

# **SELF ASSESSMENT REPORT (SAR) 2021-22**

**FOR FIRST TIME ACCREDITATION OF  
DIPLOMA IN PHARMACY PROGRAM**

**Submitted to**



**NATIONAL BOARD OF ACCREDITATION  
NEW DELHI**

**Submitted by**



**VIDYABHARATI COLLEGE OF PHARMACY,  
C.K. Naidu Road, Camp, Amravati – 444 602 (Maharashtra) India**

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## INSTITUTION INFORMATION

1. **Name and Address of the Institution** : **Vidyabharati College of Pharmacy.**  
C.K. Naidu Road , Camp, Amravati, Maharashtra.
2. **Name and Address of the Affiliating University** : Maharashtra State Board of Technical Education,  
Kherwadi, Bandra (E), Mumbai - 400051  
Maharashtra State, India
3. **Year of Establishment of the Institution** : **1983**
4. **Type of the Institution:**
- |                            |   |                                     |
|----------------------------|---|-------------------------------------|
| University                 | : | <input type="checkbox"/>            |
| Deemed University          | : | <input type="checkbox"/>            |
| Autonomous                 | : | <input type="checkbox"/>            |
| Affiliated                 | : | <input checked="" type="checkbox"/> |
| Any Other (Please specify) | : | <input type="checkbox"/>            |
5. **Ownership Status:**
- |                            |   |                                     |
|----------------------------|---|-------------------------------------|
| Central Government         | : | <input type="checkbox"/>            |
| State Government           | : | <input type="checkbox"/>            |
| Grant-in-Aid               | : | <input type="checkbox"/>            |
| Self financing             | : | <input checked="" type="checkbox"/> |
| Trust                      | : | <input type="checkbox"/>            |
| Society                    | : | <input checked="" type="checkbox"/> |
| Section 25 Company         | : | <input type="checkbox"/>            |
| Any Other (Please specify) | : | <input type="checkbox"/>            |

Provide details : Vidyabharati Shaikshanik Mandal (V.B.S.M.) was established in 1972 as a registered society by the founder President Dr.Devisinghji Shekhawat and Honourable Smt.Pratibhatai Patil,Ex.President of India ; with the vision to cater to the education needs in the rural areas of Amravati District and to quench the thirst of technical education.

The D.Pharm course was introduced by establishing Vidyabharati College of Pharmacy (VBCOP) in the year 1983.

V.B.S.M. is an educational society working under the visionary leadership of Dr. Devisingh Shekhawat and Smt. Pratibhatai Patil. It is a leading educational society which has been awarded as the Best Educational Society in the year 2001 by the State Government of Maharashtra. Many institutes and programs run under the society are accredited by NAAC with Centre of Excellence potential and N.B.A. and are accredited member of U.S.H.L.B.E.

Vidyabharati College of Pharmacy is the pioneer institute and topmost college in the ranking, choice and preference in the region for the students aspiring for Pharmacy.

#### 6. Other Academic Institutions of the Trust / Society / etc., if any

Sr. No.	Name of the Institution (s)	Year of Establishment	Programs of Study	Location
1	Vidyabharati Mahavidyalaya, Camp, Amravati.	1972 - 73	Science, Commerce & Art	Amravati
2	Vidyabharati Mahavidyalaya (Jr. College), Camp, Amravati.	1972 - 73	Science, Commerce	Amravati
3	Vidyabharati Mahavidyalaya (MCVC), Camp, Amravati.	1988 - 89	Motor Mechanic	Amravati
4	V.B. Institute of Research & P..G. Studies in Science & Management (MBA/MCA & OTHERS), Camp, Dist. Amravati.	1996-97, 2006-07	Management & Comp. Sci.	Amravati
5	Vidyabharati College of Pharmacy. Camp, Amravati	1983- 84	Pharmacy	Amravati
6	Vidyabharati Industrial Training Center , Camp, Amravati	1999 - 2000	Eight streams	Amravati
7	Smt. Pratibhatai Patil Mahila Shikshah Shashtra Mahavidyalaya, Camp, Amravati.	2008 – 09	B.Ed.	Amravati
8	Pratibha Mahila Hostel, Camp, Amravati	2000 – 01	Hostel	Amravati



# PART A

## INSTITUTIONAL INFORMATION

9	Vidyabharati Backward Hostel, Patrakar Colony, Amravati	1973 -74	Hostel	Amravati
10	Vidyabharati Madhyamik Vidyalaya, Patrakar Colony, Amravati	1971-72	School	Amravati
11	Vidyabharati Pre Primary English School ,Patrikar Colony ,Amravati	2011-12	School	Amravati
12	S.S.S.K.R. Innani Mahavidyalaya, Karanja Lad , Dist. Washim	1983-84	Science, Commerce & Art	Karanja Lad
13	Vidyabharati Mahavidyalaya (Jr. College), Karanja Lad , Dist. Washim	1984-85	Jr. College	Karanja Lad
14	Vidyabharati Mahavidyalaya (MCVC), Karanja Lad , Dist. Washim	1988-89	Motor Mechanic	Karanja Lad
15	Jyoti Mahila Vastigruha, Karanja Lad , Dist. Washim	2000-01	Hostel	Karanja Lad
16	V.B.English Primary School ,Karanja Lad , Dist. Washim	2005 - 06	School	Karanja Lad
17	Vidyabharati Madhyamik Vidyalaya, Shaha, Karanja Lad , Dist. Washim	1987-88	Commerce & Art	Karanja Lad
18	Sant Muktabai Arts & Commerce College, Muktainagar, Dist. Jalgoan	1983-84	Commerce & Art	Muktainagar
19	Sant Muktabai Jr. College, Muktainagar, Dist. Jalgoan	1990 – 91	Science	Muktainagar
20	Sant Muktabai Madhyamik Vidyalaya, Muktainagar, Dist. Jalgoan	2000-01	School	Muktainagar
21	Vidyabharati High School, Shelubazar, Tq. Murtizapur, Dist. Akola	1971-72	School	Shelubazar
22	Pre Primary English School, Muktainagar, Dist. Jalgoan	2017-18	School	Muktainagar

## PART A

### INSTITUTIONAL INFORMATION

23	Vidyabharati Jr. College, Shelubazar, Tq. Murtizapur, Dist. Akola	1990-91	Science & Commerce	Shelubazar
24	Matoshri Nathibai Vidyalaya, Sungaon, Tq. Jalgaon (Jamod), Dist. Buldhana.	1972-73	School	Sungaon
25	Sant Gadge Baba Vidyalaya, Sayat, Tq. Bhatkuli, Dist. Amravati	1970-71	School	Sayat
26	Shri. Shavchandji Laddha Madyamik Vidyalaya, Shivangaon, Tq. Tiwsa, Dist. Amravati.	1970-71	School	Shivangaon
27	Shri. Shavchandji Laddha Jr. College, Shivangaon, Tq. Tiwsa, Dist. Amravati.	1992-93	Jr. College	Shivangaon
28	Shri. Shavchandji Laddha Jr. College (HSVC), Shivangaon, Tq. Tiwsa, Dist. Amravati.	1993-94	HSVC	Shivangaon
29	JRS English School, Chandrapur (Kh) Tal. Daryapur	2017-18	School	Chandrapur (Kh)

#### 7. Details of all the programs being offered by the Institution under consideration :

S.No.	Program Name	Year of Start	Intake	Increase in intake, if any	Year of increase	AICTE Approval	Year of obtaining PCI Approval	Accreditation Status*
1.	Diploma in Pharmacy	1983	60	-	-	Yes	1992-93	Applying first time
2.	Bachelor in Pharmacy	1993	60	-	-	Yes	2001-02	N.B.A..Accredited for three years (2020-23)
3.	Master in Pharmacy a. Pharmaceutics b. Pharmacology c. Quality Assurance	2009 2010 2011	15 15 15	-	-	Yes	2016	- -
4.	Doctoral Program	2005	16	-	-	N A	N A	N A

- Write applicable one :
- Applying first time
- Granted Provisional Accreditations For Two/ Three Years For The Period (Specify Period)
- Granted Accreditations For 5/6 Years For The Period (Specify Period)
- Not Accredited (Specify visit dates , year)
- Withdrawn (Specify visit dates , year)
- Not eligible for accreditation
- Eligible but not applied

Note : Add rows as needed.

**8. Programs to be considered for Accreditation vide this application :**

S.No.	Program Name
1.	Diploma in Pharmacy (D.Pharm)

**9. Total number of employees :**

**A. Regular Faculty and Staff**

Items		CAY (2021-22)		CAYm1 (2020-21)		CAYm2 (2019-20)	
		Min	Max	Min	Max	Min	Max
Faculty in Pharmacy	M	14	15	15	16	16	17
	F	06	06	06	06	06	06
Non-teaching staff	M	25	25	25	28	28	28
	F	-		-		-	

**B. Contractual Staff (Not covered in Table A) :**

Items		CAY(2021-22)		CAYm1 (2020-21)		CAYm2 (2019-20)	
		Min	Max	Min	Max	Min	Max
Faculty in Pharmacy	M	02	03	02	02	02	02
	F	01	01	00	00	00	00
Non-teaching staff	M	05	05	05	06	06	06
	F	02	02	02	02	05	05

Note :

- Minimum 75% should be Regular / Full Time faculty and the remaining shall be Contractual Faculty as per AICTE norms and standards.
- The Contractual Faculty (doing away with the terminology of visiting/ adjunct faculty, what so ever) who have taught for 2 consecutive semesters in the corresponding academic year or full time basis shall be considered for the purpose of calculation in the student faculty ratio.

**CAY - Current Academic Year (2021-22)**

**CAYm1- Current Academic Year minus 1 = Current Assessment Year(2020-21)**

**CAYm2- Current Academic Year minus 2 = Current Assessment Year minus 1(2019-20)**

**10. Total number of Pharmacy students in the Institute :**

D. Pharmacy	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Total no. of boys	74	63	69
Total no. of girls	65	77	55
Total no. of students	139	140	124

B.Pharmacy	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Total no. of boys	152	142	149
Total no. of girls	138	125	122
Total no. of students	290	267	271

M.Pharmacy	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Total no. of boys	36	33	29
Total no. of girls	53	43	34
Total no. of students	89	76	63

## PART A

### INSTITUTIONAL INFORMATION

Ph.D.	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Total no. of boys	10	06	06
Total no. of girls	03	00	00
Total no. of students	13	06	06

*(Instruction : The data may be categorized in tabular form in case institute runs UG,PG and doctoral programs, please separate table for each, if any)*

#### 11. Contact Information of the Head of the Institution and NBA coordinator, if designated :

- i. Name : Dr.S.D.Pande  
Designation : Principal  
Mobile No. : 9823172064  
Email id : drsdpande@gmail.com
- ii. NBA coordinator, if designated :  
Name : Mrs.L.L.Jain (Gonsalves)  
Designation : Head of Department  
Mobile No. : 9923499666  
Email id : [lovinajain.2011@gmail.com](mailto:lovinajain.2011@gmail.com)

**CRITERIA SUMMARY****Name of the Program : Diploma in Pharmacy**

<b>CRITERIA NO.</b>	<b>Criterion</b>	<b>Marks / Weightage</b>
<b>1</b>	Vision, Mission, Program Educational Objectives	50
<b>2</b>	Program Curriculum and Teaching – Learning Process	50
<b>3</b>	Course Outcomes and Program Outcomes	60
<b>4</b>	Students' Performance	75
<b>5</b>	Faculty Information and Contributions	75
<b>6</b>	Facilities and Technical Support	100
<b>7</b>	Continuous Improvement	30
<b>8</b>	Governance, Institutional Support and Financial Resources	60
	<b>Total :</b>	<b>500</b>

# CRITERION

1

## VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

CRITERION	VISION, MISSION AND PROGRAM EDUCATIONAL	50
1	OBJECTIVES	

### 1.1 State the vision and mission (5)

*(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations)*

#### **Vision(Institutional) :**

TO BE PERCEIVED AS A PREVALENT INSTITUTE FOR PROMOTING TRANSCENDENCE IN PHARMACY DISCIPLINE TO CODDLE THE URGE FOR PROFESSION AND HUMANITY

#### **Vision(Departmental):**

TO DEVELOP AS A CENTRE FOR QUALITY PHARMACY EDUCATION TO PRODUCE COMPETENT PHARMACY DIPLOMA HOLDERS TO BE A PART OF HEALTH CARE SYSTEM TO SERVE THE SOCIETY.

#### **Mission : ( Institutional)**

<b>M1</b>	:	To achieve transcendence by creating learning environment and providing facilities for creative thinking and personality development.
<b>M2</b>	:	Impart conducive environment to escalate problem solving perspectives, forethought ability and effective communication skill in budding pharmacists.
<b>M3</b>	:	Promote ethical and professional values to prepare sustainable and competent workforce having professional identity with sense of social responsibility.

# CRITERION

1

## VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

	<b>Mission (Departmental):</b>
<b>M1</b>	: To produce pharmacy diploma holders with proficient psychomotor and cognitive skills by providing standard learning environment and facilities.
<b>M2</b>	: To inculcate strong ethical values and good professional behavior, so as to adapt and absorb emerging changes in the field of pharmacy profession.
<b>M3</b>	: To foster all round development and leadership qualities to accelerate entrepreneur traits in the budding pharmacists.
<b>M4</b>	: To establish Industry Institution Interaction to create life long learners to serve the society.

### 1.2. State the Program Educational Objectives (PEOs) (5)

*(State the Program Educational Objectives 3 to 5 of the program seeking accreditation)*

<b>PEO 1</b>	: To produce pharmacy diploma holders able to discharge the responsibilities of pharmacist with adequate understanding of supportive areas connected to the health care system.
<b>PEO 2</b>	: To inculcate leadership quality with planning ability and effective oral and written communication skills.
<b>PEO 3</b>	: To encourage ethical principles and professional values to develop pharmacists with professional identity for serving the society.
<b>PEO 4</b>	: To encourage the students for lifelong learning skills and entrepreneurship ability.

### 1.3. Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders (15)

*(Describe where (websites, curricula, posters etc.) the Vision, Mission and PEOs are published and detail the process which ensures awareness among internal and external stakeholders with effective process implementation)*



*(Internal stakeholders may include Management, Governing Board Members, faculty, support staff, students etc. and external stakeholders may include employers, industry, alumni, funding agencies, etc.)*

Every effort is made to ensure that the Vision and Mission of the Institute and Department is communicated effectively to all stakeholders namely students, faculty, parents, industry, alumni, funding agencies etc.

The Vision, Mission and PEO statements are published and disseminated through the following methods.

- College brochure
- College letter head used for official communication.
- College website
- Display Boards: Flexi-boards, Permanent boards
- Direct Communication to stake holders through :
  1. Orientation program of newly joined staff members
  2. Induction program for students of first level
  3. Parent meet
  4. Alumni meet
  5. Campus placement drive

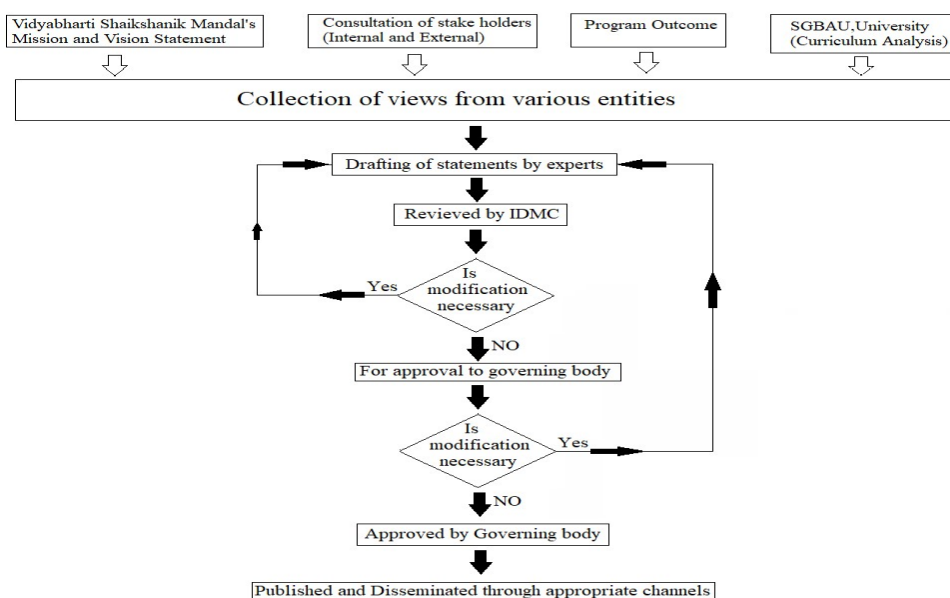
#### **1.4. State the process for defining the Vision & Mission and PEOs of the program (10)**

*(Articulate the process for defining the Vision, Mission and PEOs of the program)*

The Institute has established the Vision, Mission and PEO statements through consultative process involving the stake holders: internal stake holders (management, Governing body members, faculty, supporting staff, students, etc.) and external stake holders (employees, industry, alumni). Then department framed the departmental vision and mission statements with the consultation of respective stake holders aligned with the vision and mission

statement of institute formed with the intention of fulfilling the societal and professional needs. The institute framed the vision and mission through a consultative process as shown in Figure 1.1.

- Step 1 : Vision and Mission of the college, curriculum and Program objectives are taken as the basis to interact with various stakeholders for formulating the PEOs.
- Step 2 : All the views as mentioned above are collected, scrutinized and summarized to convey the key constituents to drafting committee.
- Step 3 : In the light of current status of the institute, teaching-learning environment, and based on the review of feedback, PEOs are formulated by the appointed expertise members
- Step 4 : The proposed PEOs are reviewed by IDMC and recommendations, if any, are refereed back to drafting committee. These are further sent to the Governing Body.
- Step 5 : If approved, further communicated to Governing body for final approval. In case of rejection or changes suggested further again placed in front of expert committee for changes to be made, if any.
- Step 6 : Approval on final draft copy is taken from Governing body
- Step 7 : After approval dissemination is carried out through appropriate channels.



**Fig 1.1: Flow chart for process for defining the Vision & Mission**

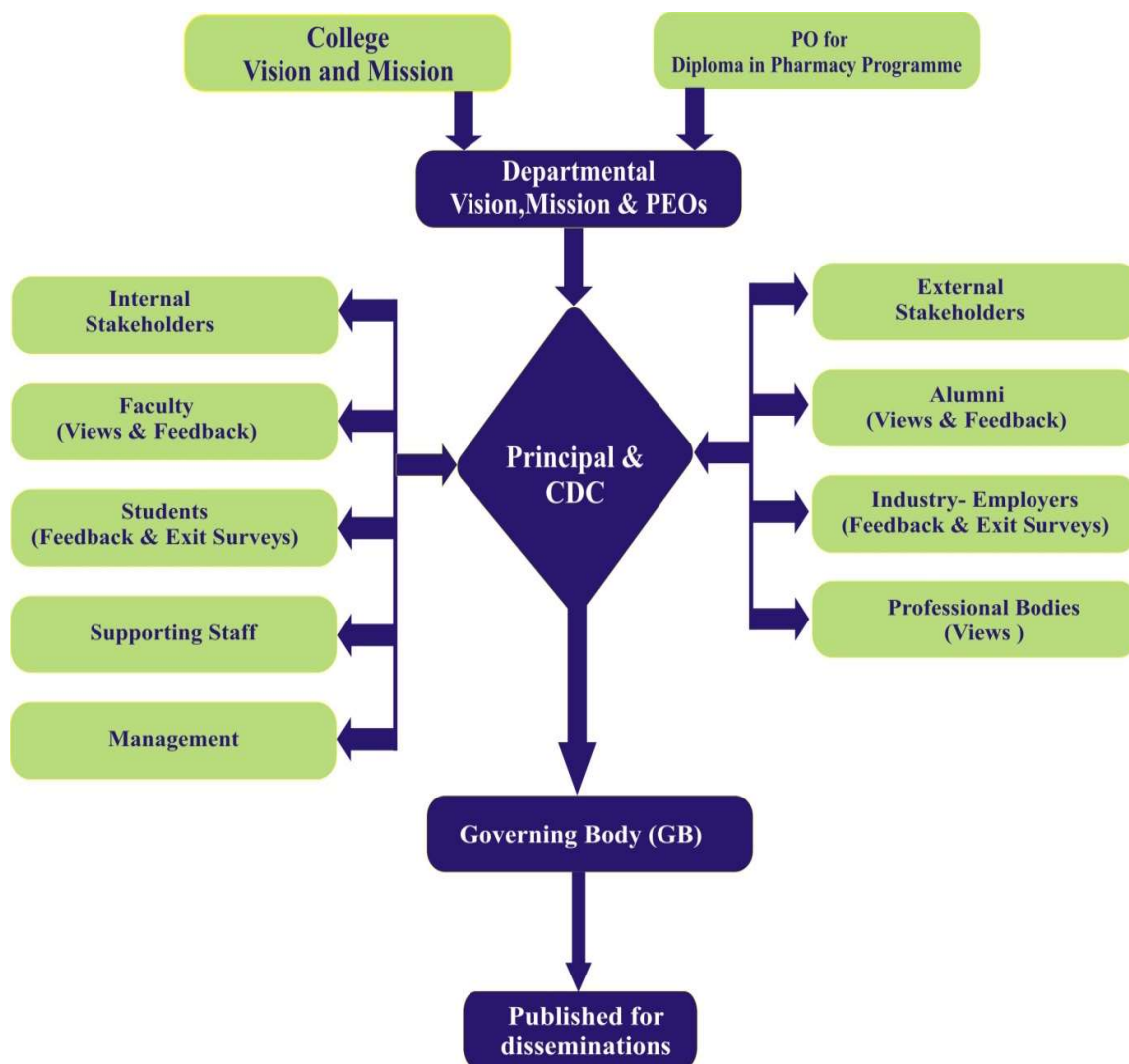
**Drafting of Vision Mission Statements and PEOs of the program:**

In framing the vision and mission of the department, the following steps were followed.

- Step 1** : Vision and Mission of the institute are taken as an origin.
- Step 2** : Collection of views from internal and external stake holders.
- Step 3** : Based on available information, views from stake holders, contents from program outcome and syllabus content analysis, brainstorming sessions are carried out by the staff and a draft copy of Vision and Mission statement is prepared along with PEO statements.
- Step 4** : The draft copy is reviewed by Head of the institute and College Development Committee.
- Step 5** : After seeking consent from Head of the institute and CDC, the draft was further communicated to Governing body for final approval.
- Step 6** : Approval of final draft copy is taken from Governing body.
- Step 7** : After approval from Governing Body dissemination is carried out through appropriate channels as mentioned in point 1.3.

The above steps are highlighted in figure 1.2.

The inputs from stake holders, faculty, alumni, industry, and professional bodies are considered to formulate our course PEOs. Formatted survey data is utilized to gather comprehensive information for scrutiny and analysis. Formal and informal visits by the alumni give scope for direct personal interaction, discussion and also give an opportunity to collect and record information required for improving the program based on their professional experiences. A similar format can be used in other cases.



**Fig 1.2: Flow chart for process for defining the Vision, Mission and Program Educational Objectives of Diploma in Pharmacy program**

# CRITERION

1

## VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

### 1.5 Establish consistency of PEOs with Mission of the Institute

(15)

*(Generate a “Mission of the Institute - PEOs Matrix” with justification and rationale of the mapping)*

The consistency of the PEOs is based on the survey conducted amongst internal and external stake holders and following interpretation is indicated in mapping of PEOs with Mission statement.

PEO no.	PEO Statement	M1Standard Learning Environment	M2 Upholding human values	M3 Entrepreneur traits	M4 Industry Institute Interaction
PEO 1	To produce pharmacy diploma holders able to discharge the responsibilities of pharmacist with adequate understanding of supportive areas connected to the health care system.	3	3	2	2
PEO 2	To inculcate leadership quality with planning ability and effective oral and written communication skills.	3	3	2	2
PEO 3	To encourage ethical principles and professional values to develop pharmacists with professional identity for serving the society.	3	3	2	2
PEO 4	To encourage the students for lifelong learning skills and entrepreneurship ability.	3	3	2	2

# CRITERION

1

## VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

**Note:** M1, M2..... Mn are distinct elements of Mission statement. Enter correlation levels 1,2 or 3 as defined below :

1: Slight (Low)

2: Moderate (Medium)

3 : Substantial (High)

*If there is no correlation, put “-”*

**Note :** In this document wherever the term ‘process’ has been used its meaning is process formulation, notification and implementation.

The following justifications have been derived on the basis of the survey reports obtained through exit interview, alumni feedback, employer feedback and parent feedback of the students after the completion of the course, three years prior to the current assessment year of PEO attainments.

The program justifies the PEOs with its mission statements by following missionary steps and collects feedbacks from the stake holders for rationale mapping of mission with PEO and its attainments -

### a. Mission of the Department : Matrix survey of Exit Interview –

Sr.No.	PEO Statement	Keywords of Mission			
		M1 Standard Learning Environment	M2 Upholding human values	M3 Entrepreneur traits	M4 Industry Institute Interaction
PEO 1	To produce pharmacy diploma holders able to discharge the responsibilities of pharmacist with adequate understanding of supportive areas connected to the health care system.	3	3	2	2
PEO 2	To inculcate leadership quality with planning ability and effective oral and written communication skills.	3	3	2	2
PEO 3	To encourage ethical principles and professional values to develop pharmacists with professional identity for serving the society.	3	3	2	2
PEO 4	To encourage the students for lifelong Learning skills and entrepreneurship ability.	3	3	2	2

#### b. Mission of the Department : Matrix survey of Alumni Feedback

Sr.No.	PEO Statement	Keywords of Mission			
		M1 Standard Learning Environment	M2 Upholding human values	M3 Entrepreneur traits	M4 Industry Institute Interaction
<b>PEO 1</b>	To produce pharmacy diploma holders able to discharge the responsibilities of pharmacist with adequate understanding of supportive areas connected to the health care system.	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>
<b>PEO 2</b>	To inculcate leadership quality with planning ability and effective oral and written communication skills.	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>
<b>PEO 3</b>	To encourage ethical principles and professional values to develop pharmacists with professional identity for serving the society.	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>
<b>PEO 4</b>	To encourage the students for lifelong learning skills and entrepreneurship ability.	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>



# CRITERION

1

## VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

### c. Mission of the Department: Matrix survey of Parents meet-

Sr.No.	PEO Statement	Keywords of Mission			
		M1 Standard Learning Environm ent	M2 Upholding human values	M3 Entrepre neur traits	M4 Industry Institute Interacti on
PEO 1	To produce pharmacy diploma holders able to discharge the responsibilities of pharmacist with adequate understanding of supportive areas connected to the health care system.	3	3	2	2
PEO 2	To inculcate leadership quality with planning ability and effective oral and written communication skills.	3	3	2	2
PEO 3	To encourage ethical principles and professional values to develop pharmacists with professional identity for serving the society.	3	3	2	2
PEO 4	To encourage the students for lifelong learning skills and entrepreneurship ability.	3	3	2	2

### d. Mission of the Department: Matrix survey of Employers Feedback -

Sr. No.	PEO Statement	Keywords of Mission			
		M1 Standard Learning Environment	M2 Upholding human values	M3 Entrepre neur traits	M4 Industry Institute Interaction
PEO 1	To produce pharmacy diploma holders able to discharge the responsibilities of pharmacist with adequate understanding of supportive areas connected to the health care system.	3	3	2	2
PEO 2	To inculcate leadership quality with planning ability and effective oral and written communication skills.	3	3	2	2
PEO 3	To encourage ethical principles and professional values to develop pharmacists with professional identity for serving the society.	3	3	2	2
PEO 4	To encourage the students for lifelong learning skills and entrepreneurship ability.	3	3	2	2



CRITERION	Program Curriculum and Teaching-Learning Processes	50
2		

#### 2.1 CONTENTS AND COMPLIANCE OF THE CURRICULUM(5)

*(State the contents of the syllabus; about the course/learning material/content/laboratory experiments/projects etc. also mention identified curriculum gaps, if any)*

Vidyabharati College of Pharmacy (VBCOP) is affiliated to MSBTE, Mumbai and follows the syllabus prescribed under the Education Regulation of Pharmacy Act - 1948. The Diploma in Pharmacy program is having two levels.

The current Education Regulations in the course are Education Regulation -1991 (E.R.91) for Level – II of the program (i.e. D.Pharm Second year) and the new education regulation 2020 is implemented for the level – I of the program (i.e. D.Pharm- Ist year) for the current academic year (CAY) and in the CAYm1 and CAY m2 the E.R.-1991 was followed for both the levels of program.

The Level I and Level II of the program consists of six courses respectively. As per the provision of E.R. -91, the course syllabus is imparted through theory and practical classes. Details of contents of syllabus are given in Annexure – II ( As per ER 1991) and as per the provision of E.R.-2020. The course syllabus is imparted through theory, practical and tutorial classes along with the required visits of Hospital, Industry and Medicinal Gardens. Details of contents of syllabus are given in Annexure – II.a ( As per ER 2020).

#### Contents of syllabus: Course and Course wise identified gaps (as per the E.R.-91)

(Annexure II: The syllabus approved under section 10 of Pharmacy Act 1948 as per ER-1991.) Level 1

Table No. 2.1.1.1

Course Code	Course Name	Mode of Teaching		Gap identified
		Theory	Practical	
C101	Pharmaceutics – I	75 Hours (3 Hrs/ week)	100 Hours (4 Hrs/ week)	The recent trends of formulation in Pharma industries.
C102	Pharmaceutical chemistry – I	75 Hours (3 Hrs/ week)	75 Hours (3 Hrs/ week)	Modern tool usage for analysis.
C103	Pharmacognosy	75 Hours (3 Hrs/ week)	75 Hours (3 Hrs/ week)	-
C104	Biochemistry & Clinical Pathology	50 Hours (2 Hrs/ week)	75 Hours (3 Hrs/ week)	Modern tool usage for pathological testing.
C105	Human Anatomy & Physiology	75 Hours (3 Hrs/ week)	50 Hours (2 Hrs/ week)	-
C106	Health Education and Community Pharmacy	50 Hours (2 Hrs/ week)	-	Pathophysiology of newly identified diseases and its treatment.

#### Level 2

Table No. 2.1.2.1

Course Code	Course Name	Mode of Teaching		Gap identified
		Theory	Practical	
C201	Pharmaceutics – II	75 Hours (3 Hrs/ week)	100 Hours (4 Hrs/ week)	The concept of Novel Drug Delivery System
C202	Pharmaceutical chemistry – II	100 Hours (4 Hrs/ week)	75 Hours (3 Hrs/ week)	Latest marketed drugs
C203	Pharmacology & Toxicology	75 Hours (3 Hrs/ week)	50 Hours (2 Hrs/ week)	Latest marketed drugs
C204	Pharmaceutical Jurisprudence	50 Hours (2 Hrs/ week)	-	Current amendment in the pharmaceutical legislation
C205	Drug Store & Business Management	75 Hours (3 Hrs/ week)	-	Communication skills and Digital accounting.
C206	Hospital & Clinical Pharmacy	75 Hours (3 Hrs/ week)	50 Hours (2 Hrs/ week)	Latest marketed Drugs

#### Contents of syllabus: Course and Course wise identified gaps (as per the E.R.-2020)

(Annexure II.a: The syllabus approved under section 10 of Pharmacy Act 1948 as per ER-2020.)

Level 1 (E.R.2020 implemented for CAY i.e.2021-22)

Table No. 2.1.1.2

Course Code	Course Name	Mode of Teaching			Gap identified
		Theory	Practical	Tutorial	
C20111	Pharmaceutics - Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20112	Pharmaceutical Chemistry - Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20113	Pharmacognosy - Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20114	Human Anatomy & Physiology - Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20115	Social Pharmacy - Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20151	Pharmaceutics - Practical	-	75 (3 Hrs/ week)	-	No GAP identified
C20152	Pharmaceutical Chemistry - Practical	-	75 (3 Hrs/ week)	-	No GAP identified
C20153	Pharmacognosy – Practical	-	75 (3 Hrs/ week)	-	No GAP identified
C20154	Human Anatomy & Physiology - Practical	-	75 (3 Hrs/ week)	-	No GAP identified
C20155	Social Pharmacy - Practical	-	75 (3 Hrs/ week)	-	No GAP identified

Level 2(Syllabus yet not implemented)

Table No. 2.1.2.2

Course Code	Course Name	Mode of Teaching			Gap identified
		Theory	Practical	Tutorial	
C20221	Pharmacology – Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20222	Community Pharmacy & Management – Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20223	Biochemistry & Clinical Pathology – Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20224	Pharmacotherapeutics – Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20225	Hospital & Clinical Pharmacy – Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	No GAP identified
C20226	Pharmacy Law & Ethics - Theory	75 (3 Hrs/ week)	-	25 (1 Hr/ week)	Current amendment in the pharmaceutical legislation.
C20256	Pharmacology – Practical	-	50 (2Hrs/ week)		No GAP identified
C20257	Community Pharmacy & Management – Practical	-	75 (3 Hrs/ week)		No GAP identified
C20258	Biochemistry & Clinical Pathology – Practical	-	50 (2Hrs/ week)		No GAP identified
C20259	Pharmacotherapeutics – Practical	-	25 (1 Hr/ week)		No GAP identified
C20260	Hospital & Clinical Pharmacy – Practical	-	25 (1 Hr/ week)		No GAP identified

The prescribed syllabus is delivered through the prescribed number of lectures and practicals in each course. For that, the time-table is framed and the facilities like classrooms and laboratories are provided.

For the better understanding of students, lectures are delivered using ICT tools apart from the traditional chalk and board method of teaching. VBCOP believes in blended technique of teaching for effective learning but for the CAY & CAYm1 due to the Covid19 Pandemic scenario and Lockdown implemented by the Government the complete teaching learning and major delivery of syllabus content was done by using virtual methods of teaching by using online platforms like Google meet, Google classrooms, Google forms and the literature and notes of syllabus were circulated to students through WhatsApp groups.

For the time bound delivery of syllabus, session plan and lesson plans are prepared at the start of each academic session and meticulously followed to get the syllabus completed. The syllabus is reviewed by the Course Incharge and dealt against the Program Outcomes provided by the NBA. The Course Incharge considering the syllabus, frame COs and map it with the POs, after which the gap of the syllabus for the particular course is identified and reported to the Head of the Program along with suggestions for the measures to be taken for bridging the identified gap so as to further strengthen the Program Educational Objectives.

Head of the Program after the final approval of measures to be taken for bridging the gap from Institute Curriculum Implementation Unit (ICIU), prepares academic calendar for the upcoming session including the planned measures to be taken for bridging the gap.

The delivery of the syllabus and the teaching learning tools used and developed by the faculty are audited by the internal and external bodies and the reports are submitted to the Principal for necessary action. On the basis of these reports, necessary changes in the infrastructure and human resource facilities are done with the consent of Governing Body and College Development Committee.

The attainment of COs and POs is calculated after completion of each session and on the basis of the attainment, the methods for bridging the gap are modified for the next upcoming session.

Institute time to time reported the gap identified in E.R.1991 to the apex bodies for the compliance in curriculum. As a remedial measure, the institute runs certain add-on courses to bridge the gap of syllabus so that the outgoing students will be competent enough to work in the professional field. But in the CAY, E.R.2020 was implemented framed by the apex body complying the gaps of previous E.R. hence no gaps were identified at the time of implementation but it was decided in the staff meeting that the feedback from all the stake

holders will be gathered after passing out of first batch of E.R. 2020 implementation, the conclusion for the identification of gap will be reported.

#### Measures taken for delivering the content beyond syllabus for bridging the gap of prescribed syllabus for the session 2019-20 (CAYm2)

Course code	Course Name	PO Mapped	Gap Identified	Measure Taken to bridge the gap	Impact Analysis
C101	Pharmaceutics I	1,2,4,5,6,7,8,9,	The recent trends of formulation in pharma industries.	A guest lecture by Dr.Swaroop Lahoti was organized on 20/07/2019 on the topic "Recent Trends in Formulation"	The student's awareness was improved.
C102	Pharmaceutics I	1,4,5,6,9	Modern tool usage for analysis.	Visit to the Q.C. department of Glacier & Priest Pharmaceutical MIDC, Amravati on 24/02//2020	Improvement in the students toward modern tool usage was noticed.
C104	Biochemistry & Clinical Pathology	1,2,4,7,8,9	Modern tool usage for pathological testing.	Visit to Dayasagar Hospital was Organised on 02/10/2019	Improvement in the awareness of new diagnostic techniques was noticed
C106	Health Education & Community Pharmacy	1,2,3,4,5,6,7,8,9,	Pathophysiology of newly identified diseases and its treatment.	Assignments were given on diseases caused by Corona , Ebola & Zika virus.	Value addition & Improvement was noticed in the knowledge of students .
C201	Pharmaceutics II	1,4,5,9	The concept of novel drug delivery system	Guest lecture was organized a) Dr.Swaroop Lahoti on 20/07/2019 on the topic "Recent Trends in Formulation" b)Dr.Madhuri Pardeshi on the topic "Cosmoceuticals" on 29/11/2019	Improvement in the students was noticed.
C202	Pharmaceutical Chemistry II	1,4,7,8,9.	Latest marketed drugs	A Guest lecture by Dr.Amit Kavimandan was organised on 26/07/2019 on Hepatitis B	The student's awareness was improved.
C203	Pharmacology	1,4,5,6,7,9	Latest marketed drugs	1.Technical quiz was organized on 29/01/2020 2.A Guest lecture by Dr.Amit Kavimandan was organized on 26/07/2019 on Hepatitis B	The student's awareness was improved.
C204	Pharmaceutical Jurisprudence	1,3,4,5,6,7,8,9	Current amendment in the pharmaceutical legislation	1.A Guest lecture by Mr.Dipak Rathi was organized on 25/09/2019 on the topic "Opportunities of Business Abroad" 2.The student prepared the report on practical training in drug store comprising of various concepts of the course.	The student's awareness was improved.



C205	Drug Store & Business Management	1,3,4,5,6,7,8,9	Communication skills and Digital accounting.	Guest lecture was organized : a) Mrs.ShitalPandit on 28/08/2019 on the topic “ Recent trends in Pharma sales and Marketing” b) Mr. Rajesh Sasane on 29/11/2019 on “communication skill”.	Significant improvement was noticed in communication skills of students.
C206	Hospital & Clinical Pharmacy	1,2,4,5,6,7,9	Latest marketed drugs	A Guest lecture by Dr.H.D.Unewas organized on 20/07/2019 on the topic “Patient Counseling”	The student’s awareness was improved.

#### Measures taken for delivering the content beyond syllabus for bridging the gap of prescribed syllabus : for the session 2020-21 (CAY m1)

Due to Lockdown implemented by Government of India because of Covid- 19 Pandemic the following possible measures were taken by using virtual modes of communications with the students and the regular hospital and Industrial visits were not feasible. Hence no visit or educational tour was conducted.

Course code	Course Name	PO Mapped	Gap Identified	Measure Taken to bridge the gap	Impact Analysis
C101	Pharmaceutics I	1,2,4,5,6,7,8,9,	The recent trends of formulation in pharma industries.	1.A Webinar on CGMP was organized on 22/06/2020. The resource person for the webinar was Dr.V.K.Mourya, Principal, Government College of Pharmacy, Aurangabad. 2. A Webinar on Evaluation of Cosmetics was organized on 19/06/2020. The resource person for the webinar was Dr.Ambikanandan Mishra, Director Pharmaceutical Research, NMIMS, Mumbai.	The student’s awareness was improved.
C201	Pharmaceutics II	1,4,5,9	The concept of novel drug delivery system	1.A Webinar on Evaluation of Cosmetics was organized on 19/06/2020. The resource person for the webinar was Dr.Ambikanandan Mishra, Director Pharmaceutical Research, NMIMS, Mumbai. 2. A Webinar on Recent Development in “Novel Drug Delivery System” by Mr.A.B.Nangliya	Improvement in the students was noticed.

				Research Associate Bliiss Pharmaceuticals Ltd. Mumbai organized on 26/10/2020	
C204	Pharmaceutical Jurisprudence	1,3,4,5,6,7,8,9	Current amendment in the pharmaceutical legislation	1.The students prepared the report on practical training in drug store comprising of various concepts of the course.	The students awareness was improved.
C205	Drug Store & Business Management	1,3,4,5,6,7,8,9	Communication skills and Digital accounting.	1.A Webinar by Prof.Rajesh Bhoyar, H.O.D. Computer Department, SGBAU , Amravati was organize on 21/09/2021 on Digital Literacy. 2. MOU with Microsoft was signed to run Addon courses. 3. Online Workshop for Telephonic interview was conducted on 04/01/2021 by Miss. Ashwini Rathi, Mentor for Personality development at Uddan Amravati.	Improvement was noticed in communication skills of students.

#### Measures taken for delivering the content beyond syllabus for bridging the gap of prescribed syllabus : for the session 2021-22 (CAY)

Due to Lockdown implemented by Government of India because of Covid- 19 Pandemic the following possible measures were taken by using virtual modes of communications. From 7<sup>th</sup> Feb.2022 the unlock down was declared for the students hence due to lack of time for regular academic proceeding the following measures were taken in the available time.

Course code	Course Name	PO Mapped	Gap Identified	Measure Taken to bridge the gap	Impact Analysis
C201	Pharmaceutics II	1,4,5,9	The concept of novel drug delivery system	A guest lecture was organized on 28/03/2022 on "Noval Drug Delivery System" by Dr.V.P.Wankhade.	Improvement in the students was noticed.
C203	Pharmacology	1,4,5,6,7,9	Latest marketed drugs	Two day Online National conference on current & future scope in pharmacology & research on 17/9/2021 & 18/9/2021	The students awareness was improved.
C204	Pharmaceutical Jurisprudence	1,3,4,5,6,7,8,9	Current amendment in the pharmaceutical legislation	1.A guest lecture on "New Trends in Pharmaceutical retail sector ' by Miss.Bharati Mohakar on 08/03/2022 2.The student prepared the	The students awareness was improved.



				report on practical training in drug store comprising of various concepts of the course.	
C205	Drug Store & Business Management	1,3,4,5,6,7,8,9	Communication skills and Digital accounting.	1. Webinar on Scientific writing by Dr.R.Bakal on 25/09/2021. 2. Guest lecture-scope in pharma marketing by Mr.ShubhamMantri on 14/10/2021	Significant improvement was noticed in communication skills of students.

### 2.2 Adherence to Academic Calendar(10)

#### *(Demonstrate notified academic calendar & its adherence)*

In the beginning of every academic year, an academic calendar is prepared by Head of the Program with an objective to plan the academic activities to be undertaken in the upcoming session based on the MSBTE academic calendar. It is finalized by the Principal, and IMC. The academic calendar prescribes beginning of session dates and end of session dates. It also specifies dates for conducting Progressive Theory Test and Progressive Skill Test, other activities including cultural events, co-curricular events, guest lectures and sports activities planned for the session. Departmental time-table is prepared and displayed on the notice board. All the faculty members strictly follow the academic calendar and timetable.

The timetable is prepared by considering the academic calendar and the scheme of lectures and practicals given in the E.R., which specifies designated classrooms, laboratories and respective Course Incharge. The timetable includes theory classes, tutorial classes, laboratory practicals etc. (Annexure : III Time table) Teaching Plans are prepared, documented and followed by the respective Course Incharge according to the Institute's academic calendar considering total working days excluding holidays and Sundays and then the lectures are planned accordingly which should cover the whole syllabus. Adherence to the institutional academic calendar is monitored by the academic coordinator and IMC throughout the session. Academic audits are conducted twice in a session by internal and once in a session by external agencies.

The Academic calendar and it's adherence for last three years are given below:

#### CAYm2 :2019-20

S.No.	Activity	Plan date	Date of Actual Conduction
1	<b>First Term starts</b>	<b>26/06/2019 (DCP – II)</b>	26/06/2019
2	Cleanliness Drive and Tree plantation	2 <sup>nd</sup> week of July 2019	14/07/2019
3	World Hepatitis Day	28/07/2019	26/07/2019
4	Quiz Competition	9/8/2019	9/8/2019
5	Exam form filling for Ex-students	13/08/2019 to 01/09/2019	13/08/2019 to 01/09/2019
6	Patriotic song Competition	2 <sup>nd</sup> week of August 2019	14/08/2019
7	Induction programme for First year	4th week of August 2019	26/08/2019
8	Teachers Day Celebration (Traditional Day)	5 <sup>th</sup> Sept. 2019	5/9/2019
9	Industrial Guest lecture	2 <sup>nd</sup> week of Sept. 2019	20/07/2019
10	Disaster management workshop	16/09/2019	16/07/2019
11	Trade fair	18/09/2019	18/09/2019
12	First internal Monitoring	3 <sup>rd</sup> week of Sept. 2019	10/9/2019
13	State Level Elocution competition	21/09/2019	21/09/2019
14	Pharmacist Day Celebration	25 <sup>th</sup> Sept. 2019	25 <sup>th</sup> Sept. 2019
15	Visit to NGO and Social outreach activities	2 <sup>nd</sup> Oct. 2019	2 <sup>nd</sup> Oct. 2019
16	First Sessional Examination	3 <sup>rd</sup> week of Oct. 2019	14/10/2019 to 19/10/2019
17	Winter Practical Exam	14/10/2019 to 22/10/2019	- -
18	Winter Break (Diwali Vacation)	25/10/2019 to 29/10/2019	
19	<b>Second Term</b>	30/10/2019 to 23/03/2020	
20	Winter Theory Exam	14/11/2019 to 05/12/2019	14/11/2019 to 05/12/2019
21	One Day Seminar	Last week of November 2019	29/11/2019
22	Financial Literacy workshop	27/11/2019	27/11/2019
23	AIDS Awareness Rally	30/11/2019	30/11/2019
24	Educational Tour and Industry Visit	1 <sup>st</sup> week of Dec.2019	9/12/2019
25	Parents meet	4 <sup>th</sup> week of Dec. 2019	28/12/2019
26	Alumni meet	1 <sup>st</sup> week of Jan.2020	4/1/2020
27	Second Sessional Exam	13/01/2020 to 18/01/2020	13/01/2020 to 18/01/2020
28	Declaration of Winter exam result	2 <sup>nd</sup> week of Jan. 2019	2 <sup>nd</sup> week of Jan. 2019
29	Hospital Visit / Industry Visit	4 <sup>th</sup> week of Jan. 2020	24/02/2020
30	Summer Exam form filling	23/01/2020 to 03/02/2020	23/01/2020 to 03/02/2020
31	Sports Carnival	23 to 25 Jan. 2020	23 to 24 Jan. 2020
32	Annual gathering “Josh ”	29 & 30 Jan. 2020	29 & 31 Jan. 2020
33	Second Internal Monitoring	2 <sup>nd</sup> week of Feb. 2020	10/2/2020

#### CAYm1 :2020-21

S.No.	Activity	Plan date	Date of Actual Conduction
1	<b>First Term for students (DCP – II)</b>	<b>17/08/2020 to 08/11/2020</b>	<b>17/08/2020 to 08/11/2020</b>
	<b>First Term starts for teachers</b> (For preparation of e-contents for online teaching)	<b>15/06/2020</b>	<b>15/06/2020</b>
2	F.D.P. on Digital teaching methodology	First week of July 2020	First week of July 2020
3	Workshop on Effective use of I.C.T. in teaching	07-06-2020	07-06-2020
4	International Yoga Day celebration (through online Yoga workshop)	19/07/2020	19/07/2020
5	Cleanliness Drive and Tree plantation	Last week of July 2020	Last week of July 2020
6	Teacher Day Celebration	5 <sup>th</sup> Sept. 2020	5 <sup>th</sup> Sept. 2020
7	Guest Lecture on Digital Literacy	21/09/2020	21/09/2020
8	Pharmacist day celebration (Webinar on Career opportunities to serve health care system)	25/09/2020	25/09/2020
9	Guest Lecture on Mental Health Awareness	26/09/2020	26/09/2020
10	Industrial Guest lecture	Last week of Oct. 2020	26/10/2020
11	First internal Monitoring	1 <sup>st</sup> week of Nov.2020	1 <sup>st</sup> week of Nov.2020
12	Winter Break (Diwali Vacation)	09/11/2020 to 19/11/2020	09/11/2020 to 19/11/2020
	<b>Second Term : (DCP – II)</b>	<b>20/11/2020 to 10/06/2021</b>	<b>20/11/2020 to 10/06/2021</b>
13	Commencement of First year classes	24/12/2020	24/12/2020
14	<b>First Sessional Examination D.C.P. - II</b>	<b>3<sup>rd</sup> week of Dec.2020</b>	<b>3<sup>rd</sup> week of Dec.2020</b>
15	Guest lecture on personality development	First week of Jan.2021	04/01/2021
16	<b>Winter Exam form filing schedule</b>		
i.	With regular fees	05/01/2021 to 10/01/2021	05/01/2021 to 10/01/2021
ii.	With late fee	11/01/2021 to 12/01/2021	11/01/2021 to 12/01/2021

17	Induction for the First year students	Third week of Jan. 2021	16 /01/ 2021
18	<b>Winter Exam schedule (for Backlog)</b>		
	i. Practical Exam	08/01/2021 to 17/02/2021	08/01/2021 to 17/02/2021
	ii.Theory Exam	24/02/2021 to 17/03/2021	24/02/2021 to 17/03/2021
19	<b>First Sessional Examination D.C.P. - I</b>	<b>II<sup>nd</sup> week of March - 2021</b>	<b>II<sup>nd</sup> week of March - 2021</b>
20	Declaration of Winter result	First week of April 2021	First week of April 2021
21	Parent's Meet	Second week of April 2021	Telephonic conversation with Parents
22	Summer Exam Form filling Schedule		
	i. With regular fees	17/04/2021 to 22/04/2021	17/04/2021 to 22/04/2021
	ii. With late fee	23/04/2021 to 25/04/2021	23/04/2021 to 25/04/2021
23	<b>Second Sessional Exam (D.C.P. I &amp; II)</b>		
24	Second Internal Monitoring	Last week of April 2021	Last week of April 2021
25	Sanman	Third week of May 2021	Not conducted due to strict Lockdown
26	<b>Third Sessional Exam (D.C.P. I &amp; II)</b>	4 <sup>th</sup> week of May 2021	4 <sup>th</sup> week of May 2021
27	Last Date for Record Submission of all students & Issue of training form to Final year students	Third week of June 2021	Not conducted due to strict Lockdown
28	<b>Summer theory exam</b>	5 <sup>th</sup> June 2021	5 <sup>th</sup> June 2021
i.	Practical Exam	22/06/2021 to 03/07/2021	22/06/2021 to 03/07/2021
ii.	Theory Exam	13/07/2021 to 30/07/2021	13/07/2021 to 30/07/2021
29	Training period	Student can start training for three months from 01 <sup>st</sup> Aug.2021 onwards.	Student started training for three months from 01 <sup>st</sup> Aug.2021 onwards.
30	Declaration of result	Fourth week of August 2021	Fourth week of August 2021

#### CAY :2021-22

S.No.	Activity	Plan date	Date of Actual Conduction
1	First Term for students (DCP – II) First Term starts for teachers (For preparation of e- contents for online teaching)	15/09/2021 to 30/10/2021 14-06-2021	15/09/2021 to 30/10/2021 14-06-2021
2	International Yoga Day celebration (through online Yoga workshop)	21-06-2021	21-06-2021
3	Tree plantation Drive	2 <sup>nd</sup> week of June 2021	09/07/2021
4	Fire Fighting workshop for staff	Last week of August 2021	31/08/2021
5	Teacher Day Celebration	5 <sup>th</sup> Sept. 2020	5 <sup>th</sup> Sept. 2020
6	AICTE Conference	3 <sup>rd</sup> week of Sept. 2021	3 <sup>rd</sup> week of Sept. 2021
7	World Pharmacist Day Celebration (Webinar on Scientific writing)	25-09-2021	25-09-2021
8	Commencement of First year classes	01-10-2021	01-10-2021
9	Personality Development Program	First week of Oct.2021	11 <sup>th</sup> & 14 <sup>th</sup> Oct. 2021
10	Industrial Guest lecture	Second week of Oct.2021	22/10/2021
11	Induction for First year student	21/10/2021 (Online)	21/10/2021 Online
12	Guest Lecture Series	3 <sup>rd</sup> week of Oct. 2021	22/10/2021
13	Winter Break (Diwali Vacation)	31/10/2021 to 06/11/2021	31/10/2021 to 06/11/2021
14	First internal Monitoring	3 <sup>rd</sup> week of Nov.2021	3 <sup>rd</sup> week of Nov.2021
15	Second Term	07/11/2021 to 28/05/2022	07/11/2021 to 28/05/2022
16	First Sessional Examination D.C.P. - II	Last week of Nov.2021	Last week of Nov.2021
17	Constitutional day celebration	26-11-2021	26-11-2021
18	Blood Donation Camp	19-12-2021	19-12-2021
19	First Sessional Examination D.C.P. - I	Second week of Dec.2021	Second week of Dec.2021
20	Parent's Meet	Last week of Feb. 2022	28/02/2021
21	Second Sessional Exam (D.C.P. I & II)	07/03/2022 to 12/03/2022	07/03/2022 to 12/03/2022
22	Women's day celebration	08-03-2022	08-03-2022
23	Second Internal Monitoring	09-04-2022	09-04-2022
24	Third Sessional Exam (D.C.P. I & II)	23/05/2022 to 28/05/2022	23/05/2022 to 28/05/2022
25	Last date for record Submission of all students & issue of Training Form to Final year students	28-05-2022	28-05-2022
26	<b>Summer theory exam</b>		
i	Practical Exam	28/05/2021 to 06/06/2022	28/05/2021 to 06/06/2022
ii	Theory Exam	08/06/2022 to 28/06/2022	08/06/2022 to 28/06/2022
27	Training period	Student started training for three months from 01 <sup>st</sup> July2022 onwards.	Student started training for three months from 01 <sup>st</sup> July2022 onwards.

At the end of each session the reports of various activities conducted as per the academic calendars were submitted to the Head of Programs with impact analysis done on the basis of feedbacks taken from the stake holders after the event for further continuation or discontinuation of the event. Simultaneously the events feedback was considered for the assessment of POs attainment by indirect methods.

### 2.3 INITIATIVES IN TEACHING AND LEARNING PROCESS(15)

*(Implementation of teaching learning process and Initiatives in improving instruction methods, the quality of laboratory experiences with regard to conduct, record observations, analysis and continuous evaluation, encouraging bright students, assisting weak students etc.. The initiatives, implementation details and impact analysis need to be documented)*

In VBCOP, the teaching and learning process begins with an Induction program for the newly admitted students. The main aim of the induction program is to orient the students towards professional education and the students are made aware of POs & PEOs during the induction itself. The students are also made aware of various courses to be taught during the program levels and are acquainted with the Exam Regulation and evaluation parameters set by MSBTE.

VBCOP firmly believes in blended techniques of teaching comprising of use of modern ICT tools along with traditional chalk and board system.

Course Incharge for standard teaching follows CIAAN Norms under which they maintain session plan, plan for lecture execution, and continuous assessment statements along with attendance record in their course files.

Apart from classical class room lecture delivery system of teaching, innovative methods of teaching are also adopted by the faculty members of the department for effective teaching learning.

➤ **Concept based teaching with the use of ICT tools:**

With the help of Power Point Presentation the contents from the syllabus are explained to the students and the whole topic is analyzed with rapid questioning and questions for assignments based on the topics are allotted to the students.



➤ **Flipped Class room :**

The learning material of course content is provided to the students in form of URL or video clips and students are asked to prepare questionnaires to clear their doubts for better understanding of the syllabus contents.

➤ **Learning by doing :**

- The practicals for lab work based on contents of syllabus are designed considering the facts that the students can better understand the concepts by actual performance of procedures to facilitate their learning. All labs are well equipped with sophisticated instruments with Standard Operating Procedure. Pilot plant, Aseptic room, Medicinal plant garden, Instrument room and Language Lab. have been developed by the institute. Focus is given on developing the abilities and skills of students for lifelong learning.
- Various activities like poster competitions, paper presentation competitions, model making competitions and technical quiz are conducted in the institute by the department to motivate the students to prepare topics from syllabus for their better learning.
- Industrial training of three months under registered pharmacist is made compulsory for students.
- Time to time visits to industries and hospitals are organized so that the students can have the first hand experience of industrial working.

➤ **Problem based Teaching :**

To develop the thinking ability and logic building capacity of the students problem based experiment are designed for students and time to time assignments and project reports were asked from the students.

➤ **Use of Audio Visual teaching aids:**

- Well-equipped and furnished ICT Class rooms are developed by the department.
- Topics are explained to the students with e-learning in the form of clips from internet or YouTube to make them understand more clearly about the concepts and mechanisms for learning. The institute provides computer facilities with

internet and WIFI facility which provides open access to the students which can help them for self learning.

- Learning charts and models are prepared and displayed by the faculty of department in the institutional premises for better understanding of concepts.
- Theme based Museums are displayed in the premises for the ease of learning to the students.

➤ **Delivery of Content Beyond Syllabus :**

- Various pedagogical initiatives are taken by the department to deliver the content beyond the syllabus by using visual charts, videos, e-learning through Digital library etc.
- The guest lectures of resource persons from industry, hospitals and academia are regularly organized during the sessions with prior planning in academic calendars.

To motivate the self learning in the students, syllabus content based assignments are given to the students and tutorials are conducted. The impact of each and every method is analyzed by the faculty of department.

The records of lab work are evaluated by Course Incharge with continuous assessment. The internal assessment of students is also carried out on the basis of continuous evaluation through the Progressive Theory Test and Progressive Skill Test. For maintaining transparency in evaluation process, the assessed answer sheets are shown to the students with the suggestive measure for improvement.

The students scoring less than 40 % marks are identified as weak students and the remedial classes are planned and conducted to enhance the learning ability of weak students and the impact analysis of the same is conducted and documented for future references. Weak students are continuously mentored by the mentor faculty during their mentoring sessions for their academic progress and difficulty

Similarly, the students scoring more than 60% marks are identified as bright students and the bright students are encouraged by following measures -

- Institute provides extra books through college book bank scheme
- Financial support is provided for participating in co-curricular activities



- Preference is given for participation in various State and National Level Competition.
- Students are felicitated with cash prizes

The students having top position in the course by scoring more than 90 % marks are awarded by teachers sponsored cash prizes in felicitation program known as “SANMAN”

The quality of syllabus delivery is also analyzed from the feedbacks of stake holders (students and their parents). The institute follows feedback mechanism from the students and the ratings are given on various parameters in the scale of five in a fixed feedback format framed by the institute. (Annexure: IV Format for Faculty Feedback by students) The reports of the feedbacks are analyzed by the H.O.D. and reports are submitted to the Principal for necessary action.

Course Outcome and Program Outcome attainments are calculated after completion of the session for which the question papers for internal and external theory exam and Progressive Skill Test are mapped with COs and POs. The attainment of COs are calculated with the help of direct and indirect methods for attaining the POs.

#### **2.4 Initiatives related to Hospital and other related interactions (10)**

*(Give details of the industry/ hospital involvement in the program such as industry-supported laboratories, partial delivery of appropriate courses by industry experts and/or collaborative initiatives with the hospitals etc. Mention the initiatives, implementation details and impact analysis)*

VBCOP always strives to impart education of global standards. In addition to the regular compliance to the prescribed syllabus of E.R. 1991 under Section 10 of Pharmacy Act -1948, several initiatives have been taken to foster the growth of the students.

Apart from in-house faculty course delivery, the eminent personalities from Industry and academia are invited for partial delivery of contents of syllabus and content beyond syllabus. As a part of collaborative gestures benefiting the society in large the Memorandum Of Understanding with Industries, Hospitals and Academic Institutes are signed by the department. The details of collaborative activities are given in the following tables -

**Details of Industrial linkage and its significance : (Table : 2.4.1)**

Sr.No.	Name of Industry	Date of MOU	Significance of MOU
1	Priest Pharmaceuticals, Amravati	01/01/2013	Industry institute interaction
2	Dayasagar Hospital, Amravati	01/01/2013	Industry institute interaction
3	Krushivigyan Kendra & Food Testing Laboratory, Durgapur, (Badnera)	01/10/2015	Industry institute interaction
4	Vidyabharati Mahavidyalaya , Amravati	01/01/2017	Conduction of add on courses and for value addition
5	Datta Meghe Institute of Medical Sciences	30/05/2017	Industry institute interaction
6	Namo Namah Technologies	11/04/2018	Student placement activity
7	Matoshri Hospital ,Walgaon	01/06/2018	Industry institute interaction
8	Patlex Business Solutions, Latur	13/07/2019	Entrepreneurship Development
9	Glacier Pharmaceuticals, Amravati	24/02/2020	Industry institute interaction
10	Maharashtra Center For Entrepreneurship Development	27/02/2020	Entrepreneurship Development
11	Vidharbha Ayurvedic Mahavidyalaya, & Rugnalaya, Amravati	31/10/2020	Industry institute interaction
12	A-Klass drugs & Pharmaceuticals Pvt. Ltd., Khamgaon	29/11/2021	Industry institute interaction
13	Dr. Rajendra Gole Ayurvedic College Hospital & Research Center, Amravati	30/12/2021	Industry institute interaction

**Details of Activities conducted under industry institute interactions during last three years :** Table : 2.4.2

Sr.No.	Name of Activity Conducted	Date of Conduction	Impact Analysis
1	Add on Course for communication skill and Tally	2017 onwards till date	Communication skills of students were improved
2	Guest lecture by Dr.AmitKavimandan	26/07/2019	Additional knowledge beyond the syllabus was gained by students
3	Hospital visit	02/10/2019	Students gained the first hand knowledge of actual working
4	One Day Seminar on Effective communication for interview	29/11/2019	Communication skills of students were improved
5	Industrial visit	24/02/2020	Students gained the first hand knowledge of actual working
6	Add on Course for Computer literacy	From 2020 onwards	Digital communication skills of students were developed
7	One week FDP for Online Digital teaching methodology	From 29/06/2020 to 04/07/2020	Digital communication skills of teachers were developed
8	Online webinar on Telephonic interview skill	04/01/2021	Communication skills of students were improved
9	Guest lecture on Menstrual hygiene	22/10/2021	Syllabus content was gained by the students in depth delivered the expert
10	Mentoring session by Dr.Mrs.S.J.Pandharikar	08/03/2022	Additional knowledge beyond the syllabus was gained by students
11	Students three months training program	After completion of each academic year	Concepts beyond syllabus were cleared during actual day to day working of drug stores during training firsthand experience is obtained by the students which bridge the gap between the current drug practice in pharmacy

The Institute organizes educational tour for industry visits, which includes visits to the research laboratories (to study animal house, maintenance and handling) medicinal and botanical gardens, pharmaceutical manufacturing units (Allopathic and Ayurvedic products). In association with the industry and hospital.

## **2.5 INITIATIVES RELATED TO SKILL DEVELOPMENT PROGRAMS / INDUSTRY INTERNSHIP / TRAINING / HOSPITAL PHARMACY (10)**

*(Mention the initiatives, implementation details and impact analysis)*

Every student has to undergo five hundred hours training under registered pharmacist spread over the period of three months. College Training and Placement Cell facilitates arrangements for training of final year students by identifying the training centers and having MOU's with them. The cell gives orientation to the students regarding the training and procedures to prepare training report of the same. The cell also facilitates to issue official letters to the students which need to be submitted to the training institute.

On the completion of the training, the students are asked to submit a report of same and one duplicate copy of training certificate is retained by the institute. A short individual interactive session is held with training cell regarding their observation and experience during training. The evaluation of the training is done on the basis of interaction and report submitted by the students. Students are benefited from such training as they develop the skills required for running drug store as per the rules of Drug and Cosmetic Act -1940. They get confidence and practical knowledge from such trainings. They also get help in the placement for their future career development.

Institute has established an Entrepreneurship Development Cell. Under this cell, students are motivated for entrepreneurship. For this purpose, the cell organizes guest lecturers from nearby successful entrepreneurs and renowned alumni on different topics including skill development and source of finance. Every year Entrepreneur cell organizes Trade Fair in the month of September to inculcate Entrepreneur traits among the students.

Apart from the above activities, department time to time organizes guest lectures and workshops as a part of skill development program for students and staff and the details of the skill development program conducted in last three years are given below –

Skill development program conducted for Students: Table 2.5.1

Academic Session	Sr. No.	Name of the event	Date of conduction	No. of Beneficiaries	Benefit
<b>2019-20</b>	1	Guest lecture on Patient Counseling	20/07/2019	120	Skill development and value addition
	2	Industry expert lecture on Recent trends in formulations	20/07/2019	120	Skill development and value addition
	3	Guest lecture on Current Trends in Pharma Sales & Marketing	28/08/2019	120	Skill development and value addition
	4	Disaster Management Workshop	16/09/2019	120	Skill development and value addition
	5	Guest lecture on Opportunities of Business Abroad	25/09/2019	120	Skill development and value addition
	6	Guest lecture on Financial Literacy	27/11/2019	120	Skill development and value addition
	7	Workshop on Effective Communication for Interview	29/11/2019	120	Skill development and value addition
	8	Organization of Poster & Model Competition in Ayrogyam	29/01/2020	120	Skill development and value addition
	9	Visit to Priest & Glacial Pharmaceuticals	24/02/2020	60	Skill development and value addition
<b>2020-21</b>	1	Webinar on Digital Litrary	21/09/2020	60	Skill development and value addition
	2	Webinar on Global carrier opportunities to serve health care system	25/09/2020	60	Skill development and value addition
	3	Development of positive attitude	26/09/2020	60	Skill development and value addition
	4	Webinar on telephonic interview skill	04/01/2021	120	Skill development and value addition
	5	Webinar on Clearing entrance test for higher studies in abroad with financing aids	20/01/2021	120	Skill development and currier orientation
<b>2021-22</b>	1	Online guest lecture on Scientific writing	25/09/2021	60	Skill development and value addition
	2	Online guest lecture on Profile building	11/10/2021	120	Skill development and value addition
	3	Online guest lecture on Scope in Pharma sales and marketing	14/10/2021	120	Skill development and currier orientation
	4	Online guest lecture on Menstrual hygine and sanitation	22/10/2021	80	Skill development and value addition
	5	A Visit To Medicinal Plant Garden	12/02/2022	60	Skill development and value addition
	6	A guest lecture on PCOD	08/03/2022	80	Skill development and value addition
	7	A guest lecture on New Trends in Pharma Retail sector	08/03/2022	120	Skill development and value addition
	8	A guest lecture on Custodian of Health Care	28/03/2022	120	Skill development and value addition
	9	Poster presentation competition	13/04/2022	70	Skill development and value addition



	10	A mentoring session on Career opportunities	29/04/2022	120	Skill development and value addition
	11	A Visit To Institute Pilot Plat	29/04/2022	60	Skill development and value addition

A part from above skill development program every year Institute organizes Trade Fair, Sport carnival & Annual Gathering-“JOSH” to nurture Team building, Leadership & Communication skills among the students which helps them for their personality & entrepreneur development. The impact analysis of all the efforts taken is done by conducting feedback and external assessment of various activities and prizes are awarded to the best performer for motivating them.

Along with the students institute also take efforts for the skill development of teaching & non teaching staff members by motivating them for the participation in various industrial training programs, industrial visits, conferences, symposiums & qualification improvement programs by providing them partial financial support.

Skill development program conducted for Faculties at the institute: Table 2.5.2

Academic Session	Sr. No.	Name of the event	Date of conduction	No. of Beneficiaries	Benefit
<b>2019-20</b>	1	One Day Staff development program for digital teaching	13/07/2019	25	Skill development
	2	Workshop on Fire fighting	09/08/2019	25	Skill development
	3	National Conference on Emerging trends in science	1 & 2 <sup>nd</sup> Feb. 2019	50	Skill development
	4	Poster Presentation Competition & Symposium on Current Trends in Pharma Production	23/02/2019	25	Skill development
	5	A Workshop on Preparation Of Sanitizers.	16/03/2020	25	Skill development
<b>2020-21</b>	1	One week faculty development program on digital and online teaching methodology	29/06/2020 to 04/07/2020	25	Skill development
	2	One week faculty development program on effective use of ICT	06/07/2020 to 11/07/2020	12	Skill development
	3	Online Conference on Recent advancement in Pharmacological Research.	06/04/2021	25	Skill development
<b>2021-22</b>	1	A one day workshop regarding Accreditation and its scenario in NEP	13/04/2021	25	Skill development
	2	AICTE Sponsored Two Days Online National Conference On Current & future scope in Pharmacological Research.	17 <sup>th</sup> & 18 <sup>th</sup> Sept 2021	25	Skill development

**Skill development program conducted for non-teaching staff: Table 2.5.3**

Sr. No	Year	Date	Title
<b>1</b>	2019-20	09/08/2019	Workshop on Fire fighting.
		21/08/2019	Workshop on Laboratory safety.
		23/09/2019	Laboratory reagent preparation
		16/03/2020	Workshop on Preparation of sanitizer
<b>2</b>	2021-22	31/08/2021	Workshop on Fire fighting.

Apart from the in-house workshops the non-teaching staff members were deputed for training programs.



<b>CRITERION 3</b>	<b>Course Outcomes (COs) and Program Outcomes (POs)</b>	<b>60</b>
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#### 3.1. 1 Establish the correlation between the courses and the Program Outcomes (20)

(NBA defined Program Outcomes as mentioned in Annexure I)

##### 3.1.1. Course Outcomes (05)

SAR should include course outcomes of one course from each year of study, however, should be prepared for all courses.

**Note: Number of Outcomes for a Course is expected to be around 6.**

COURSE NAME: CIII YEAR OF STUDY: YYYY – YY; FOR EX. C202  
YEAR OF STUDY 2013-14

**Course Name: C101: Pharmaceutics-I, Year of Study : 2019-20**

100 is the level one of program.

C101 is the Course code for Pharmaceutics - I, taught as a first course in the level one of program.

CO101.1 to.6 are the outcomes of the first course of first level of the program.

After completion of course my students will be able to –

<b>Course Code</b>	<b>Courses Outcomes (COs)</b>
<b>CO101.1</b>	Understand and differentiate the various types of dosage forms manufactured in Pharma Industry.
<b>CO101.2</b>	Apply knowledge of various weighing, measuring system and Pharmacopoeial standards in the formulation of various dosage forms.
<b>CO101.3</b>	Select Proper packaging material for particular dosage form.
<b>CO101.4</b>	Outline a process by using distinct unit operations depending upon the physical properties of ingredients and machines.
<b>CO101.5</b>	Process and evaluate tablets and capsules.
<b>CO101.6</b>	Understand the concept of immunology used in manufacturing of various immunological products.

**Course Name: C206: Hospital and Clinical Pharmacy, Year of Study: 2019-20**

200 is the level two of program.

C206 is the Course code for Hospital and Clinical Pharmacy taught as a sixth course, in the level two of the program.

CO206.1 to.5 are the outcomes of the sixth course of second level of the program.

After completion of course my students will be able to –

Course Code	Courses Outcomes (COs)
CO206.1	Classify hospitals and illustrate their objectives, functions, drug distribution system and manufacturing practices.
CO206.2	Apply the concepts related to hospital pharmacy and explain the role of Pharmacy and Therapeutic Committee, Hospital Formulary and Drug Information Centre.
CO206.3	Identify and use surgical instruments, Surgical dressings and modern tools like computers in pharmacy.
CO206.4	Summaries the basic concepts of clinical pharmacy practice along with the physiological parameters and their significance.
CO206.5	Describe the concepts of drug interaction, drug dependence, drug abuse and bioavailability of drugs.

**Course Name: C20111 : Pharmaceutics – TH, Year of Study : 2021-22**

20 (I<sup>st</sup> & II<sup>nd</sup> digit) indicates ER

1 (III<sup>rd</sup> digit) indicates the level one of program.

11 (Last two digits) indicates the course code for Pharmaceutics - TH, taught as first course, in the level one of program.

C20111.1 to C20111.3 are the outcomes of the first course of first level of the program.

After completion of course my students will be able to –

Course Code	Courses Outcomes (COs)
C20111.1	Describe about the different dosage forms and their formulation aspects.
C20111.2	Explain the advantages, disadvantages, and quality control tests of different dosage forms.
C20111.3	Discuss the importance of quality assurance and good manufacturing practices.

**Table 3.1.1**

Similarly, Course Outcomes for all the remaining courses of the program are defined and documented.

**3.1.2 CO-PO matrices of course selected in 3.1.1 (two matrices to be mentioned, one per year from 1<sup>st</sup>& 2<sup>nd</sup> year) (05)**

**Mapping of course Outcomes and program outcomes of Program Level 1 (D. Pharm first year for ER-91)**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO101.1	3	-	-	2	1	-	2	-	2
CO101.2	1	2	-	-	2	-	-	-	2
CO101.3	1	2	-	2	1	1	1	2	1
CO101.4	2	2	-	1	-	-	1	-	2
CO101.5	3	1	-	3	3	2	1	-	1
CO101.6	1	-	-	2	2	1	1	1	2
Average	1.83	1.75	-	2	1.8	1.33	1.2	1.5	1.66

Table 3.1.2

**Mapping of course Outcomes and program outcomes of Program Level 2 (D.Pharm second year for ER-91)**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO206.1	3	2	2	3	3	2	-	2	3
CO206.2	3	-	2	3	3	3	3	-	3
CO206.3	3	3	-	3	3	-	2	3	3
CO206.4	3	-	2	3	3	3	3	3	3
CO206.5	3	-	-	3	3	3	3	2	3
Average	3	2.5	2	3	3	2.7	2.7	2.5	3

Table 3.1.2

Mapping of course Outcomes and program outcomes of Program Level 1 (D.Pharm first year for ER-2020) CAY

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
C20111.1	3	3	2	3	3	3	3	3	3
C20111.2	3	3	2	3	3	3	2	2	3
C20111.3	3	2	2	3	3	3	3	3	3
<b>Average</b>	3	2.7	2	3	3	3	2.7	2.7	3

Table 3.1.2

Note ; Correlation levels 1,2 or 3 as defined below :

1: Slight (Low)

2 : Moderate (Medium)

3: Substantial ( High)

If there is no correlation, put '-'

### 3.1.3 Course PO matrix of courses for all two years of study (10 (ER-1991)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
<b>C101</b>	1.8	1.8	-	2	1.8	1.3	1.2	1.5	1.7
<b>C102</b>	2.2	-	-	2	2	2	-	-	2
<b>C103</b>	2.4	-	-	2	2	2	2	2	2
<b>C104</b>	3	1	-	2	-	-	2	2	2.2
<b>C105</b>	3	2	-	3	3	2	2	-	3
<b>C106</b>	3	2	2	2	2	2.4	2	2	2.2
<b>C201</b>	2.2	-	-	2	2	-	-	-	2
<b>C202</b>	2.6	-	-	2.5	-	-	2	2	2
<b>C203</b>	3	-	-	2	2	2	2	-	2
<b>C204</b>	3	-	2.8	3	3	2	2.7	2.5	2.8
<b>C205</b>	2	-	2.3	2	2	2.2	2	2	2
<b>C206</b>	3	2.5	2	3	3	2.7	2.7	2.5	3
<b>Average</b>	2.6	1.9	2.3	2.3	2.3	2.1	2.1	2.1	2.2

Table 3.1.3\*

#### Mapping of course and program outcomes (Program Level 1) (ER-2020)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
C20111	3	2.7	2	3	3	3	2.7	2.7	3
C20112	3	1.8	2	3	2.8	3	2.8	2.8	3
C20113	3	2	2.8	3	3	3	2.8	2.8	3
C20114	3	1.8	2.3	3	1.5	3	3	1.5	3
C20115	3	1.3	3	3	2.3	3	3	3	3
C20151	3	2.5	2.5	3	3	3	3	3	3
C20152	3	2.2	2.4	3	3	3	3	3	3
C20153	3	2	2.8	3	2.8	2.5	2.5	2.3	3
C20154	3	2.3	3	3	3	3	3	2.3	3
C20155	3	2.8	3	3	3	3	3	3	3
Average	3	2.1	2.6	3	2.7	3	2.9	2.6	3

Table 3.1.3\*

Note: Correlation levels 1,2 or 3 as defined below :

1: Slight (Low)

2 : Moderate (Medium)

3: Substantial ( High)

If there is no correlation, put ‘ - ’

\*It may be noted that content of the table 3.1.2 must be consistent with information available in table 3.1.3 for all the courses.

#### 3.2 Attainment of Course outcomes (20)

##### 3.2.1 Describe the assessment process used to gather the data upon which the evaluation of Course Outcomes is based (10)

(Examples of data collection processes may include, but are not limited to, specific exam/tutorial questions, assignments, laboratory tests, student portfolios (A portfolio is a collection of artifacts that demonstrate skills, personal characteristics, and accomplishments created by the student during study period), internally developed assessment exams, etc. It is expected that each theory subject taught should impart specific knowledge and make a foundation for a set of Basic Concepts related to it. Similarly the laboratory experiments should have some predetermined and predefined skills which can be developed during the study).

Assessment process is divided into two parts:

**1. Internal Assessment**

**2. External Assessment**

**1. Internal Assessment:** The course outcomes are assessed on the performance of students in the internal exams. Three sessional examinations are conducted based on syllabus of 20 marks for Theory and 20 marks for practical. The short and long questions asked in the question papers of sessional exams (PTT & PST) are mapped with the COs and their attainments are calculated for ER- 91.

In the CAY (i.e.2021-22) for the level I of the program, new ER-2020 is implemented.

According to it for the level I of the program, three Practical sessional exams (PST) are conducted for 10marks as per the directives given by the PCI in the ER -2020, and then the internal assessment is calculated based on the best two averages for 10 marks scored from the practical sessional exams conducted and 10 marks are considered on the basis of assessment of reports of field visits and assignments submitted. And this total 20 marks scored is considered for the calculation of internal assessment.

Apart from the above mentioned procedure the internal assessment for the course code C20154 is calculated from the average of best two scores of three practical sessional exams conducted for 20 marks as per the directives of PCI in the ER-2020.

Similarly three theory sessional exams are conducted as per the directives of PCI in the ER-2020. Best two averages for 20 marks secured by the students in the theory sessional are considered for the internal assessment .

*(Annexure V :Sample model answer paper mapped with COs and levels of Bloom's Taxonomy)*

**2. External Assessment :** End session Examination consists of descriptive and objective type questions is conducted by Maharashtra State Board of Technical Education (MSBTE) under MSBTE examination Act. At the end of the session, based on entire syllabus for 80 marks. Also, Practical examination for 80 marks comprises of synopsis, spotting, conduction of experiments and viva-voce at the end of the session, as per syllabus of ER- 91 and ER-2020 respectively.



Following table gives the description of different tools used for evaluation of Course Outcomes: Table No. 3.2.1.1

Assessment	Tools used for Data Collection	Skills/Personal Characteristics demonstrated by the students
<b>1.External</b>	i. Question paper of Session end Theory Examination conducted by MSBTE	<ul style="list-style-type: none"> <li>➤ Performance in exam indicates depth of students' pharmacy knowledge applied to a particular course and used for betterment of society while working as pharmacist.</li> <li>➤ Writing skills for communicating for content of course.</li> <li>➤ Enhanced critical thinking required for professional identity and lifelong learning.</li> </ul>
	ii. Question paper of Session end Practical Examination conducted by MSBTE	<ul style="list-style-type: none"> <li>➤ Application of pharmacy knowledge and method for utilization of modern tools in the various experimental procedures.</li> <li>➤ Application of Pharmaceutical ethics while performing the experiments considering the impact on society and environment.</li> <li>➤ Leadership quality of the students and life long learning is also assessed during the conduction of viva and practicals.</li> </ul>
<b>2.Internal</b>	i. Progressive Theory Test (PTT) & Progressive Skill Test (PST) ii. Assignment and Reports	<ul style="list-style-type: none"> <li>➤ The Students are evaluated on collective domain of their intellectual skills and motor skills.</li> </ul>

Twenty percent weightage is given for Internal Assessment and eighty percent weightage is given for External Assessment for final evaluation of Course Outcome (In accordance with the weightage given in MSBTE curriculum.)

**3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (10)**

Program shall have set Course Outcome attainment levels for all courses.

*(The attainment levels shall be set considering average performance levels in the university/ Board examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the course outcomes of a course in addition to the performance in the University/Board examination.)*

**Measuring Course Outcomes attained through Board Examination (External assessment):**

As the MSBTE provides the average result, considering the average of previous three years result of MSBTE Exams, in the departmental meeting the target for the session 2016-17 was set and the level for achievements of the target by external assessment for the session CAYm2 is fixed on the basis of the students performance and the target level achieved in the session 2018-19 for the particular course.

The target level by external assessment for the session 2019-20 (CAYm2) for Pharmaceutics I is as follows-

- Attainment Level 1: 45 % of students scoring more than 50 % marks out of the maximum marks is considered to be attainment of “Level 1”.
- Attainment Level 2: 50 % of students scoring more than 50 % marks out of the maximum marks is considered to be attainment of “Level 2”.
- Attainment Level 3: 55 % of students scoring more than 50 % marks out of the maximum marks is considered to be attainment of “Level 3”.

The 80 % of actual attainment by direct evaluation is considered for evaluating the final attainment of COs.

**Measuring CO attainment through internal examination:**

As per the MSBTE provision three sessional exams (PTT & PST) are conducted and the mean of best two is forwarded to MSBTE as theory mean and practical mean for 20 % weightage. For the conduction of exam the question papers are framed and mapped with COs of the particular course. Hence the questions associated with same Cos are grouped together and the marks scored in the particular group is considered for calculating the attainment of the associated CO. For setting the target levels for evaluation of attainment the average of the class score is considered as standard as follows-

- Attainment Level 1: 45 % of students scoring more than average marks out of the maximum marks is considered to be attainment of “Level 1”.
- Attainment Level 2: 50 % of students scoring more than average marks out of the maximum marks is considered to be attainment of “Level 2”.
- Attainment Level 3: 55 % of students scoring more than average marks out of the maximum marks is considered to be attainment of “Level 3”.

Examples related to attainment level vs target are as follows –

**CAYm2 (Session 2019-20).**

**Course Code : C101 Name of Course : Pharmaceutics- I**

At the starting of the session after preparing the session plan, the result of the course for the previous session is considered and depending upon the level of attainment achieved the target for the upcoming session is fixed by the course in-charge –

Target set for internal assessment.

Level 1: 45 % of students scoring more than average marks

Level 2: 50 % of students scoring more than average marks

Level 3: 55 % of students scoring more than average marks

**The level achieved for individual COs :** For example course outcome attainment for course code C101 in the session 2019-20. : **Table No. 3.2.2.1**

CO No.	Level of CO attainment through internal assessment (Actual attainment)	Tools used for evaluation of CO attainment through internal assessment	Level of CO attainment through external assessment (Actual attainment)	Tools used for evaluation of CO attainment through external assessment	20% of CO attainment through internal assessment of actual attainment	80% of CO attainment through external assessment	Final attainment
CO10 1.1	1.5	PTT,PST, Practical records & assignments/reports.	3	ESE Q.1 to Q.6	0.3	2.4	0.3 + 2.4 = 2.7
CO10	1.5	PTT,PST,	3	ESE Q.1	0.3	2.4	0.3 + 2.4

# CRITERION

3

## COURSE OUTCOMES AND PROGRAM OUTCOMES

1.2		Practical records & assignments/reports.		to Q.6			= 2.7
CO10 1.3	2.5	PTT,PST, Practical records & assignments/reports.	3	ESE Q.1 to Q.6	0.5	2.4	0.5+2.4 = 2.9
CO10 1.4	2.25	PTT,PST, Practical records & assignments/reports.	3	ESE Q.1 to Q.6	0.45	2.4	0.45+ 2.4 = 2.9
CO10 1.5	1.5	PTT,PST, Practical records & assignments/reports.	3	ESE Q.1 to Q.6	0.3	2.4	0.3+2.4= 2.7
CO10 1.6	1.5	PTT,PST, Practical records & assignments/reports.	3	ESE Q.1 to Q.6	0.3	2.4	0.3+2.4= 2.7
						Mean of CO attainment	= 2.76

Since the attainment value for the course C101 is found to be 2.8

Therefore the course outcome attainment level is considered as 3 i.e. substantial

Similarly the target levels are set and attainment for the set levels are found out for all the courses of both level of the program.

#### 3.3 Attainment of Program Outcomes (20)

##### 3.3.1 Describe assessment tools and processes used for assessing the attainment of each PO (10)

*(Describe the assessment tools and processes used to gather the data upon which the evaluation of each the Program Outcome is based indicating the frequency with which these processes are carried out. Describe the assessment processes that demonstrate the degree to which the Program Outcomes are attained and document the attainment levels)*

The program outcomes attainment is assessed by direct and indirect method. The 80% of PO attainment is calculated by direct method and 20% is calculated by indirect method.

The assessment tools for direct and indirect methods used for evaluating the attainment of POs are mentioned below -

##### **Direct methods:**

1. Internal Assessment by sessional exam.(PST & PTT) i.e. Institute exams.
2. External Assessment by End Session Exam.(ESE) i.e. MSBTE Exam

##### **Indirect methods:**

1. Program Exit Survey: At the end of the program, program exit survey is conducted to summarize the feedback of students and the questionnaire of feedback are mapped with the program outcomes and rubrics are prepared for analysis and evaluation of program outcomes attainment level.
2. Alumni Survey: Alumni survey is conducted during Alumni meet organized at the institute once in a year, the feedback of Alumni are mapped with the program outcomes and rubrics are prepared for analysis and evaluation of program outcomes attainment level.
3. Employer Survey: A Campus placement drive is conducted at the end of academic year. The feedback is collected from the employers after the interview session on attainment of Pos.

#### PO evaluation

The process used to measure the attainment of POs through direct and indirect attainment is as follows,

Step 1: Course outcomes for all courses are drafted.

Step 2: Each course outcome is mapped to POs.

Step 3: Attainment of COs are measured by using external and internal assessments.

Step 4: By using result of CO attainment corresponding PO attainments are calculated.

Step 5: Also attainment of POs are calculated by using direct and indirect attainment methods.

This process is repeated for all courses in the program to calculate attainment of POs.

#### 3.3.2. Provide results of evaluation of each PO (10)

Program shall set Program Outcome attainment levels for all POs.

(The attainment levels by direct (student performance) and indirect (surveys) are to be presented through Program level Course-PO matrix as indicated).

**PO Attainment:** The PO attainment is calculated from the attainment of COs through internal and external attainments i.e. considered as PO attainment by direct methods. The value obtained from the rubrics analysis of various surveys and feedbacks is considered for PO attainment by indirect methods.

The PO attainment for the pass out batch 2019-20 (CAYm2) is shown in the table 3.3.2.1

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
C101	2.6	2.5	-	2.6	2.6	2.6	2.6	2.6	2.6
C102	2.8	-	-	2.9	2.8	3	-	-	2.8
C103	2.8	-	-	2.7	2.7	2.8	2.8	2.8	2.8
C104	1.3	1.3	-	1.3	-	-	1.4	1.3	1.3
C105	2.9	2.8	-	2.9	2.8	2.9	2.8	-	2.9
C106	2.7	2.6	2.8	2.6	2.7	2.6	2.6	2.7	2.6
C201	2.4	--	--	2.4	2.4	--	--	--	2.5
C202	2.8	--	--	2.8	--	--	2.8	2.9	2.8
C203	2.6	--	--	2.6	2.7	2.6	2.6	--	2.6
C204	2.7	--	2.7	2.7	2.7	2.7	2.7	2.7	2.7
C205	2.5	--	2.5	2.5	2.5	2.4	2.4	2.5	2.5
C206	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.9	2.8
Direct Attainment	2.6	2.4	2.7	2.6	2.7	2.7	2.6	2.6	2.6
Indirect Attainment	2.8	2.8	2.7	2.8	2.7	2.7	2.8	2.8	2.8

Level of PO Attainment: All PO's are attained with Level 3

# CRITERION

3

## COURSE OUTCOMES AND PROGRAM OUTCOMES

The PO attainment for the pass out batch 2020-21 (CAYm1) is shown in the table 3.3.2.2

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
<b>C101</b>	2.8	2.8	-	2.8	2.7	2.8	2.8	2.8	2.8
<b>C102</b>	2.7	-	-	2.7	2.7	2.7	-	-	2.7
<b>C103</b>	2.7	-	-	2.8	2.7	2.7	2.7	2.7	2.7
<b>C104</b>	2.8	2.7	-	2.7	-	-	2.8	2.7	2.8
<b>C105</b>	2.8	2.8	-	2.8	2.8	2.8	2.8	-	2.8
<b>C106</b>	2.7	3	2.6	2.7	2.8	2.7	2.7	2.7	2.7
<b>C201</b>	3	-	-	3	3	-	-	-	3
<b>C202</b>	3	-	-	3	-	-	3	3	3
<b>C203</b>	3	-	-	3	3	3	3	-	3
<b>C204</b>	3	-	3	3	3	3	3	3	3
<b>C205</b>	3	-	3	3	3	3	3	3	3
<b>C206</b>	3	3	3	3	3	3	3	3	3
<b>Direct Attainment</b>	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
<b>Indirect Attainment</b>	2.7	2.8	2.6	2.8	2.6	2.8	3	2.8	3

Level of PO Attainment: All PO's are attained with Level 3



# CRITERION

3

## COURSE OUTCOMES AND PROGRAM OUTCOMES

The PO attainment for the pass out batch 2021-22 (CAY) is shown in the table 3.3.2.3

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
<b>C101</b>	3	3	-	3	3	3	3	3	3
<b>C102</b>	3	-	-	3	3	3	-	-	3
<b>C103</b>	3	-	-	3	3	3	3	3	3
<b>C104</b>	3	3	-	3	-	-	3	3	3
<b>C105</b>	3	3	-	3	3	3	3	-	3
<b>C106</b>	3	3	3	3	3	3	3	3	3
<b>C201</b>	1.6	-	-	1.7	1.6	-	-	-	1.7
<b>C202</b>	1.7	-	-	1.7	-	-	1.7	1.7	1.7
<b>C203</b>	1.6	-	-	1.6	1.6	1.7	1.7	-	1.6
<b>C204</b>	0.2	-	0.2	0.2	0.2	0.3	0.2	0.2	0.2
<b>C205</b>	0.3	-	0.3	0.3	0.3	0.4	0.3	0.0	0.4
<b>C206</b>	1.6	1.7	1.7	1.6	1.6	1.7	1.6	1.6	1.6
<b>Direct Attainment</b>	2.1	2.7	1.3	2.1	2	2.1	2.1	1.9	2.1
<b>Indirect Attainment</b>	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3	2.9

Level of PO Attainment:

PO1, PO2, PO4, PO6, PO7, PO9 are attained with Level 3

PO5 attained with Level 2

PO3 attained with Level 1

**Average PO attainment % of last three years :**

Program Outcome No.	Program Outcome	PO Attainment % for CAYm2	PO Attainment % for CAYm1	PO Attainment % for CAY	Average PO Attainment % of last three years
PO1	Pharmacy knowledge	87	97	77	87
PO2	Modern tool usage	83	97	90	90
PO3	Leadership skill	90	93	53	79
PO4	Professional Identity	87	97	77	87
PO5	Pharmaceutical ethics	90	93	73	85
PO6	Communication skill	90	97	77	88
PO7	The Pharmacist and society	87	97	77	87
PO8	Environment and sustainability	87	97	70	85
PO9	Life long learning	87	97	77	87

Level of PO Attainment:

Program has decided following Levels for PO attainment

Level 3 - High – Score from  $\geq 75$  %

Level 2 – Medium- Score from  $\geq 60$  %

Level 1 – Low- Score from  $\geq 50$  %

# CRITERION

4

## STUDENTS' PERFORMANCE

CRITERION 4	STUDENTS' PERFORMANCE	75
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Item	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Sanctioned intake of the program (N)	60	60	60
Total number of students admitted in first year (N1)	69	65	64

Year of entry	Number of students admitted	Number of students who have successfully graduated	
		I Year	II Year
CAY (2021-22)	69	61	
CAYm1 (2020-21)	65	65	38
CAYm2 (2019-20)	64	60	60
CAYm3 (2018-19)	60	52	51
CAYm4 (2017-18)	60	47	45

CAY: CURRENT ACADEMIC YEAR

CAYm1: Current Academic Year minus 1

CAYm2: Current Academic Year minus 2 = Last Year Graduate (LYG)

CAYm3: Current Academic Year minus 3 = Last Year Graduate minus 1 (LYGm1)

CAYm4: Current Academic Year minus 4 = Last Year Graduate minus 2 (LYGm2)

### 4.1 Enrolment Ratio (Admissions) (20)

Enrolment Ratio=  $N1/N$

Item (Students enrolled at the First Year Level on average basis during the period of assessment)	Marks
$\geq 90\%$ students enrolled	20
$\geq 80\%$ students enrolled	18
$\geq 70\%$ students enrolled	16
$\geq 60\%$ students enrolled	12
$\geq 50\%$ students enrolled	08
$< 50\%$ students enrolled	0

Sr. No.	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Student Admitted in first year (N1)	69	65	64
Sanctioned Intake of Program (N)	60	60	60
Enrolment Ratio= $N1/N$	1.15	1.08	1.06
Percentage of students enrolled	100	100	100

**4.2 Success Rate (Students graduating in minimum stipulated time of two years) (20)**

*SI = Number of students graduated in minimum stipulated time / Number of students admitted.*

*Average SI = Mean of success index (SI) for past three batches.*

*Success rate score = 20 \* Average SI.*

Item	Last year Graduate (2020-21)	Last year Graduate Minus1 (2019-20)	Last year Graduate Minus 2 (2018-19)
Number of students admitted	64	60	60
Number of students graduated	60	51	45
Success index (SI)	60/64 = 0.93	51/60 = 0.85	45/60 = 0.75
Average SI	(0.93+0.85+0.75)/3 = 2.53/3 = 0.84		
Success rate	20 x 0.84 = 16.8		

**4.3 Academic Performance (Percentage of marks scored) (15)**

Academic Performance score= 1.5\*Average API

*Academic Performance Index (API) = ((Mean of Final Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Final Year/10)) x (successful students/number of students appeared in the examination)*

*Successful students are those who passed the courses in the stipulated period.*

Academic Performance	CAY (2021-22)	CAYm1 (2020-21)	CAYm2 (2019-20)
Mean of CGPA or Mean Percentage of all successful students (X)	65.78	80.71	88.11
Total no. of successful students (Y)	38	60	51
Total no. of students appeared in the examination (Z)	74	77	59
API = $x/10 * (Y/Z)$	(AP1) 3.35	(AP2) 6.21	(AP3) 6.97
Average API = $(AP1 + AP2 + AP3)/3$	$(3.35+6.21+6.97)/3 = 16.53 / 3 = 5.51$		
Academic performance Score	$= 1.5 * \text{Average API} = 1.5 * 5.51 = 8.26$		

**4.4 Placement and Higher Studies(20)**

$$\text{Assessment Points} = 20 \times (x + y)/N$$

Item	Latest Passed Batch (2020-21)	Latest Passed Batch Minus1 (2019-20)	Latest Passed Batch Minus 2 (2018-19)
Total No. of Final Year Students (N)	77	59	47
Number of students placed in Industries/ Hospitals/ Government sector through on/off campus recruitment or opted for Entrepreneurship(x)	19	07	20
No. of students admitted to higher studies (y)	18	28	15
x + y	37	35	35
Placement Index : (x + y)/N	37/77 = 0.48	35/59 = 0.59	35/47 = 0.74
T = Average of (x + y)/N	(0.48+0.59+0.74)/3 = 1.81 / 3 = 0.60		
Assessment = 20 X T	20 x 0.60 = 12.00		



# CRITERION

5

## FACULTY INFORMATION AND CONTRIBUTIONS

<b>CRITERION 5</b>	<b>FACULTY INFORMATION AND CONTRIBUTIONS</b>	<b>75</b>
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### List of Faculty Members (Exclusively for the program) : CAY 2021-22

Name of the faculty	Qualification			Association with institute (Regular / Contractual)	Designation	Date of Joining the institution	Date of Leaving the institution	Currently Associated (Yes / No)	Whether drawing salary as prescribed by the concerned state government in the respective cadre (yes / No in case of contractual faculty)
	Degree (highest degree)	university	Years of Graduation						
1.Dr. S.D.Pande	Ph.D., 2007	RTM Nagpur university, Nagpur	1990	Regular	Professor & Principal	01/08//1992	-	Yes	
2. Mr.A.R.Jaiswal	M.Pharm- 2011	Biju Patnaik University of Technology, Orissa	2001	Regular	H.O.D. (till 15/04/2022)	19/07/2002	-	Yes	
3. Mrs.L.L.Jain (Gonsalves)	M.Pharm 2014	SGBAU, Amravati	2000	Regular	H.O.D. (From 16/04/2022)	8/08/2000	-	Yes	
4. Ms. P.H.Hindocha	M.Pharm 2014	SGBAU Amravati	2002	Regular	Lecturer	3/07/2003	-	Yes	
5. Mr.A.W.Dahekar	M.Pharm 2014	SGBAU Amravati	2000	Regular	Lecturer	8/08/2005	-	Yes	
6. Mr.V.R.Mehare	M.Pharm 2011	SGBAU Amravati	2000	Regular	Lecturer	10/08/2006	-	Yes	
7. Mrs.A.B.Tasare	M.Pharm 2016	SGBAU Amravati	2001	Regular	Lecturer	1/10/2017	-	Yes	
8.Mr.Natique Ali	B.Pharm 2022	SGBAU Amravati	2022	Contractual	Lecturer	01/01/2022	26/05//2022	No	

List of Faculty Members (Exclusively for the program)

: CAYm1 2020-21

Name of the faculty	Qualification			Association with institute (Regular / Contractual)	Designation	Date of Joining the institution	Date of Leaving the institution	Currently Associated (Yes / No)	Whether drawing salary as prescribed by the concerned state government in the respective cadre (yes / No in case of contractual faculty)
	Degree (highest degree)	university	Years of Graduation						
1.Dr. K.K.Tapar	Ph.D., 2008	RTM Nagpur university, Nagpur	1982	Regular	Professor & Principal (till 31/12/2020)	01/07/1986	31/12/2020	Yes	
2.Dr. S.D.Pande	Ph.D., 2007	RTM Nagpur university, Nagpur	1990	Regular	Professor & Principal (from 01/01/2021)	01/08/1992	-	Yes	
3. Mr.A.R.Jaiswal	M.Pharm- 2011	BijuPatnaik University of Technology, Orissa	2001	Regular	H.O.D.	19/07/2002	-	Yes	
4. Mrs.L.L.Jain (Gonsalves)	M.Pharm 2014	SGBAU, Amravati	2000	Regular	Lecturer	8/08/2000		Yes	
5. Ms. P.H.Hindocha	M.Pharm 2014	SGBAU Amravati	2002	Regular	Lecturer	3/07/2003		Yes	
6. Mr.A.W.Dahekar	M.Pharm 2014	SGBAU Amravati	2000	Regular	Lecturer	8/08/2005		Yes	
7. Mr.V.R.Mehare	M.Pharm 2011	SGBAU Amravati	2000	Regular	Lecturer	10/08/2006		Yes	
8. Mrs.A.B.Tasare	M.Pharm 2016	SGBAU Amravati	2001	Regular	Lecturer	1/10/2017		Yes	

# CRITERION

5

## FACULTY INFORMATION AND CONTRIBUTIONS

List of Faculty Members (Exclusively for the program)

: CAYm2 2019-20

Name of the faculty	Qualification			Association with institute (Regular / Contractual)	Designation	Date of Joining the institution	Date of Leaving the institution	Currently Associated (Yes / No)	Whether drawing salary as prescribed by the concerned state government in the respective cadre (yes / No in case of contractual faculty)
	Degree (highest degree)	university	Years of Graduation						
1.Dr. K.K.Tapar	Ph.D., 2008	RTM Nagpur university, Nagpur	1982	Regular	Professor & Principal	01/07/1986	-	Yes	
2. Mr.A.R.Jaiswal	M.Pharm - 2011	Biju Patnaik University of Technology, Orissa	2001	Regular	H.O.D.	19/07/2002	-	Yes	
3. Mrs.L.L.Jain (Gonsalves)	M.Pharm 2014	SGBAU, Amravati	2000	Regular	Lecturer	8/08/2000	-	Yes	
4. Ms. P.H.Hindocha	M.Pharm 2014	SGBAU Amravati	2002	Regular	Lecturer	3/07/2003	-	Yes	
5. Mr.A.W.Dahekar	M.Pharm 2014	SGBAU Amravati	2000	Regular	Lecturer	8/08/2005	-	Yes	
6. Mr.V.R.Mehare	M.Pharm 2011	SGBAU Amravati	2000	Regular	Lecturer	10/08/2006	-	Yes	
7. Mrs.A.B.Tasare	M.Pharm 2016	SGBAU Amravati	2001	Regular	Lecturer	1/10/2017	-	Yes	

**Note:** Please provide the above table for last three academic years including Current Academic Year.

#### 5.1 STUDENT-FACULTY RATIO (SFR) (15) + AVAILABILITY OF HOD/ PRINCIPAL (5);(20)

No. of Students in Diploma 1<sup>st</sup>Year=**d1** : 60  
No. of Students in Diploma 2<sup>nd</sup>Year=**d2** : 60

**D1.1= NO. OF 1<sup>ST</sup>YEAR STUDENTS IN 1<sup>ST</sup>DIPLOMA PROGRAM** : 60

**D1.2= NO. OF 1<sup>ST</sup>YEAR STUDENTS IN 2<sup>ND</sup>DIPLOMA PROGRAM** : NA

**D1 = Total no. of 1<sup>st</sup>year students in all diploma programs running in the department** : 60

**d2.1= no. of 2<sup>nd</sup>year students in 1<sup>st</sup>diploma program** : 60

**d2.2= no. of 2<sup>nd</sup>year students in 2<sup>nd</sup>diploma program** : NA

**D2 = Total no. of 2<sup>nd</sup>year students in all diploma programs running in the department** : 60

No. of Students in UG 1<sup>st</sup>Year= **u1** : NA

No. of Students in UG 2<sup>nd</sup>Year= **u2** : NA

No. of Students in UG 3<sup>rd</sup>Year= **u3** : NA

No. of Students in UG 4<sup>th</sup>Year= **u4** : NA

**UG1 = TOTAL NO. OF STUDENTS IN THE UG PROGRAM** : NA

No. of Students in PG 1<sup>st</sup>Year= **p1** : NA

No. of Students in PG 2<sup>nd</sup>Year= **p2** : NA

**P1.1= NO. OF 1<sup>ST</sup>YEAR STUDENTS IN 1<sup>ST</sup>PG PROGRAM** : NA

**P1.2= NO. OF 1<sup>ST</sup>YEAR STUDENTS IN 2<sup>ND</sup>PG PROGRAM** : NA

**P1.3= NO. OF 1<sup>ST</sup>YEAR STUDENTS IN 3<sup>RD</sup> PG PROGRAM** : NA

**PG1= Total no. of 1<sup>st</sup>year students in all PG programs running in the department** : NA

**P2.1= no. of 2<sup>nd</sup>year students in 1<sup>st</sup>PG program** : NA

**P2.2= no. of 2<sup>nd</sup>year students in 2<sup>nd</sup>PG program** : NA

**P2.3= no. of 2<sup>nd</sup>year students in 3<sup>rd</sup> PG program** : NA

**PG2= Total no. of 2<sup>nd</sup>year students in all PG programs running in the department** : NA

(Note: No. of students in other programs being run in the department (For example: For Pharm.D6 year program provide number of students for all 6 years)

**No. of Students = Sanctioned Intake**

(The above data to be provided considering all the programs of the department)

# CRITERION

5

## FACULTY INFORMATION AND CONTRIBUTIONS

$S = \text{Number of Students in the Department} = D1 + D2 + UG1 + PG1 + PG2$

$$= 60 + 60 + NA + NA + NA = 120$$

$$S = 120$$

$F = \text{Total Number of Regular Faculty Members in the Department} = 7$

$$\text{STUDENT FACULTY RATIO (SFR)} = S/F = 120/7 = 17.14$$

Year	CAY	CAYm1	CAYm2
d1.1	60	60	60
d1.2	NA	NA	NA
D1	d1.1=60	d1.1=60	d1.1=60
d2.1	60	60	60
d2.2	NA	NA	NA
....			
D2	d2.1= 60	d2.1=60	d2.1= 60
u1	NA	NA	NA
u2	NA	NA	NA
u3	NA	NA	NA
u4	NA	NA	NA
UG1	u1+u2+u3+u4 = NA	u1+u2+u3+u4 = NA	u1+u2+u3+u4 = NA
p1.1	NA	NA	NA
P1.2	NA	NA	NA
.....			
PG1	p1.1+p1.2 == NA	p1.1+p1.2 == NA	p1.1+p1.2 == NA
P2.1	NA	NA	NA
p2.2	NA	NA	NA
PG2	P2.1+p2.2= NA	P2.1+p2.2= NA	P2.1+p2.2= NA
P3.1	NA	NA	NA
P3.2	NA	NA	NA
PG3	P3.1+p3.2= NA	P3.1+p3.2= NA	P3.1+p3.2= NA
Total No. of Students in the Department (S)	D1+D2+ UG1 +PG1+PG2+PG3= 60 + 60 + NA = 120	D1+D2+ UG1 +PG1+PG2+PG3= 60 + 60 + NA = 120	D1+D2+ UG1 +PG1+PG2+PG3= 60 + 60 + NA = 120
No. of Faculty in the Department (F)	F1=07	F2=07	F3=07
Student Faculty Ratio (SFR)	SFR1=S1/F1=120/07= 17.14	SFR2=S2/F2=120/07=17.14	SFR3=S3/F3=120/07=17.14
Average SFR	SFR=(SFR1+SFR2+SFR3)/3 = 17.14		

NOTE:

1. Minimum 75% should be Regular faculty and the remaining shall be Contractual Faculty as per AICTE norms and standards.
2. The contractual faculty (doing away with the terminology of visiting / adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on fulltime basis shall be considered for the purpose of calculation in the Student Faculty Ratio.
3. Depending upon the No. of programs in UG and PG the above table has to be updated accordingly. For Ex: if UG="0" and PG="1". The table may be prepared for only one PG program.

Marks to be given proportionally from a maximum of 15 to a minimum of 10 for average SFR between 20:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below:

< = 20	-	15Marks
< = 21	-	14Marks
< = 22	-	13Marks
< = 23	-	12Marks
< = 24	-	11Marks
< = 25	-	10Marks
>25.0	-	0 Marks

NOTE: IF THE INSTITUTION IS RUNNING ONLY DIPLOMA PHARMACY PROGRAM, CALCULATION OF SFR WOULD BE AS FOLLOWS:

**N**=No. of students = 2x (first year approved intake)

**F**= Total Number of Regular Faculty Members in the program

Year	N	F	SFR = N/F
CAY			
CAYm1			
CAYm2			
Average SFR for three Academic years			

HOD/PRINCIPAL IS TO BE OVER AND ABOVE 1:20 RATIO. 5 MARKS TO BE AWARDED FOR AVAILABILITY OF HOD/PRINCIPAL FOR ALL THE ACADEMIC YEARS, OTHERWISE 0 MARKS.

### 5.2 Faculty Qualification (20)

$FQ = 2 * (10x + 7y) / F$  where x is no. of faculty with M.Pharm and y is no. of faculty with B.Pharm with 3 years teaching/professional experience. F is no. of faculty required to comply 1:20 Faculty Student Ratio (no. of faculty and no. of students required to be calculated as per 5.1)

x is no. of faculty with M.Pharm = 7

y is no. of faculty with B.Pharm with 3 years teaching/professional experience = 0

F is no. of faculty required to comply 1:20 Faculty Student Ratio = 6

Therefore faculty qualification =  $2 * (10x + 7y) / F$   
 $= 2 * (10 * 7 + 7 * 0) / 6$   
 $= 23.33$

Year	X	Y	F	$FQ = 2 * (10x + 7y) / F$
CAYm2	7	0	6	23.33
CAYm1	7	0	6	23.33
CAY	7	0	6	23.33

### 5.3 Faculty Retention(20)

No. of regular faculty members in CAYm2=07, CAYm1=07,CAY=07

Sr. No.	Name of Faculty in the Program			% of Faculty retained during the last three sessions
	For the session 2019-20 CAYm2	For the session 2020-21 CAYm1	For the session 2021-22 CAY	
1	Dr.K.K.Tapar	Dr.K.K.Tapar (till 31/12/2020) Dr.S.D.Pande (From 01/01/2021)	Dr.S.D.Pande	100%
2	Mr.A.R.Jaiswal	Mr.A.R.Jaiswal	Mr.A.R.Jaiswal	
3	Mrs. L.L.Jain Gonsalves	Mrs. L.L.Jain Gonsalves	Mrs. L.L.Jain Gonsalves	
4	Miss.P.H.Hindocha	Miss.P.H.Hindocha	Miss.P.H.Hindocha	
5	Mr.A.W.Dahekar	Mr.A.W.Dahekar	Mr.A.W.Dahekar	
6	Mr.V.R.Mehare	Mr.V.R.Mehare	Mr.V.R.Mehare	
7	Mrs.A.B.Tasare	Mrs.A.B.Tasare	Mrs.A.B.Tasare	
Total no. of regular faculty	07	07	07	



Item	Marks
(% of faculty retained during the period of assessment keeping CAYm2 as base year)	
$\geq 90\%$	20
$\geq 75\%$	16
$\geq 60\%$	12
$\geq 50\%$	8
$< 50\%$	0

#### 5.4 Faculty as participants in Faculty Development/Training Activities (15)

- A Faculty scores maximum five points for participation
- Participant in 2 to 5 days Workshop/Faculty Development Program: 3Points
- Participant  $> 5$  days Workshop/Faculty Development Program: 5points

# CRITERION 5

## FACULTY INFORMATION AND CONTRIBUTIONS

Name of the Faculty	Max. 5 per Faculty		
	CAY (2021-22)	CAYm1 (2020-21)	CAY m2 (2019-20)
Dr.K.K.Tapar	NA	-	3
Dr.S.D.Pande	3	3	NA
Mr.A.R.Jaiswal	5	5	5
Mrs. L.L.Jain Gonsalves	5	5	-
Miss.P.H.Hindocha	5	5	-
Mr.A.W.Dahekar	5	5	3
Mr.V.R.Mehare	5	5	3
Mrs.A.B.Tasare	5	5	-
Sum	33	33	14
RF = Number of Faculty required to comply with 20:1 Student-Faculty ratio as per 5.1	6	6	6
Assessment = $3 \times \text{Sum} / (0.5 \text{ RF})$	33	33	14
Average assessment over three years (Marks limited to 15) =26.66			

CRITERION 6	FACILITIES	100
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### 6.1. Availability of adequate, well-equipped classrooms to meet the curriculum requirements (5)

*(Facilities for conducting theory classes)*

The Institute has adequate facilities for conducting theory and practical classes. For D. Pharm program, two classrooms are available; each 75 sq. m. with adequate seating capacity along with electric fittings like tube lights, fans, board and projector facilities. These amenities ensure proper ambience for teaching-learning process. As the strength of intake of program is 60, program is operated in single shift. Classrooms are provided with good ventilation. Theory sessional examinations and session end examinations are conducted in the classrooms.

Apart from the two classrooms, separate tutorial rooms are provided where tutorial and mentoring sessions are conducted. In addition to this, remedial classes are also conducted for the identified weak students.

A seminar hall is provided separately for conducting guest lectures with the seating capacity of 60, attached with dining area for proper conduction of skill development program.

An auditorium hall with the seating capacity of 350 students is also developed for conduction of State and National level conferences, Quiz Competition and Symposiums.

The details of the infrastructure facilities and classrooms utilized for meeting the curriculum requirements for conduction of program are given below: **Table No. 6.1.1**

Name of Room	Room No.	Capacity	Area (Sq. M)	Rooms Equipped with
<b>Class Room -1</b>	S-01	70	75	Desks, benches, podium, board and Wi-Fi
<b>Tutorial Room -1</b>	S-02	40	60	Desks, chairs, board and Projector facility with internet.
<b>Class Room -2</b>	S-04	60	60	Desks, benches, board and Wi-Fi
<b>ICT Class Room -1</b>	S-05	75	75	ICT facilities, Desks, benches, podium, interactive board with internet facility.
<b>Seminar Room</b>	F-06	60	75	ICT Facility, chairs, podium with audio visual facility, board and Wi-Fi
<b>Auditorium</b>	S-07	350	295	LCD, State -of- art infrastructure, chairs, podium, change room ,toilets Wi-Fi

**6.2. Faculty rooms****(5)***(Conducive sitting place)*

The faculty rooms are available in adequate number, and each faculty is provided with open cabin. The cabins are provided with necessary furniture and electrical fittings with wi-fi / internet facilities. The details of the faculty rooms along with the facilities available are given in the table below – **Table No. 6.2.1**

Name of Room	Room No.	Used for	Area (Sq. m)
<b>Principal's Chamber</b>	G-01	Principal	32
<b>H.O.D. Cabin</b>	G-04	H.O.D.	30
<b>Faculty Room with cubicals</b>	F-21	Faculty	90

**6.3. Laboratories including preparation room (wherever applicable), instrument/machine room and computer labs along with equipment and relevant facilities** **(50)**

*(Scientific Experiments Conducting/Computing facilities; availability, adequacy & effectiveness)*

Five laboratories for the program are provided which are well equipped with adequate facilities and safety measures and are spacious for comfortable working of 25 students, attached with preparation rooms.

In all laboratories, electrical and plumbing fittings are provided adequately. Laboratories have un-interrupted power supply using solar system and power backup system in campus and fire fighting system is installed in all the laboratories. The list of laboratories used for conduction of program during CAY 2021-2022 with the contents therein are tabulated below:

**Table No.: 6.3.1 :** Details of Labs. used for running the program.

Lab Description	Room No.	Batch Size	Area (Sq. M)	Availability of manuals	Quality of Instruments	Safety measures	Remarks
1. Pharmaceutical Chemistry Lab. with preparation room, equipped with fuming chamber & exhaust fans, centralized electric, gas & water supply facility.	G-17	25	100	Available	Excellent	1.Fire extinguisher 2.Sand buckets 3.Safety guidelines displayed. 4. .First aid	Used for conduction of practical classes of course no. C202 & C20152
2. Human Anatomy & Physiology and Pharmacognosy Lab. with preparation room, along with electric and water supply and proper display of charts and models.	F-08	25	100	Available	Excellent	1.Fire extinguisher 2. Safety guidelines displayed. 3. .First aid	Used for conduction of practical classes of course no. C20154 & C20153
3. Pharmaceutics Lab. with preparation room and well equipped machine room attached for the purpose of conduction of regular day to day practicals for utilization of machines, exhaust fans, centralized electric, gas & water supply facility.	F-12	25	100	Available	Excellent	1.Fire extinguisher 2.Safety guidelines displayed. 3. .First aid	Used for conduction of practical classes of course no. C201 & C20151
4. Pharmacy practice Lab. with	F-18	25	100	Available	Excellent	1.Fire extinguish	Used for conduction

preparation room, exhaust fan, electric, gas & water supply facility and attached aseptic room having facility of change room for the maintenance of aseptic conditions.						er 2.Safety guidelines displayed. 3.First aid	of practical classes of course no. C206 & C20155
Pharmacology Lab. with preparation room, Centralized aeration system, electric, gas & water supply facility.	G-27	25	100	Available	Excellent	1.Fire extinguish er 2. Safety guidelines displayed. 3.First aid	Used for conduction of practical exams (spotting) of course no. C203
Computer Room & Language Laboratory, equipped with 20 units with legal software	F-05	NA	75	Available	Excellent	1. Fire extinguish er.	Used for conduction of practicals of course no. C203

**Note:** Give a separate table for Instrument room and Machine room listing all the instruments/equipment present with their make and model, existence of SOPs and Log Books for individual equipment.

The list of equipments available in each laboratory is given below-

**Table No. 6.3.1.1 : Details of Instrument Room**

Room No.	Batch Size	Area (Sq. M)	Availability of SOPs	Quality of Instruments	Safety measures	Remarks
G -12	10	60	Available	Good	Fire Extinguisher	All instruments are placed as per the requirement of PCI

## LIST OF EQUIPMENTS PLACED IN INSTRUMENT ROOM

Name of Equipment	Make & Model
Nephelometer Digital Model	Make- Elico Model- No. FGCL052D
pH Meter Digital With Combined Electrode	Make- Elico Model –FGL1120
Fluorimeter Digital With 05 No Glass Test tube	Make- Elico Model No- FGCL053F
Conductivity Meter Digital With Cell Type CCo3	Make- Elico Model No FGCL053F
Colorimeter Digital With 8 Filters & 6 No Glass Test Tube Elico Model	Make- Elico Model No.- FGCL 157
Afcoset electronic precision balance.	Make-Electronic Model : fx300
Spectrophotometer UV- visible Pc based unit. with software	Make –Shimadzu Model- UV-1601 PC
Conductivity meter	Digital model, systronic make
Photo-fluorometer	Make- Systronic Model- 151
Nephlo turbidity meter digital	Make – Systronics Model no- 132
I.R. Moisture Balance	Make-Kamal Industries
KBR Die. 13 mm	Make – Toshin
Pellet Holder	Make & Model- Toshin
Dry Box for Storage	Make- Toshin Model- Acalic Faber
FTIR Spectrophotometer with Accessories	Make- Shimadzu Model- FTIR 8400s
Oven hot Air Temp up to 250 C	Make & Model – Shital
Electronic Weighing Balance	Make –OHAUS Model-AR2140,Cap:210gm,Reds-0.1gm
Vacuum pump oil free for H.P.L.C Solvent	Make- PCI analytical Model-P C I -15
Photoelectric Calorimeter	Make & Model- Elico
Refractometer Complete	Make & Model- Abbe
Fire Extinguisher	Make & Model- ABC
Polari meter Research	Make – Matzer Model- METZ 1409
Precession Melting point Boiling point Apparatus Complete	Make & Model-Compbell
Colorimeter	Make & Model- Systronic Model- Photoelectric Analog
Colorimeter	Make- Systronic Model- Photoelectric Digital
pH Meter	Make & Model- Systronic
Incubator	Model- Glass Door with S.S. Inner Chamber Size 18x18x18
Magnetic Stirrer with Hot Plate	Make & Model- REMI 2 MLH Complet
Platform Balance Complete (05 kg)	Model-05 kg Capacity
Centrifuge machine	Model- 1x15 ml Tubes
Triple Beam Balance	Make- Dolphin Model-111 gm capacity
Electronic Balance	Make – Citizen



	Model- CTG302
Conductivity Meter Pocket	Make – Equip Tronic Model- pocket
Digital Conductivity Meter	Model- EQ-660B
“Wensar” Digital Electronic Balance	Model-ECB-300
“Equiptronics” Digital pH meter	Model-EQ-610
“El” Digital Tele-thermometer	Model-461

Table No. 6.3.1.2 : Details of Machine Room

Room No.	Batch Size	Area (Sq. M)	Availability of SOPs	Quality of Instruments	Safety measures	Remarks
<b>F-15 &amp; G- 25</b>	10	130	Available	Excellent	1. Fire extinguisher & safety guidelines displayed.	For the smooth conduction of day to day practicals, the machine room is attached to the Pharmaceutics lab and the additional machines for Industrial use are placed in Pilot Plant in support of machine Room.

<b>LIST OF EQUIPMENTS PLACED IN : MACHINE ROOM</b>	
Centrifuge machine	Model : TC-450
Hot Air Oven	Make – Shital Model- SST-12
Hot plate Round 4” dia 500 W	Make & Model – Shital
Hot air Oven Thermo stat controlled	Make – Shital Model-SSI-12(45x45x45 cms)
Oven Thermostatic controlled	Make – Shital Model-SSI-12 , Thermostatic controlled
Digital Tablet Dissolution machine	Make – Electrolab Model- TDT-06PL
Friability Test App. with Double Drum	Make- Rajesh Chm Model- Digital RPM code: 1015 C
Tablet Disintegration Test machine	Make-Kamal Industries. Model- Two basket Assembly
Tablet Friability Test apparatus	Make-Kamal Industries Model-Double drum
Bulk Density Test Apparatus	Make-Kamal Industries Model- manual
Strip leakage Apparatus	Make-Kamal Industries
Electronic Weighing Balance	Make & Model- Ohaus Model-V31x3, cap: 3000gm, Reda-01g.
Tablet Hardness Tester	Model- Monsanto Type
Tablet Punching Machine	Model- hand Operated
Capsule Filling Machine	Model- Hand Operated 100 holes
Friability Test App.	Sonalee Traders Amravati.
Table Disintegration Test	Sonalee Traders Amravati.
Blender	Sonalee Traders Amravati.
Ball Mill	Sonalee Traders Amravati.
Distilled Water Still Plant	Model- SSI-14
Heating Mantle Multi size	Model- Cap. 50-500ml Built in Energy Regulator
Centrifuge	Make & Model – Remi
Tincture press	The Berar Mechanical Work
Tablet Counter	Neneel Enterprises
Collapsible Tube Filling machine	Model- Hand operated
Tube Crimping & Sealing Machine	Neneel Enterprises
Demineraliser two bed	Make & Model- Indian CA 20 V
Tablet Coating Machine	Ankit Engineering Corporation
Veego Tablet Dissolution Test Apparatus	Model-VDAT
Disintegrating test Apparatus (Double Bask)	Make & Model- Compbell
Hardness Tester	Make & Model- Monosato
Tablet Counter Device	Make & Model- Aluminium
Tablet punching Machine	Model- Single Stroke Hand Operated
Ampoule Clarity Test Apparatus Complete	Hemco Pharma Kalbadevi Road Bombay

Dispensing Balance	Model- 50 gm
Collapsible Tube Crimping Sealing Machine	Rajesh Chemical Co. Bombay
Tablet Hardness Tester	Make & Model- Pfizer Model- Pfizer type with dial 20 PSI SSI - 62(A)
Brookfield Viscometer	Make-Labman, Model-LMDV – 200
Rotary Evaporator	Make- Equitron, Model- EV-11
<b>LIST OF EQUIPMENTS PLACED IN : PILOT PLANT</b>	
Cadmach single stroke Tablet machine	Make - Cadmach machinery Model – SSF3
Rotary tablet machine (10stn)	
Coating pan 12” inc	Make & Model- Pharma Fab
Fluid Bed Dryer (5kg)	Make & Model-Pharma fab
Oscillating Granulator (lab)	Make & Model – Pharma Fab
Homogenizer C Stand	Make & Model –Pharma Fab
Turn Table	Make & Model-Pharma Fab
S.S. Storage Tank (25 lits)	Make & Model- Pharma Fab
Slat Chain Conveyer P.P Belt 6”	Make & Model- Pharma Fab
Polishing pan 12 “	Make & Model- Pharma Fab
Double Cone Bender 10 kg	Make & Model- Pharma Fab
Blender	Mass mixer, paddle block capacity 5 Kg
Tray Dryer (6 Tray)	Make & Model-Pharma Fab
Multi Mill	Make & Model – Pharma Fab Model- S.S. 316 (lab)
Planetary Mixer 05 lit	Make & Model- Pharma Fab
Vibro Sifter 12 “	Make & Model- Pharma Fab
Two head Bottle Washing and Brushing	Make & Model- Pharma Fab
Voluntary Filling Machine	Make & Model-Pharma Fab
Filter press	Make & Model- Pharma Fab
Transfer Pump	Make & Model- Pharma Fab
Stirrer C Stand	Make & Model- Pharma Fab
S.S. Vessels (10 LITS)	MAKE & MODEL- Pharma Fab
P.P. Cap. Sealing Machine	Make & Model- Pharma Fab
Double Cone Blender 5kg	Make & Model- Kamal Ind.
Capsule filling machine	Make & Model- Kamal Ind. Model- 300 capsule / operation automatic
Capsule loading machine	Make & Model- Kamal Ind. Model- 300 capsule / operation automatic
Dehumidifier	Make & Model- Kamal Ind. Model-Refrigeration type (1 tone)
Electronic Balance	Make & Model – Citizen Model- CTG302

**6.4. Drug Museum****(10)**

*(Type & quality of collection in the museum with proper labelling and display)*

The pharmaceutical museum contains the show-casing of products made by the students, solid dosage forms (tablets and capsules), different types of packing (strip / blister), granules, marketed products, injectable formulations, infusion bottles, liquid preparations for humans, aerosols, cosmetic preparations, natural crude extracts and semisolid ointments. The museum is designed with special care to highlight the displayed products and is located on the ground floor, facing the entrance gate, which becomes visible to everyone while entering. The museum is designed to provide separate sections for various categories of products. Further, electrical points are provided to illuminate the cabinets. The list of products displayed in the drug museum are given in the following table:

**Table no:6.4.1**  
**Anatomy – Physiology**

Sr. No	Name of Specimen	Sr. No	Name of Specimen
1	Human Kidney	6	Human Intestine
2	Human Brain	7	Human Spleen
3	Human Eye	8	Human Stomach
4	Human Liver	9	Human Embryo
5	Human Lung	10	Human Teeth

**Pharmacognosy :**

Sr. No	Name of Crude drug	Sr. No	Name of Crude drug
1	Cinnamon	13	Cassia
2	Nutmeg	14	Pinus cone
3	Kurchi	15	Behera
4	Dioscorea	16	Fenugreek
5	Vidang	17	Clove
6	Fennel	18	Brahmi
7	Acacia	19	Ashoka

8	Fern	20	Caraway
9	Celery	21	Linseed
10	Dill	22	Nux Vomica
11	Rose	23	Bael Fruit
12	Aconite		

**Pharmaceutical Products :**

Sr. No	Name of product	Sr. No	Name of product
1	Powder	11	Gel
2	Tablet	12	Cream
3	Capsule	13	Ointment
4	Nasal spray	14	Perfume
5	Linctus	15	Vial
6	Elixir	16	Saline solutions
7	Suspension	17	Injections
8	Syrup	18	Lotion
9	Emulsion	19	Mouthwash
10	Shampoo		

**Cosmoceutical Products :**

Sr. No	Name of Cosmoceutical Products	Sr. No	Name of Cosmoceutical Products
1	Shampoo	7	Talcum Powder
2	Dye	8	Compact Powder
3	Hair care products	9	Lipstick
4	Eye products	10	Nail Polish
5	Soaps	11	Nail Polish Remover
6	Cold cream	12	Hair remover cream

**6.5 Medicinal Plant Garden****(10)**

*(Area, demarcation, temporary/permanent arrangement, planting of plants under the shade in demarcated areas, adequacy of the plants)*

**Area :** The area of the medicinal plant garden is 2500 sq. ft in which various medicinal plants are maintained.

**Demarcation :** In the campus, separate medicinal plant garden is demarcated for pharmacy programs.

**Arrangement :** Permanent

**Adequacy of the plants:** Adequate plants have been planted considering the syllabus content of program.

**Overall look and maintenance of the medicinal plant garden**

- Total area of the garden is 2500Sq. ft.
- The boundary of the garden is properly named and demarcated.
- The medicinal plant garden is permanent and is provided with all time maintenance facility. A permanent gardener takes care about watering and other requirements for maintenance of medicinal plants.
- The plant density of the medicinal plants is maintained properly with adequate distance required for proper growth of plant and area to study the plant.

**Types, varieties and number of plants, available in the garden**

Vidyabharati College of Pharmacy, Amravati is maintaining the medicinal plant garden which includes several types of herbs, shrubs and trees. The garden is located on back side of the college. The medicinal garden is managed by the faculty and student representatives from each class. A gardener looks after the water pouring, cleaning and providing the pesticides from time to time. The medicinal plants maintained in the garden are listed in the table given

below. The plantation has been done appropriately in demarcated areas. All the plants are provided with name plates bearing vernacular and botanical names.

**Table no:6.5.1**

Sr. No	Biological Name	Family	Common Name
1	<i>Limoniaacidisimia</i>	Rutaceae	Kavat
2	<i>Cinnamomumtamala</i>	Lauraceae	Tejpan
3	<i>Murrayakoeniggi</i>	Rutaceae	Curry Patta
4	<i>Zingiber officinale</i>	Zingiberaceae	Adrak
5	<i>Calotropis procera</i>	Asclepiadaceae	Rui
6	<i>Myristicafragrans</i>	Myristicaceae	Jaiphal
7	<i>Azadirachta indica</i>	Meliaceae	Neem
8	<i>Alstoniascholaris</i>	Apocynaceae	Saptaparni
9	<i>Plumbago zeylanica</i>	Plubaginaceae	Chitrak
10	<i>Cassia fistula</i>	Fabaceae	Amaltash
11	<i>Bombax ceiba</i>	Malvaceae	Katesawar
12	<i>Simarouba glauca</i>	Simaroubaceae	Simarouba
13	<i>Albizialebbeck</i>	Fabaceae	Shiras
14	<i>Catharanthus roseus</i>	Apocynaceae	Sadaphuli
15	<i>Syzygiumalmuni</i>	Myrtaceae	Jamun
16	<i>Mimosa pudica</i>	Fabaceae	Touch Me Not
17	<i>Madhukalongifolia</i>	Sapotaceae	Moha
18	<i>Chrysopoganzizanioides</i>	Poaceae	Wala
19	<i>Bixaorellana</i>	Bixaceae	Shendri
20	<i>Carissa carandas</i>	Apocynaceae	Karvand
21	<i>Adrographispaniculata</i>	Acanthaceae	Kalmegh
22	<i>Coleus ambonicus</i>	Lamiaceae	PaanOwa
23	<i>Kaempferia galanga</i>	Zingiberaceae	Kapur Kacheri
24	<i>Aegle marmelos</i>	Rutaceae	Bael
25	<i>Vitex negundo</i>	Lamiaceae	Kambarmodi
26	<i>Allium sativum</i>	Liliaceae	Lasun
27	<i>Aloe barbedensis</i>	Liliaceae	Korphad
28	<i>Bryophyllumpinnatum</i>	Crassulaceae	Panphuti
29	<i>Withaniasomnifera</i>	Solanaceae	Ashwagandha
30	<i>Rauwolfia serpentina</i>	Apocynaceae	Sarpgandha
31	<i>Cissusquadrangularis</i>	Vitaceae	Hadjod
32	<i>Adhatodavasica</i>	Acanthaceae	Adulsa
33	<i>Murrayakoeniggi</i>	Rutaceae	Curry Patta
34	<i>Kaempferia galanga</i>	Zingiberaceae	Kapur Kacheri
35	<i>Commiphoramukul</i>	Burseraceae	Guggul



36	<i>Curcuma longa</i>	Zingiberaceae	Haldi
37	<i>Ocimum sanctum</i>	Labiatae	Krushna Tulas
38	<i>Ocimum basilicum</i>	Labiatae	Sabja
39	<i>Adenantharpavonina</i>	Fabaceae	Ratangunj
40	<i>Terminalia arjuna</i>	Combretaceae	Arjuna
41	<i>Aloe barbedensis</i>	Liliaceae	Korphad
42	<i>Sapindussaponaria</i>	Sapindaceae	Ritha
43	<i>Cymbopogonflexuosus</i>	Gramineae	Lemon Grass
44	<i>Plumbagozeylanica</i>	Plumbaginaceae	Chitrak
45	<i>Terminalia belerica</i>	Combretaceae	Behada
46	<i>Barleriaprionitis</i>	Acanthaceae	Katekoranti
47	<i>Abrusprecatorus</i>	Fabaceae	Lalgunja
48	<i>Curcuma longa</i>	Zingiberaceae	Haldi
49	<i>Argyridspeciosa</i>	Convolvulaceae	Samodrashok
50	<i>Terminalia chebula</i>	Combretaceae	Hirda
51	<i>Putranjivaroxburgii</i>	Euphorbiaceae	Putranjiva
52	<i>Terminalia arjuna</i>	Combretaceae	Arjuna
53	<i>Embillicaofficialis</i>	Euphorbiaceae	Amla
54	<i>Asparagus racemosus</i>	Liliaceae	Shatavari
55	<i>Eucalyptus globulus</i>	Myrtaceae	Nilgiri
56	<i>Caesalpinia bonducella</i>	Fabaceae	Sagargoti

Apart from the above species of plants, various species of the plants have been planted in campus other than demarcated area.

#### 6.6 Provision of Jan Aushadhi Drug Store (5)

The institute is still in the process of identifying the place and applying for Jan Aushadhi Drug Store.

#### 6.7 Adequacy and Utilization of Machine Room (5)

The laboratory attached machine room is maintained to support the conduction of laboratory work of course no. C101, 201, 20111 & 20151. The utilization records of the machines are maintained in logbook. The details of machine used frequently are given below –

Table No. 6.7.1

Sr. No	Name of Equipments	Date of purchase	Cost in Rs.
1	Hot air oven	6/28/1995	7920.00
2	Ball mill	10/25/1986	2425.00
3	Mass mixture	5/26/1996	25300.00
4	Disintegration test apparatus	06/20/1990	7400.00
5	Tablet dissolution test apparatus	8/29/2018	20900.00
6	Centrifuge	9/1/1987	821.00
7	Mechanical stirrer	6/28/1995	1870.00
8	Ampoule filling and sealing machine	8/27/2018	18408.00
9	Tincture press	8/9/1987	225.00
10	Ointment tube filling machine	7/1/1995	8117.00
11	Tube sealing machine	9/26/1987	832.00
12	Hand grinder	01/07/1995	2032.00
13	Hand operated Capsule filling machine	25/06/1995	15895.00
14	Bottle sealing machine	7/1/1995	4361.00
15	Hammer mill / Disintegrator	6/02/1990	7400.00
16	Tablet coating machine	2/8/1990	6325.00
17	Heating mantle	9/1/1987	477.00
18	Granulating sieve sets	6/17/1996	9091.00
19	Dispensing balance	3/12/1986	1600.00
20	Soxhlet apparatus	2/1/1995	1200.00
21	Ointment slab	8/27/2018	2719.00
22	Percolator	6/29/1985	2300.00
23	Monsanto hardness tester	6/28/1995	36996.00
24	Pfizer hardness tester	6/28/1995	13750.00
25	Autoclave (Small)	8/2/1995	395.00
26	Blender	3/29/1987	1484.00
27	Hand operated Tablet compression machine	1/9/1996	6000.00
28	Tablet Counter	7/1/1995	600.00
29	Friability Test Apparatus	7/1/1995	7000.00
30	Clarity Test Apparatus	11/22/2018	2792.00
Total Cost of Equipments			216635.00

## 6.8. Non Teaching Support

(10)

Sr. No	Name Of Technical Staff	Designation	Date of Joining	Qualification		Other Technical Skills Gained	Responsibility
				At Joining	Now		
1	Mr. D. P. Vyas	Lab Technician	10/01/2001	D.Pharm	D.Pharm	Attended skill development programs for First aid, Fire fighting, Chemical reagent preparations.	1.Preparation of required reagents. 2.Maintenance of equipments and instruments. 3.Maintenance of stock registers. 4.Providing assistance in conduction of practicals and handling of instruments.
2	Mr.A.P. Jadhao	Lab Technician & Data Operator	01/01/2008	B.Sc	B.Sc	Received MSCIT certificate and gained competence in Marathi typing.	1.Uploading and processing of data to various apex bodies. 2. Maintenance of equipments of Computer Laboratory. 3. Maintaining stock registers and internet usage logbook. 4. Keeping the lab neat and clean. 5.Providing assistance in conduction of practicals and handling of Computer equipments.

3	Mr.N.R. Marodkar	Lab.Technician	1/8/2019	D.Pharm	D.Pharm	Attended skill development programs for First aid, Fire fighting, Chemical reagent preparations.	1.Preparation of required reagents. 2.Maintenance of equipments and instruments. 3.Maintenance of stock registers. 4.Providing assistance in conduction of practicals and handling of instruments.
4	Miss .N.R. Marodkar	Lab.Technician	1/8/2019	D.Pharm	D.Pharm	Attended skill development programs for First aid, Fire fighting, Chemical reagent preparations.	1.Preparation of required reagents. 2.Maintenance of equipments and instruments. 3.Maintenance of stock registers. 4.Providing assistance in conduction of practicals and handling of instruments.

**6.8.1. Availability of adequate and qualified technical supporting staff for Program specific laboratories (5)**

*(Assessment based on the information provided in the preceding table)*

For providing the expert assistance for the conduction of practicals as a part of syllabus content delivery, the qualified technical staff with competent skill has been appointed at various areas of laboratory work.

**Table No. 6.8.1.1**

Sr.No.	Name of Technician	Qualification	Area of work
1	Mr.D.P.Vyas	Diploma in Pharmacy	Aseptic room, Pharmacy Practice and Pharmaceutical chemistry Laboratories
2	Mr.A.P.Jadhao	Bachelor of Science (Computer)	Computer Laboratory,HAP and Pharmacology Laboratory
3	Mr.Nikhil.R.Marodkar	Diploma in Pharmacy	Pharmaceutics and Pharmaceutical chemistry Laboratory
4	Miss.Nikita.R.Marodkar	Diploma in Pharmacy	Pharmaceutics Laboratory and Machine room

- Apart from above mentioned technical staff, one qualified Librarian and Store keeper, adequate Office Staff and lab attendants are appointed for smooth conduction of institutional work and record keeping.
- Cleaning staff and security staff are made available on contractual basis.

**6.8.2. Incentives, skill upgrade, and professional advancement (5)**

*(Assessment based on the information provided in the preceding table)*

For skill upgradation and professional advancement of the Non- Teaching staff members,the Institute motivates and deputes them for skill development and Qualification Improvement

Program and depending upon their skill and qualification improvement, they have been promoted to the higher designation under Career Advancement Scheme.

To facilitate the skill development of non-teaching staff members, Institute organizes Skill Development Programs and also deutes them to the programs organized by the other institutes also. Some of the non-teaching staff members have been also deputed to the industries under Institute Industry Interaction Program.

Details of incentives and professional advancement are given below –

- Mr.L.S.Pande was appointed as Lab. Attendant on qualification of B.A. in the session 1998-1999. After qualification improvement of Master course in Computer application, he was promoted to the post of Office Superintendant in the session 2014-15.
- Mr.M.G.Bansod was appointed as a peon on qualification of S.S.C. in the year 2005. On the basis of his improved qualification of C. Lib. in the year 2014, he was promoted to the post of Library attendant from the session 2017-18.

The details of the skill development Programs are given below –

**Table No 6.8.2.1**

Sr. No	Year	Date	Title
1	2019-20	09/08/2019	Workshop on Fire fighting.
		21/08/2019	Workshop on Laboratory safety.
		23/09/2019	Laboratory reagent preparation
		16/03/2020	Workshop on Preparation of sanitizer
2	2020-21	24/12/2020	Seminar on New Education Policy
3	2021-22	31/08/2021	Workshop On Fire Fighting

CRITERION 7	CONTINUOUS IMPROVEMENT	30
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### 7.1 Improvement in Success Index of Students (10)

Items	LYG* (2020-21)	LYGm1 (2019-20)	LYGm2 (2018-19)
Success index (from 4.2.1)	0.93	0.85	0.75

**\*Last year graduate and m1 & m2 indicate minus one year and minus two years respectively**

*SI = (Number of students who have passed from the program in the stipulated period of course duration) / (Number of students admitted)*

Assessment shall be based on improvement trends in success indices.

Marks are awarded accordingly.

### 7.2 Improvement in Academic Performance in Final Year (10)

*Assessment is based on improvement in:*

Items	LPB (2021-22)	LPBm1 (2020-21)	LPBm2 (2019-20)
Academic Performance Index (from criteria 4.3)	3.35	6.21	6.97



**7.3 Improvement in laboratories (10)**

New Facility created in the program during the last three years

Year of Assessment	Improvement in laboratory done
<b>CAY : 2021-22</b>	<ol style="list-style-type: none"> <li>1. Laboratory equipments were purchased for following laboratories               <ol style="list-style-type: none"> <li>a. Pharmaceutics Laboratory – Pharmacopoeial sieves sets and desiccators were purchased.</li> <li>b. Pharmacognosy Laboratory – Thermostatic water bath</li> <li>c. Pharmacy Practice Laboratory- Female contraception model and devices.</li> <li>d. Three air conditioner were purchased for seminar hall.</li> <li>e. One Cassette air conditioner was purchased for auditorium.</li> <li>f. Various laboratory equipments were purchased for the implementation of new Education Regulation.</li> </ol> </li> </ol>
<b>CAYm1 : 2020-21</b>	<ol style="list-style-type: none"> <li>1. The Solar rooftop of plant for electricity generation installed to save the electricity.</li> <li>2. Virtual classroom and laboratory facilities are developed for online teaching learning considering the lockdown due to COVID- 19 pandemic.</li> </ol>
<b>CAYm2 : 2019-20</b>	<ol style="list-style-type: none"> <li>1. Firefighting systems had been installed in all the laboratories.</li> <li>2. Smart digital classrooms has been developed with interactive boards.</li> <li>3. Reprography facility has been extended.</li> <li>4. Library Stack room facility were enhanced.</li> <li>5. Aseptic room was renovated with new electric fixtures and painting.</li> <li>6. New models and charts were purchased for laboratories.</li> </ol>

CRITERION 8	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	60
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**8.1 ORGANIZATION, GOVERNANCE AND TRANSPARENCY (25)****8.1.1 Governing body, administrative setup, functions of various bodies, service****Rules Procedures, recruitment and promotional policies (10)**

*List the governing, senate and all other academic and administrative bodies; their memberships, functions, and responsibilities, frequency of their meetings; and attendance there in, participation of external members in a tabular form. A few sample minutes of the meetings and action taken reports should be annexed. The published rules, policies and procedures; year of publication and its implementation shall be listed. Also state the extent of awareness among the employees/students.*

The governance aspects are dealt and recorded by the different administrative bodies listed below which look after the governance of the organization and ensure its transparency to stakeholders.

A) Governing Body (GB)

B) College Development committee (CDC)

C) Internal Monitoring Committee (IMC)

The transparency of the procedures and code of conduct followed by the institute are made available through the following -

D) Organizational Chart

E) Rules and procedures, recruitment and Promotional policies

**A) Governing Body:** The governing body is constituted as per AICTE norms. It consists of management representatives, faculty representatives and experts from the field of industry and academia. The body mainly plays the governance part by proper planning and monitoring of utilization of resources.

The following is the composition of governing body of VBCOP for the period 2018 – 2022:

**Composition of Governing Body Table No. 8.1.1.1  
(2018 – 2022)**

Sr. No.	Name of the Member	Designation
1.	Mr. R.D. alias Raosaheb Shekhawat (President VBSM, Amravati)	Chairman
2.	Mr.B.L.Shekhawat (Society Nominee)	Member
3.	Dr. A.D Chavhan (Society Nominee)	Member
4.	Mr. Raghunathji Rode (Society Nominee)	Member
5.	Mr. S.V. Kalikar (Educationalist from region)	Member
6.	Mr.Ashok I. Nanwani (Industrialist from region)	Member
7.	Dr.S.D.Pande (Faculty Nominee)	Member
8.	Mr. A.R. Jaiswal (Faculty Nominee)	Member
9.	Dr. F.C.Raghuwanshi (Nominee of University)	Member
10.	Nominee of D.T.E. (Director DTE)	Ex-officio Member
11.	Nominee of M.S.B.T.E. (Dy. Secretary of the region)	Ex-officio Member
12.	Nominee AICTE (Office incharge , Western region)	Ex-officio Member
13.	Dr.K.K.Tapar (Principal)	Member Secretary

**Composition of New Governing Body with Effect from 08/04/2022 : Table No. 8.1.1.2**

Sr. No.	Name of the Member	Designation
1.	Mr. R.D. alias Raosaheb Shekhawat (President VBSM, Amravati)	Chairman
2.	Mr.B.L.Shekhawat (Society Nominee)	Member
3.	Dr. A.D Chavhan (Society Nominee)	Member
4.	Mr. Raghunathji Rode (Society Nominee)	Member
5.	Mr. S.V. Kalikar (Educationalist from region)	Member
6.	Mr.Ashok I. Nanwani (Industrialist from region)	Member
7.	Dr.Mrs.M.D.Game (Faculty Nominee)	Member
8.	Miss.L.J.Gonsalves (Faculty Nominee)	Member
9.	Dr. Arun D.Chavhan (Nominee of University)	Member
10.	Nominee of D.T.E. (Director DTE)	Ex-officio Member
11.	Nominee of M.S.B.T.E. (Dy. Secretary of the region)	Ex-officio Member
12.	Nominee AICTE (Office incharge , Western region)	Ex-officio Member
13.	Dr.S.D.Pande (Principal)	Member Secretary

**Powers and Functions of the Governing Body:**

The Governing Body, besides being the supreme administrative authority of the institute, shall have the following functions:

- To consider the important communications, policy decisions received from the MSBTE / University, Government, AICTE, PCI and other apex bodies.
- To make recommendations on the planning and monitoring the institute working and development.
- To monitor the development programs of students and faculty.
- Fixation of the fee and other charges that are payable by the students to the institute based on the recommendations of the Fees Regulating Authority, Govt. of Maharashtra and other regulatory authority.

- V) To consider and approve the proposals for creation of infrastructure facilities such as building, equipment and learning resources on continuous basis.
- VI) To study the annual planned budget of the institute and approve it with required suggestions for allocation.
- VII) To analyze the audited account statements and approve the same.

#### Frequency of G.B. meeting:

Normally governing body meeting takes place once in a academic year or as per the requirement.

Details of dates of Governing Body Meetings held during last three years: **Table No. 8.1.1.3**

CAY (2021-22)	CAYm1 (2020-2021)	CAYm2 (2019-20)
20/08/2021	15/06/2020	15/06/2019

**B. College Development Committee (CDC):** The CDC comprises of management representatives and representatives of teaching and non-teaching staff which mainly look after planning and executions of the academic activities of the institute.

#### Composition of College Development Committee (CDC): Table No. 8.1.1.4

Sr. No.	Name of the Member	Designation
1	Mr. R.D. alias Raosaheb Shekhawat (President VBSM, Amravati)	Chairman
2	Dr. A.D Chavhan (Secretary V.B.S.M.Amravati)	Member
3	Mr. Raghunathji Rode (Treasurer, V.B.S.M.Amravati)	Member
4	Dr.S.D.Pande (H.O.D. Nominated by Principal)	Member
5	Dr.Mrs.M.D.Game ( Elected member from female teaching staff)	Member
6	Mr.A.W.Baitule (Elected member from teaching staff)	Member
7	Dr.V.P.Wankhade (Elected member from teaching staff)	Member
8	Mr.L.S.Pande (Elected member from non-teaching staff)	Member
9	Mr.A.R.Jaiswal (Educationalist)	Member

10	Mr.Ashok I. Nanwani (Industrialist)	Member
11	Dr.S.M. Sakharwade (Researcher)	Member
12	Dr.Sheela Rathod (Social Worker)	Member
13	Mr.J.V.Vyas (I.D.M.C. Coordinator)	Member
14	President Student Council	Member
15	Secretary Student Council	Member
16	Dr.K.K.Tapar Principal V.B.C.P. Amravati	Member Secretary

**Composition of New College Development Committee (CDC) 08/04/2022 onwards:  
Table No. 8.1.1.5**

Sr. No.	Name of the Member	Designation
1	Mr. R.D. alias Raosaheb Shekhawat (President VBSM, Amravati)	Chairman
2	Dr. A.D Chavhan (Secretary V.B.S.M.Amravati)	Member
3	Mr. Raghunathji Rode (Treasurer, V.B.S.M.Amravati)	Member
4	Miss.L.J.Gonsalves (H.O.D D.Pharm.) (Nominated by Principal)	Member
5	Dr.Mrs.M.D.Game ( Elected member from female teaching staff)	Member
6	Mr.A.W.Baitule (Elected member from teaching staff)	Member
7	Dr.V.P.Wankhade (Elected member from teaching staff)	Member
8	Mr.L.S.Pande (Elected member from non-teaching staff)	Member
9	Mr.A.W.Dahekar (Educationalist)	Member
10	Mr.Ashok I. Nanwani (Industrialist)	Member
11	Dr.S.M. Sakharwade (Researcher)	Member
12	Dr.Sheela Rathod (Social Worker)	Member
13	Mr.J.V.Vyas (I.D.M.C. Coordinator)	Member
14	President Student Council	Member
15	Secretary Student Council	Member
16	Dr.S.D.Pande Principal V.B.C.P. Amravati	Member Secretary

**Functions of the CDC:**

1. To monitor the execution of academic and other related activities of the college and to make necessary arrangement for the proper execution of academic activities.
2. To approve the syllabus content to be taught and to approve the activities to be conducted for bridging the gap of the syllabus content.
3. To monitor the development program of students and faculty and to motivate them by Institute scholarships, fellowships, medals, prizes and certificates based on the recommendations of the Internal Monitoring Committee.
4. To plan the annual budget of the institute.
5. To approve the budget estimates- recurring and non- recurring for the financial year in advance demanded by the H.O.D. and Principal.

**Frequency of CDC meeting:** Twice in a session.

**Details of dates of CDC Meetings held during last three years: Table No. 8.1.1.6**

CAY (2021-2022)	CAYm1 (2020-2021)	CAYm2 (2019-2020)
23/08/2021	15/06/2020	15/06/2019
20/02/2022	Due To Strict Lockdown Implemented By local Disaster Management Committee, Amravati, Meeting Was Not Conducted.	09/03/2020

**C. Internal Monitoring Committee (IMC):** Internal Monitoring Committee comprises of head of the institute, head of program/ academic coordinator and two senior lecturers for periodic monitoring of academic working of the programs twice in academic year and submit its reports to the Head of institute.



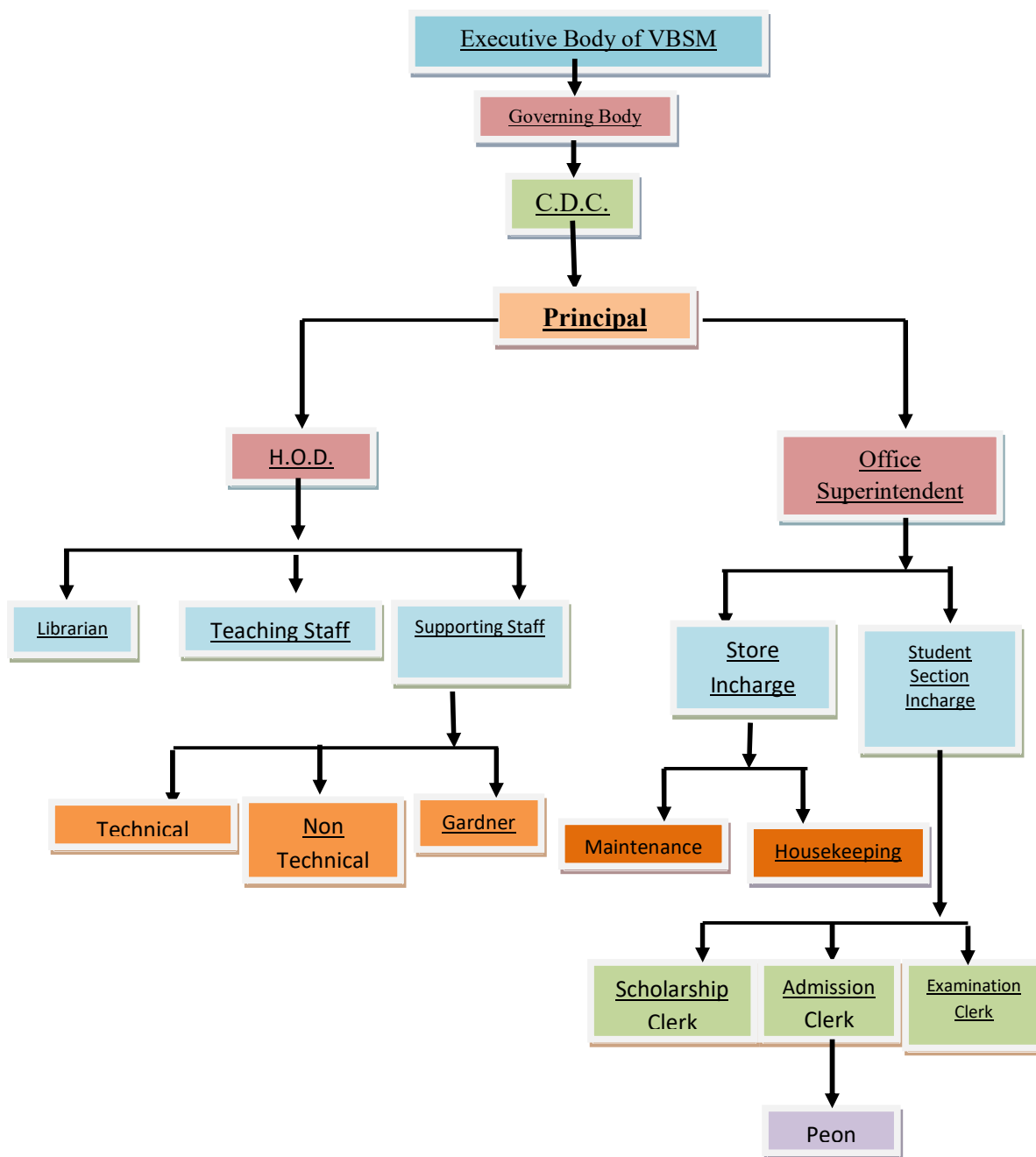
**Composition of Internal Monitoring Committee (IMC) : Table No. 8.1.1.7**

Sr. No.	Name of the Member	Designation
1	Principal, V.B.C.P.Amravati	Chairman
2	Mr.A.R.Jaiswal H.O.D., Diploma in Pharmacy	Academic Coordinator
3	Miss.L.J.Gonsalves Sr.Lecturer	Member
4	Mr.A.W.Dahekar Sr.Lecturer	Member

**Functions of the Internal Monitoring Committee (IMC) :**

1. To approve the Academic calendar and monitor its adherence.
2. To supervise the curricular, co curricular and extracurricular activities of the program.
3. To implement the curriculum implementation and assessment norms provided by MSBTE and maintenance of the documents and assessment records.
4. To conduct the Academic audit twice in a year.
5. Monitoring of proper utilization of budget by the programs.
6. To collect and analyze the feedback from stakeholders.

## D. The organization chart of the Institution :

**The Organization Chart of the Institute**

**E. Defined rules, procedures, recruitment and promotional policies etc.**

The following acts and rules are adopted as guidelines for procedures, recruitment, promotional policies and directions issued from time to time by the regulatory bodies:

- Norms of Pharmacy Council of India (PCI)
- AICTE Norms
- Rules for Affiliation and approval by MSBTE, Mumbai.
- All other applicable state/central government rules and Maharashtra state civil services regulations.
- Rules and By-laws of Society

Considering the norms of regulatory bodies the management of VBCOP has drafted a code of conduct in the name of Human Resource Manual which defines all the rules, procedures, recruitment and promotional policies of the organization.

**Rules for Recruitment for Teaching Staff:** For the recruitment of teaching staff VBCOP follows AICTE regulations and MSBTE guidelines. All the recruitments are done by advertising the vacant post and conducting the interviews of applicants who has applied in response for advertisement. At the time of appointment strictly norms for qualification provided by AICTE are followed.

The staff declaration for the Diploma program is granted by MSBTE and its consist of following cadre -

**Cadre Structure (Approved by MSBTE)**

- (a) Principal
- (b) Head of Department
- (c) Lecturers/ Senior Lecturers / Selection grade

**Mode of Selection of Teaching Staff:**

Direct recruitment to all cadres is based strictly on merit. Invariably in almost all cases, the following procedure is followed:

- a) Advertisements are issued in leading newspapers.
- b) Applications are scrutinized within 30 days after the last day for receipt of application.
- c) The lists of applications and resumes with relevant details are prepared for Selection Committee nominated by the head of the institute.
- d) The deputy secretary RBTE, Nagpur appoints the subject experts, MSBTE nominee, representative of reserve category, President and Secretary of society as a member of staff selection committee and joint Director R.O. himself or his representative acts as an DTE nominee in the staff selection committee for the selection and approval of candidates for the posts of Principal, H.O.D. and Lecturers.
- e) Call letters are sent to eligible candidates for attending interviews specifying place, date and time of interview.
- f) Selection Committee interviews and recommends candidates to MSBTE with the merit points.
- g) Letters of appointment are issued to selected candidates by the head of the institute
- h) The selection list along with supporting documents are sent to the Director MSBTE, Mumbai for the approval.

**Recruitment Procedure for Supportive staff:** The Secretary of VBSM gives the advertisement of the vacant post to be filled in the cadre of non-teaching staff and the interviews are conducted by the selection committees consisting of Management representatives, Principal and H.O.D.

**a) Staff appointed in Office**

- (i) Administrative Officer (Graduate with experience)
- (ii) Accountant (Graduate)
- (iii) Senior Assistant (Graduate with experience)
- (iv) Junior Assistants (Graduate)
- (v) Peon (below or equal to SSC)

**b) Laboratories (other than computer Labs)**

i) Lab Technician (Diploma in Pharmacy / DMLT / B.Sc.)

ii) Lab Attendant (HSC)

**c) Computer Labs**

i) Data Operator / Lab. Technician (Graduate in Science)

**Qualifications:**

Non-teaching staff are recruited on the qualifications prescribed by the State Government.

**Probation Period Policy:**

**Probation:** Probation means an appointment made on trial on specified conditions for a stipulated period to a post for determining one's fitness for the job. All regular employees serve the first two years of employment on probation. The condition of probation is applicable for permanent appointments.

**Temporary appointment:** It means appointment made purely on temporary basis for the period ten months either for a permanent post or in tenure post or against a temporary post. After the completion of tenure of appointment, the termination order is issued to such employees and the employee found good in his/ her working can be selected for permanent appointment.

**Evaluation in Probation Period:** Department head evaluates the ability, suitability, and potential of the employee during his/her work. Fifteen days prior to the completion of probation period, the Head of the Department, based on his evaluation, will intimate to Principal about employees performance / non-performance. Based on the performance appraisal reports of the employees the Management decides to continue / discontinue service of the employee. For termination of service, termination order is issued.

**Voluntary Resignations:** It may be accepted in lieu of termination. Unless notified, all job offers are on a permanent requirement with a probation period. Termination of employment, or other disciplinary action, during the probationary period, is not subject to progressive discipline and the grievance procedure.

**Salary Policy:**

**Type and Fixation of Initial salary:** In general, the type and fixation of initial salary is subject to statutory requirements like those of the government pay scales (Current is 6th pay rule), as per the pay scale of All India Council of Technical Education (AICTE). Salary fixation is done at the discretion of managing society considering the income and expense statements of the institute.

**Salary Increments:**

**i. Time scale of pay:** Time scale of pay means a scale in which the salary rises, subject to the conditions prescribed in the statutes of pay rules by periodical increments, from a minimum to maximum. Every employee is entitled to an annual increment in salary subject to the recommendations of the Head of the Institute considering the performance appraisal report of the employee after the approval of G.B.

**ii. Payroll Schedules:** Employees are paid for all the days of the month. Payment is directly deposited with a designated bank in the individual's account or given in cash for employees who are paid for visits or whose job is menial in nature of employment. All employees are having salary account in the bank located in the institute campus.

**iii. Payment mode of salary:** The salaries of all employees are deposited to the salary account at Campus branch of Bank of Baroda.

**Payroll Deductions:** Standard deductions like Income-tax, professional tax and contribution of provident funds and other deduction wherever applicable are deducted from the monthly salary statements.

**Promotion and Transfer Policy**

1) A promotion is the shift of an employee from one position to another with more responsible duties or requiring more skills. Promotions are based on merit of skills and qualifications required for the higher position. A pay rise is eminent in case of promotions but the Management reserves the right to do so.

2) A lateral transfer is when an employee moves from one position to another position that is on the same pay scale regardless of the title of the new position.

3 Transfers and promotions during probation period are subject to an administrative approval for the same, by Principal.

4 Employees are encouraged to apply for any position for which they are qualified and should contact the Principal for specific information.

5 When an employee is promoted either on applying for an advertised position or via the reclassification process the employee may receive remuneration based on an employee's exceptional experience and/or education and job responsibility.

6 A faculty desiring of promotion to a higher post has to face the Selection Committee appointed by the regularity bodies and only on the recommendations of the committee he /she is granted promotion.

#### **8.1.2 Decentralization in working and grievance redressal Mechanism (5)**

*List the names of the faculty members who are administrators/decision makers for various responsibilities. Specify the mechanism and composition of grievance redressal cell.*

Organization working is a result of collective team work and hence for the smooth conduction of administrative and academic work VBCOP believes in decentralization of work. Hence various committees for administrative and academic working have been formed at institute and department level at the start of each session with fixed scope and objectives.



**Various administrative and academic committees for the program formed for the session: 2019-20 (CAYm2) Table No. 8.1.2.1**

Sr. No.	Name of Committee	Constitution	Functions
1	Examination Committee	Incharge - Mr.A.R.Jaiswal	<ol style="list-style-type: none"> <li>1.To upload exam forms for MSBTE exams.</li> <li>2.Distribution of Hall tickets .</li> <li>3.Correction of seating chart.</li> <li>4.Arrangement of internal exams .</li> <li>5.Conduction of internal exams and annual practical exams.</li> <li>6.Filing and maintenance of internal exam documents.</li> <li>7.Uploading of theory and practical means to MSBTE.</li> </ol>
2	Student Section and Counseling	Incharge - Mr.V.L. Thakur	<ol style="list-style-type: none"> <li>1. Assisting the students for admission process.</li> <li>2.Verification and maintenance of student documents</li> <li>3.Merit list verification.</li> <li>4.Issue of I. Cards, Bonafied certificates ,Training forms, Diploma certificates and Fee structure statements.</li> <li>5.Assisting the students in other MSBTE and scholarship documentations.</li> </ol>
3	Training & Placement cell	Incharge – Mr.A.W.Dahekar	<ol style="list-style-type: none"> <li>1.Organization of skill developments programs for students teaching and non-teaching members.</li> <li>2. Arranging campus interviews.</li> <li>3. Assisting students for Off campus placement drives.</li> <li>4.Arranging industry, Hospital visit and educational tours.</li> <li>5.Organization of career orientation programs and industry expert lecture.</li> <li>6. Making MOU with industry, Institute and Hospitals.</li> <li>7. Deputing the students to the identified training centers and evaluations of training reports.</li> <li>8. Maintaining and communicating the record of training report to the MSBTE for issue of Diploma certificate.</li> </ol>
4	Sports	Incharge Miss.L.J.Gonasalves	<ol style="list-style-type: none"> <li>1.Procurement of sport facilities at the institute.</li> <li>2. Collection and submission of prorata for IEDSSA membership.</li> <li>3.Escorting the students for participating in IEDSSA events.</li> <li>4.Filing and maintaining the records of sport department.</li> <li>5.Organization of various sport evens at the institute.</li> </ol>
5	Attendance Committee / Class Co-coordinator	DCP – I Mr. V.R.Mehare DCP – II Mr.A.R.Jaiswal	<ol style="list-style-type: none"> <li>1. Preparation of roll calls on the basis of enrolled students.</li> <li>2.Procurement and distribution of Lab. Manuals</li> <li>3. Compiling and maintaining monthly attendance statement and reporting to the Head of Department for necessary action.</li> <li>4. Distribution of students to the mentors with consent of H.O.D.</li> <li>5. Organization of Parents meet and maintaining the record of same.</li> <li>6. Arrangement of backlog and remedial classes with the consent of H.O.D.</li> </ol>
6	Medical support Committee	Incharge Miss.P.H.Hindocha Appointed R.M.P.- Dr.Sheela Rathor	<ol style="list-style-type: none"> <li>1. Maintenance of sick room and sick room record.</li> <li>2. Procurement of requirements of first aid box.</li> <li>3. Verification of medicines of first aid box.</li> <li>4. Assistance to the sick patients</li> <li>5. Contacting RMP in case of emergency.</li> <li>6. Arrangements of medical facilities at the time of institutional events.</li> </ol>
7	Guest Lecture	Incharge - Mr.A.R.Jaiswal Member - Mr.A.W.Dahekar	<ol style="list-style-type: none"> <li>1. Communications with the identified resource persons.</li> <li>2. Arrangements of conduction of guest lectures.</li> <li>3. Maintaining record and reports of the conducted events.</li> </ol>
8	Extra Curricular activities	Incharge Miss.L.J.Gonasalves Member – Mrs.A.B.Tasare	<ol style="list-style-type: none"> <li>1. Organization of Annual gathering, Teachers Day, Womens Day, Pharmacist Day and Pharmacy Week.</li> <li>2. Celebrating birth anniversary and paying homage on death anniversary of national and professional leader.</li> <li>3. Arranging social awareness ,cleanliness and tree plantation programs.</li> </ol>
9	Data Operator	Incharge - Mr.A.P.Jadhao	<ol style="list-style-type: none"> <li>1. Uploading data for approval and extension activities to PCI , AICTE, DTE and MSBTE.</li> <li>2. Upgradation of institute Website and departmental media page.</li> </ol>
10	Feedback Committee	Incharge - Mr.A.R.Jaiswal (H.O.D.)	<ol style="list-style-type: none"> <li>1. Collection of faculty and institutional facilities feedback from students.</li> <li>2. Analysis of feedback and perpetration of feedback report and submit to Principal.</li> </ol>

			3. Preparation of action taken report with the consent of Principal.
11	Time-table Committee	Incharge - Mr.A.R.Jaiswal (H.O.D.) Member - Miss.P.H.Hindocha	1.Calculation of workload and distribution of workload to the faculty with consent of Principal. 2. Preparation of time-table considering the occupancy of classroom and labs.
12	Alumni Committee	Incharge - Miss.P.H.Hindocha	1.Collecting the data of recent status of Alumni and its maintenance. 2. Registration of pass out students as Alumni. 3. Organization of Alumni Meet and Alumni supported programs. 4. Preparation and maintenance of Alumni meeting records.
13	E.D.Cell	Incharge - Mr. A.W. Dahekar Member – Mr. V.R. Mehare	1. Organization of Entrepreneur Development Program in association with Mitcon, Industry or any Government organization. 2. Organization of Trade fair. 3. Organizing Visit to the medical stores or other business organization. 4. Preparation and maintenance of records of E.D. activities.
14	Internal Monitoring Committee	Chairman -Dr.K.K.Tapar Co-coordinator - Mr..A.R.Jaiswal Member – 1) Miss. L.J. Gonsalves 2) Mr. A.W. Dahekar	1. Execution and implementation of CIAAN norms. 2. Monitoring the academic activities of the program. 3. Conducting Academic audits twice in a session and submitting the report to the Principal. 4. Preparation and maintenance of documents for all the inspections of various apex bodies.
15	Prospectus Committee	Mr.A.R.Jaiswal Mr.J.V.Vyas	1. To place the order to cooperative store for prospectus as per the requirement. 2. Providing data required for designing the Prospectus . 3. Finalization of prospectus design.
16	Library Committee	Principal - Chairperson H.O.D. - Member Librarian – Member Secretary Student Representative from the program	1. To review the Library utilization and day to day Library working. 2. Procurement and development of learning resources 3. Grievance Redressal of grievance reported regarding Library working 4. Planning and preparing proposals for enhancement of Library facilities.
17	Purchase Committee	Principal - Chairperson H.O.D. - Member O.S. – Member Storekeeper – Member Secretary	1. To prepare indent for consumable and non consumable Laboratory requirements. 2. Calling Quotations from suppliers. 3. Preparations of comparatives statements on the basis of received Quotations 4. Finalization of order and procurement of good received.

**NOTE: Due to the Lockdown implemented from March 2020 to Feb. 2022 the above mentioned administrative and academic committees continued the working for CAY & CAYm1.**

Apart from the above mentioned committees the following institutional committees have been constituted with the adequate representation of department for the Grievance Redressal of the stake holders.

- Women Grievance Redressal Cell.
- Anti Ragging Committee with Anti Ragging Squad.
- Grievance Redressal Committee.

#### 1. Women Grievance Redressal Cell

Grievances related to women and sexual harassment are addressed by a Women Grievance Redressal Cell. The college has formed an internal complaints committee (Under Sexual harassment of women at work place prevention prohibition and Redressal Act 2013).

The composition of Women Grievance Redressal Cell is as given below: **Table No. 8.1.2.2**

Sr. No.	Name	Designation
1.	Dr.M.D.Game	Chairperson
2	Miss. L.J.Gonsalves	Member
3	Mr.J.V.Vyas (Male teacher representative)	Member
4	Miss. P.H.Hindocha	Member
5	Dr. Varsha Deshmukh ( Lady Lawyer)	Member
6	Dr. Subhash Tawar (Representative of N.G.O.)	Member
7	Mr. L. S. Pande ( Non-teaching Staff Representative)	Member
8	Mr. V.R.Mehare	Member
9	Miss. M.P.Jadhav	Member
10	Nominee for female diploma students	Member
11	Nominee for female U.G. students	Member
12	Nominee for female P.G. students	Member

## 2. Anti-ragging committee and Anti-ragging Squad :

Ragging though a universal phenomenon, it often takes a malignant form wherein the juniors and new students may be subjected to physiological or physical discomfort or harassment. To prevent and deter such incidents in higher educational institutions, the Government of India has taken a serious view on the cases of ragging. The AICTE, UGC and PCI and statutory bodies implement the provisions. The following members of the college are being appointed to form the anti-ragging committee. Besides looking after general discipline, the committee will supervise all anti-ragging measures. Disciplinary matters are dealt with stern approach expeditiously. Any matter communicated verbally, written form or in anonymous format are viewed with due weightage.

The composition of Anti-ragging committee is given below: Table No. 8.1.2.3

Sr. No.	Name	Designation
1.	Principal	Chairman
2.	Dr.S.D.Pande	Member
3.	Dr.M.D.Game (Ladies Representative)	Member
4.	Mr. A.R.Jaiswal	Member
5.	Mrs. A.B.Tasare (Ladies Representative)	Member
6.	Mr. A.W.Dahekar (Backward class Representative)	Member
7.	Mr. S.C. Atram (Backward class Representative)	Member

### 3. Student Grievance Redressal committee:

Grievances of students related to the academic and infrastructure facilities are addressed by students in Grievances Redressal committee. The online facilities for reporting student grievance have been provided on institute Website and complaints box have been displayed in the premises of the institute. For the ease of students program wise grievance reporting officers are appointed to register the complaints of the students.

The composition of Student Grievance Redressal committee is given below:

Table No. 8.1.2.4

Sr. No.	Name	Designation
1.	Principal	Chairman
2.	Dr.S.D.Pande	Member
3.	Dr.M.D.Game (Ladies Representative)	Member
4.	Mr.J.V.Vyas	Member
5.	Mr.A.W. Baitule	Member
6.	Mr. A.R.Jaiswal	Member
7.	Male Student Representative	Member
8.	Female Student Representative	Member
9.	Mr. L.S.Pande	Member Secretary

**8.1.3. Delegation of financial powers (05)**

*Explicitly mention financial powers dedicated to the Principal, Heads of Departments and relevant in-charges. Demonstrate the utilization of the financial powers for each year of the assessment years.*

**Principal:** The principal has the financial powers to spend Rs 25,000/- at a time, keeping in view of the urgency and needs. These are to authorize the purchase of consumables for laboratories (books etc) over and above the general procedure of annual purchases.

- To permit the reimbursement of travelling (conferences and workshops) and other expenses for official purposes.
- To take care of guests, parents, alumni and stakeholders.
- To sponsor faculty/staff for any academic activities as per norms.
- To authorize any other expenses, he may deem essential.

**Head of the Department:** The Head of the Department have the financial powers to spend Rs 5,000/- at a time, keeping in view of the urgency, immediate needs & on time repair of equipment.

**8.1.4. Transparency and availability of correct/unambiguous information in public domain (05)**

Information on the policies, rules and processes is made available on website.

- On arrival, all students joining VBCOP are informed about the rules, regulations and procedures at college during orientation program.
- The same are available in the society manual.
- Periodic reminders are done through circulars which get inputs.
- All information relevant or needed by all stakeholders is available on web.
- Periodic communications are sent to parents/guardians.
- SMS communications are sent to the parents regarding absence, sessional marks, monthly attendance, examination absence, etc.

- At the time of joining new staff, personal information like qualifications, professional skills and experience are collected and used for strengthening the course and the college.
- The data of all staff are periodically updated and uploaded on the college website.
- The administrative rules and regulations covering all cadre of staff employed are mentioned in the manual. The employees are given uniform consideration. Transparency is maintained relating to rules followed which include general administration, service conditions, duties, promotion policies, increments, awards and also disciplinary action.
- The program syllabus book and academic calendar is available to the stake holders which provides transparency in implementing academic plans and current regulations, courses, marks, attendance, examination through prospectus, notice board etc.
- Recruitment and interview of all staff is done by issuing advertisements and following the regulations of AICTE and Pharmacy Council of India (PCI). Thus reference points are made clear to the staff.
- Notices are displayed on the notice boards. Separate notice boards are available for department, office, placement, training, info apex, library, etc. In total, the administration and staff are available for open communication with students, employers (for placement) etc.
- As per the urgent need SMS system and digital notice board facility is made available for stake holders.
- Time to time meeting with all stake holders i.e. parents, students, staff, alumni and employer are organized at least once in a session to update and share the recent information and amendments.



## 8.2 BUDGET ALLOCATION, UTILIZATION, AND PUBLIC ACCOUNTING AT INSTITUTE / PROGRAM LEVEL (20)

*Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years.*

*Total Income at Institute/Program level: For CFY, CFYm1, CFYm2 & CFYm3*

*CFY: Current Financial Year, CFYm1 (Current Financial Year minus 1), CFYm2 (Current Financial Year minus 2) and CFYm3 (Current Financial Year minus 3)*

### For CFY : 2021-22 Table No. 8.2.1

Total Income: (Till 31 <sup>st</sup> March 2022)				Actual expenditure (Till 31 <sup>st</sup> March 2022)			Total No. of students: 120
Fee	Gov t.	Grant( s)	Other Source es (specif y)	Recurri ng includi ng Salarie s	Non- recurri ng	Special Projects/A ny other, specify	Expenditur e per student
1,29,99769. 75	-	-	-	5596220. 10	121925	-	47651

**Note:** Similar tables are to be prepared for CFYm1

### For CFYm1 : 2020-21 Table No. 8.2.2

Total Income: (till 31 <sup>st</sup> March 2021):				Actual expenditure (till 31 <sup>st</sup> March 2021):			Total No. of students: 120
Fee	Gov t.	Gra nt (s)	Other Source es (specif y)	Recurri ng includi ng Salarie s	Non- recurri ng	Special Projects/A ny other, specify	Expenditur e per student
55,95,252. 01	-	-	-	5192568. 16	160030	-	44605



**For CFYm2 : 2019-20 Table No. 8.2.3**

Total Income: (till 31 <sup>st</sup> March 2020):				Actual expenditure (till 31 <sup>st</sup> March 2020):			Total No. of students: 120
Fee	Gov t.	Gra nt (s)	Other Sour ces (specif y)	Recurri ng includi ng Salarie s	Non- recurri ng	Special Projects/A ny other, specify	Expenditur e per student 120
73,95583. 68				7678265. 14	527377		68380

**For CFYm3 : 2018-19 Table No. 8.2.4**

Total Income: (till 31 <sup>st</sup> March 2019):				Actual expenditure (till 31 <sup>st</sup> March 2019):			Total No. of students: 111
Fee	Gov t.	Gra nt (s)	Other Sour ces (specif y)	Recurri ng includin g Salaries	Non- recurrin g	Special Projects/A ny other, specify	Expenditure per student
651359 6				6646170.5 0	1302900		71613

Table No. 8.2.5

Items	Budgeted in CFY (2021-22)	Actual expenses in CFY – (2021-2022)	Budgeted in CFYm1 (2020-21)	Actual Expenses in CFYm1 (2020-21)	Budgeted in CFY (2019-20)	Actual expenses in CFY (2019-20)	Budgeted in CFYm1 (2018-19)	Actual Expense s in CFYm1 (2018-19)
Infrastructure Built-Up	250000	- -	50000	- -	100000	99550	650000	650000
Library	100000	71984	100000	83450	40000	31450	23980	23980
Laboratory equipment	200000	121925	200000	160030	260000	253359	700000	615400
Laboratory consumables	150000	20780	100000	78688	60000	57100	84940	84940
Teaching and non-teaching staff salary	7378026	3823704	7103554	3903780	7103554	4617222	5750852	5750852
Training and Travel	50000	6100	5000	4760	30000	27950	10000	5350
Miscellaneous expenses *	20000	7917	20000	19550	50000	44075	15300	15300
Others, specify	1202974	1665735.10	1241446	1102340.16	636446	3074736.15	1511213	803248.50
Total	9360000.00	5718145.10	8820000.00	5352598.16	8280000.00	8205642.14	8746285.00	7949070.50

\* Items to be mentioned.

**8.2.1 Adequacy of budget allocation (10)**

*Justify that the budget allocated over the years was adequate.*

VBCOP follows the process of distributing the available financial resources in a manner consistent with our institute's vision, mission, long-term goals, which are transparent to stakeholders. The allocation model is updated annually. Keeping in view of the fact that no budgeting process is perfect and that ideally there would be more funds to allocate, the goals of the process are to:

- Recognize the importance of staff to long term success.
- Encourage areas to focus on outputs directly related to the strategic plan.
- Improve institutional and support facilities to make the learning environment of vibrant development.
- Development of soft skills of staff and students.

The institute allocates the available resources based on the forecasted requirements, keeping the curricular and beyond curricular activities, staff skill development, library, transport, and maintenance in mind. It is the responsibility of Governing Body to ensure that the allocated resources are spent as per their forecasted plans. The emphasis is to increase quality of academic inputs delivered and positively contribute to the institute, in terms of development of new technologies, methods and practices.

The allocation model ideally followed for allocating the funds to proposed budget is as follows- **Table No. 8.2.1.1**

Sr.No.	Heads of Expenses	Allocated Percentage (%) of Total Income
1	Salary Expenditure	65
2	Laboratory Consumable and Lab. Equipment	5
3	Building construction and Maintenance	3
4	Library Expenditure	2
5	Student Activity, Establishment, Training, Travel & Miscellaneous Expenditure.	25

Considering the allocated amount and the actual Budget utilize. It has been observed that during the period of assessment Budget allocated and utilization is adequate i.e. **84.73%** and the remaining amount is deposited in corpus fund as future provision to support the Institute in financial adverse condition and the Budget utilize is found to be adequate for smooth conduction of Institute during the period of assessment.

#### 8.2.2: Utilization of allocated Funds (10)

State how the budget was utilized during the last three years.

As per the budget allocation its utilization summary is given in following table with Percentage of budget utilize for the expenditure on Diploma in Pharmacy programme.

**Table No. 8.2.2.1**

Sr.No.	Financial Year	Budgeted in CFY	Actual Expenses In CFY	Percentage
1	CFY 2021-2022	9360000.00	5718145.10	61.09%
2	CFY m1 2020-2021	8820000.00	5352598.16	60.68%
3	CFYm2 2019-2020	8280000.00	8205642.14	99.10%
4	CFYm3 2018-2019	8746285.00	7949070.50	90.88%

**Table No. 8.2.2: Utilization of allocated funds for last three years.**

The respective academic and supportive units are informed on allocation of funds under various heads including the guidelines towards making purchase of laboratory equipment, programs to be conducted, training activities and other miscellaneous. CDC decides the utilization for the financial year's allocated funds in consultation with the concerned experts including Principal. The utilization is made as per the plans and projections. The priorities are identified. Emphasis is made on increasing the quality of academic inputs that positively contribute to the development. Every effort is made for providing the best and updated infra-structural and other facilities to students and staff.

**8.3 LIBRARY AND INTERNET (15)****8.3.1 Quality of learning resources (hard/soft) (10)**

- *Relevance of available learning resources including e-resources*
- *Accessibility to students*

VBCOP make every effort to provide good and quality learning resources to its internal stake holders, for that an specious library with variety of learning material is developed and the detail of which are given below -

- **Library Space and utilization :**

- Carpet area of library (in m<sup>2</sup>) : 325.00 Sq mtr.
- Reading Space (in m<sup>2</sup>) : 16.87 Sq mtr.
- Number of seats in reading space : 48
- Number of users (Issue Book) per day : 20 - 30
- Number of users (reading Space) per day : 60-70
- **Timings**
- During working day : 10.00 A.M. to 6.30 P.M.

**Library Staff and automation details:**

- **Fulltime qualified Librarian** : **01**
- Number of supporting Library staff : 02
- Management Computerization for search,  
Indexing, issue / return records, bar coding used : Libman
- Library services on internet / intranet : Yes
- Library membership : DELNET, NDLI
- Archives : Yes
- Number of Computer in Digital Library : 15
- **Titles and Volumes** : Number of Title : **3139**  
: Numbers of Volumes : **14796**
- **Book Bank facility** : 1.Book Bank sponsored by Social welfare  
Department  
2. College Book Bank for Open category

- **Digital Library**

Availability of digital library Contents:

- No. of e-books 176
- No. of Computers 15
- Availability over internet Yes

**Details of additions in Library stack during last three years : Table No. 8.3.1.1**

Year	No. of New Titles added	No. of Editions added	No. of New Volumes added
<b>CFY: 2021-22</b>	157	02	705
<b>CFYm1: 2020-21</b>	374	02	37
<b>CFYm2: 2019-20</b>	110	03	1144
<b>CFYm3: 2018-19</b>	109	11	1342

- **Details of total library journals title wise back volume with the additions in last three years : Table No. 8.3.1.2**

S. N.	Name of the Journals	2021-22	2020-21	2019-20	Total Volumes present till date as back volume
1	BioPharma International	6	12	12	164
2	International Journal of Pharmacology & Technology	1	2	2	19
3	International J. of Pharmaceutical Research & Analysis(2)	1	2	2	15
4	Asian J. Of Research in Pharmaceutical science	1	4	4	9
5	Indian J. Of Heterocyclic Chemistry	2			52
6	Asian J. of Pharmaceutics	1	4	4	49
7	Pharmaceutical Technology	4	12	12	165
8	Asian J. of Pharmaceutical Analysis	1	3	4	28
9	Research Journal of Pharmacy & Technology	1	12	12	139
10	International J. of Pharmacy and Therapeutics	2	4	3	9
11	Asian J. of Pharmacy and Technology	1	4	4	9
12	Asian J. of Research in Pharmaceutical Science	1	2	2	5

13	Indian J. Of Pharmacist Practice	3			3
14	American J. of Biological and Pharmaceutical Research	1	2	2	5
15	Indian J. Of Pharmaceutical Education & Research	3			22
16	International J. of Biopharmaceutics	1	2	2	5
17	International J. of Pharmaceutical and Biological Archives	1	4	4	9
18	International Journals of Green Pharmacy	1	4	4	25
19	Indian Journal of Pharmaceutical Sciences		6	6	147
20	Ethanopharmacology (Inventi)	3	4	4	35
21	Molecular Pharmacology (Inventi)	3	4	4	35
22	NDDS (Inventi)	3	4	4	35
23	Pharma Tech (Inventi)	3	4	4	35
24	Molecular Modeling (Inventi)	3	4	4	35
25	Biomedical Anaysis (Inventi)	3	4	4	31
26	Pharma Process Development (Inventi)	3	4	4	31
27	Novel Excipients(Inventi)	3	4	4	11
28	Pharma Analysis and Quality Assurance (Inventi)	3	4	4	11
29	Advanced Dosaging (Inventi)	3	4	4	11
30	Planta Activa (Inventi)	3	4	4	11
31	Indian Journal of Pharmacology	3	6	6	141
32	Journal Of Hospital Pharmacy	3			3
33	Journals of Medicinal Plants Studies	4	6	6	16
34	Indian Drug	2			264
35	Indian J. Of Traditional Knowledge	2			22
36	Research Journal of Phamacognosy and Phytochemistry	1	4	4	9
37	Reseach J. of Topical and Cosmetic Science		2	2	4
38	Advances in Pharmacology & Toxicology	1	2	1	27
39	Indian Journal of Hospital Pharmacy	4	6	3	163
40	Indian J. Of Natural Products & Resources	1			9
41	Indian Drug Review	3	6	6	51
42	The Indian Pharmasist		4		35
43	Indian J. of Chemistry A	8	11	12	84
44	Indian J. of Chemistry B		11	12	71
45	Indian J. of Experimental Biology	7	11	22	69
46	Medicinal Aromatical Plant Abstract		6	6	90
47	Indian J. Of Drug Development Technology	1	2	2	5






**Details of Library Expenditure of Diploma in Pharmacy Program: Table No. 8.3.1.3**

Description	CFY (2021-22)	CFYm1 (2020-21)	CFYm2 (2019-20)	CFYm3 (2018-19)
Books and Journals	71984	83450	31450	23980
Total	71984	83450	31450	23980

\*All figures in the Indian Rupees

**8.3.2 Internet****(05)**

- Name of the Internet provider : Vodafone-Idea
- Available band width : 100 mbps (Vodafone-Idea)
- Wi Fi availability : Available
- Internet access in labs, classrooms, library and other offices : Yes, by LAN and WIFI
- Security arrangements : Yes.
  - 1) 24 x 7 security guards available in Campus.
  - 2) Whole campus is under CCTV Surveillance.

 <p>Vidya Bharati Shaikshanik Mandal's, Amravati  <b>VIDYABHARATI COLLEGE OF PHARMACY</b>          C.K. Naidu Road, Camp, Amravati - 444 602.          Tel No. / Fax No. 0721-2552012, Email : vbcop_office14@rediffmail.com, 258principal@gmail.com, website : www.vbcop.org          Permanently Affiliated to S.G.B. Amravati University, Amravati, M.S.B.T.E., Mumbai          Recognized by Govt. of Maharashtra, Affiliated AICTE &amp; Pharmacy Council of India, New Delhi          Accredited Member USHLBE, United State, ISO 9001:2015 Certified Institute &amp; N.B.A. Accredited (uo)</p>					
<b>Dr. D. R. Shekhawat</b> (Founder President)		<b>Mr. R. D. Shekhawat</b> (President)		<b>Dr. S. D. Pande</b> (Principal) M. 9823172064	
<b>Vision :</b> To be perceived as a prevalent Institute for Promoting transcendence in Pharmacy discipline to coddle the urge for profession and humanity		Ref. No. <u>NBCP / 588 / 2022</u>			
<b>Mission :</b> To achieve transcendence by creating learning environment and providing facilities for creative thinking and personality development		Date <u>20.09.2022</u>			
Impart conducive environment to escalate problem solving perspectives forethought ability and effective communication skill in budding pharmacists		<h3>DECLARATION</h3> <p>I undertake that, the institution is well aware about the provisions in the NBA'S accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institute shall fully abide by them.</p> <p>It is submitted that information provided in this Self-Assessment Report is factually correct. I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA in case any false statement / information is observed during pre-visit, visit, post-visit and subsequent to grant of accreditation.</p>			
Promote ethical and professional values to prepare sustainable and competent workforce having professional identity with sense of social responsibility					
Establish industry institute interactions to escalate industrial perspective for improving employability, entrepreneurship skill, industrial competency and to prosper lifelong learning		Date : <u>20-9-2022</u> Place : Amravati			
		 Signature, Name and Designation of the Head of the Institute <u>(Signature)</u>			

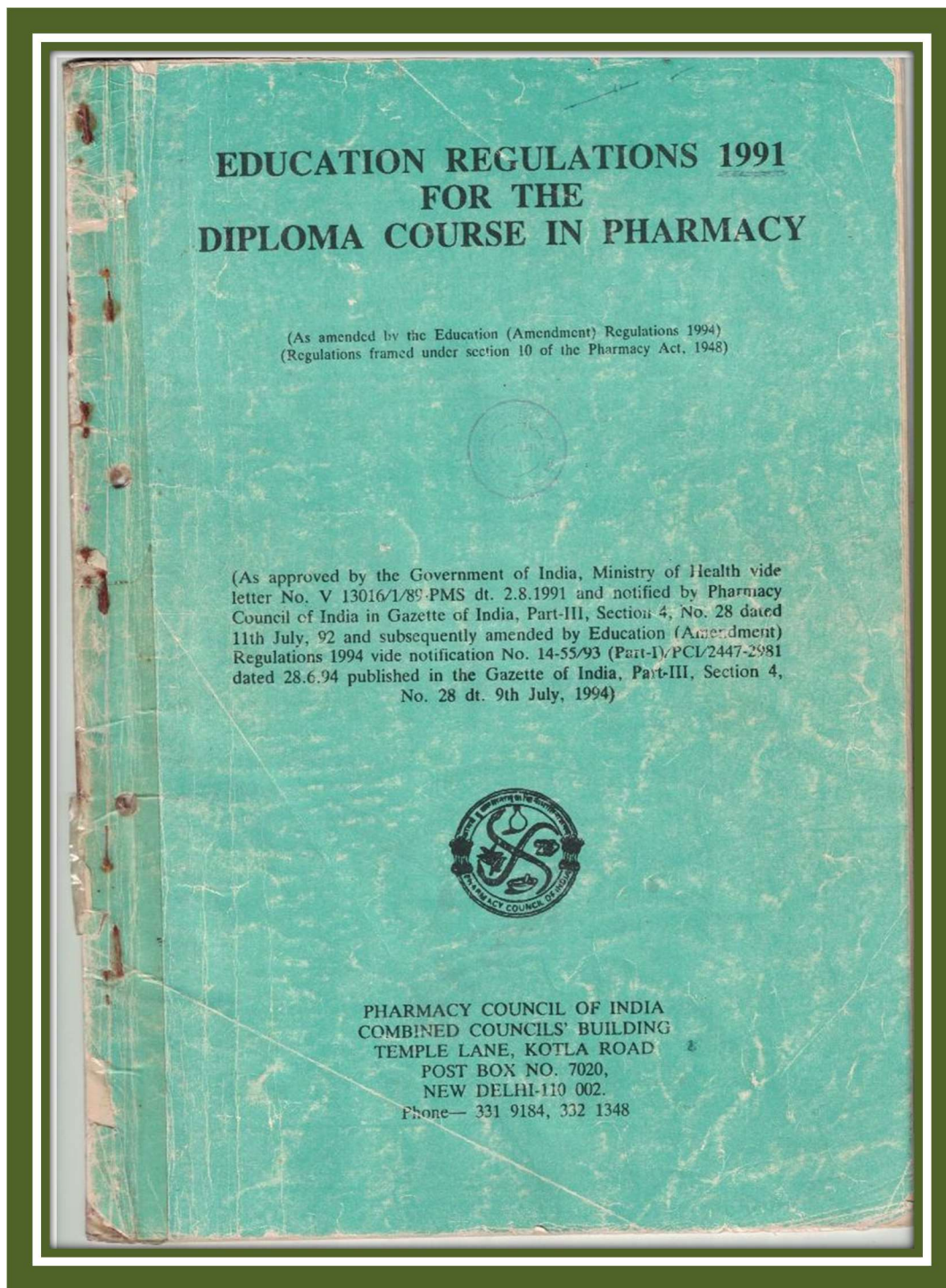
- 1. Pharmacy Knowledge:** Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy.
- 2. Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.
- 3. Leadership skills:** Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.
- 4. Professional Identity:** Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).
- 5. Pharmaceutical Ethics:** Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
- 6. Communication:** Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.

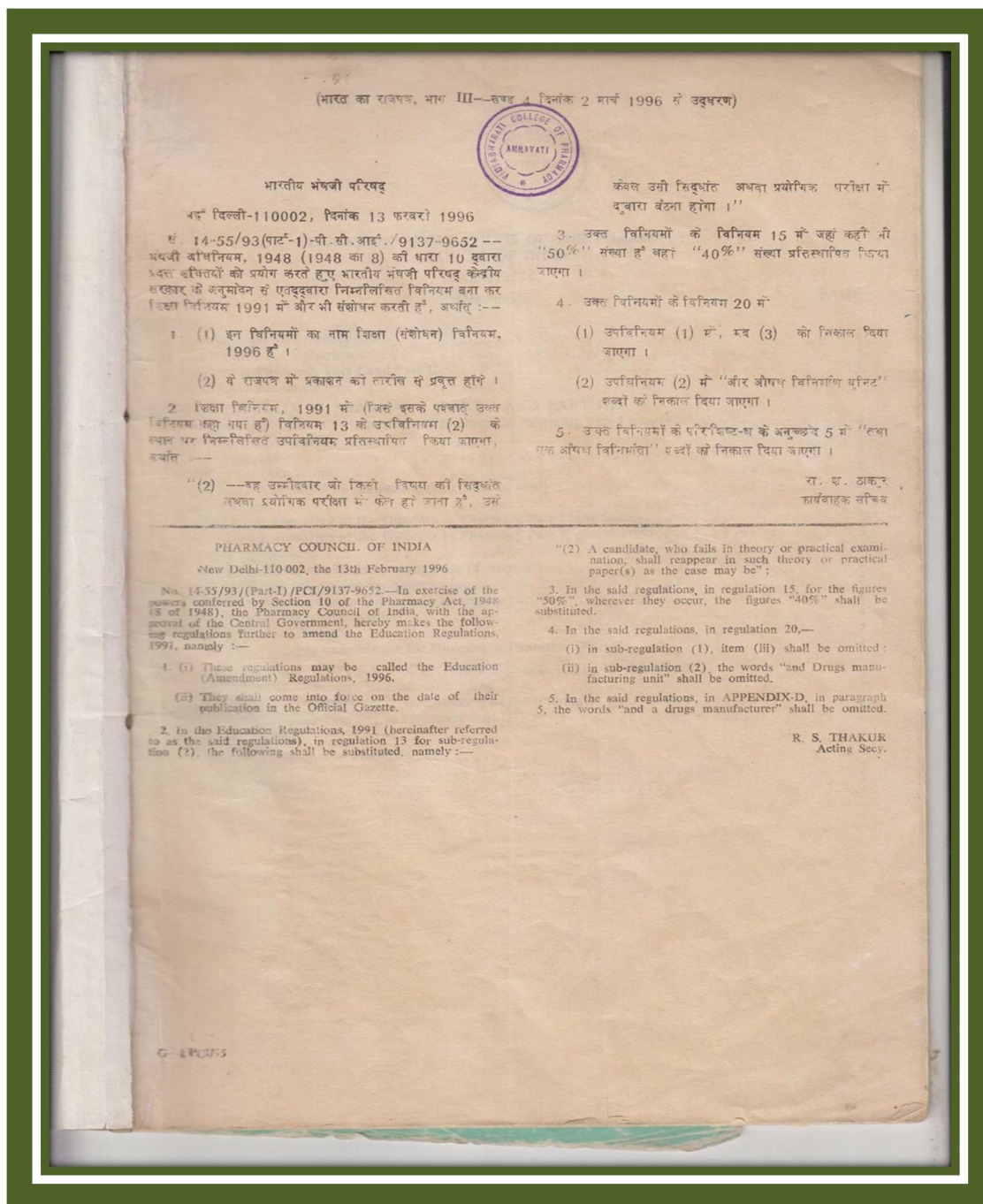
**7. The Pharmacist and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.

**8. Environment and sustainability:** Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**9. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning need









APPENDIX-A  
SYLLABUS

## DIPLOMA IN PHARMACY (PART-I)

## 1.1 PHARMACEUTICS-I

Theory (75 hours)

1. Introduction of different dosage forms. Their classification with examples—their relative applications. Familiarisation with new drug delivery systems.

2. Introduction to Pharmacopocias with special reference to the Indian Pharmacopocia.

3. Metrology-Systems of wights and measures. Calculations including conversion from one to another system. Percentage calculations and adjustments of products. Use of alligation method in calculations, Isotonic solutions.

4. Packing of Pharmaceuticals-Desirable features of a container-types of containers. Study of glass and plastics as materials for containers and rubber as a material for closures—their merits and demerits. Introduction to aerosol packaging.

5. Size reduction Objectives, and factors affecting size reduction, methods of size reduction—Study of Hammer mill, Ball mill, Fluid Energy Mill and Disintegrator.

6. Size separation-Size separation by sifting. Official Standard for powders. Sedimentation methods of size separation. Construction and working of cyclone separator.

7. Mixing and Homogenisation-Liquid mixing and powder mixing, Mixing of semisolids. Study of Silver-son Mixer-Homogeniser, Planetary Mixer; Agitated powder mixer; Triple Roller Mill; Propeller Mixer. Colloid Mill and Hand Homogeniser. Double cone mixer.

8. Clarification and Filtration-Theory of filtration, Filter media; Filter aids and selection of filters. Study of the following filtration equipments-Filter Press, Sintered Filters, Filter Candles, Metafilter.

9. Extraction and Galenicals-(a) Study of percolation and maceration and their modification, continuous hot extraction-Applications in the preparation of tinctures and extracts.

(b) Introduction to Ayurvedic dosage forms.

10. Heat processes Evaporation-Definition Factors affecting evaporation-Study of evaporating still and Evaporating Pan.

11. Distillation-Simple distillation and Fractional

distillation; Steam distillation and vacuum distillation. Study of vacuum still, preparation of Purified Water I.P. and water for Injection I.P. Construction and working of the still used for the same.

12. Introduction to drying processes-Study of Tray Dryers: Fluidized Bed Dryer, Vacuum Dryer and Freeze Dryer.

13. Sterilization-Concept of sterilization and its differences from disinfection-Thermal resistance of micro-organisms. Detailed study of the following sterilization process.

(i) Sterilization with moist heat,

(ii) Dry heat sterilization,

(iii) Sterilization by radiation,

(iv) Sterilization by filtration and

(v) Gaseous sterilization.

Aseptic techniques. Application of sterilization processes in hospitals particularly with reference to surgical dressings and intravenous fluids. Precautions for safe and effective handling of sterilization equipment.

14. Processing of Tablets-Definition; Different types of compressed tablets and their properties. Processes involved in the production of tablets; Tablets excipients; Defects in tablets. Evaluation of Tablets; Physical Standards including Disintegration and Dissolution. Tablet coating-Sugar coating; film coating, enteric coating and microencapsulation (Tablet coating may be dealt in an elementary manner.)

15. Processing of Capsules—Hard and soft gelatin capsules; different sizes capsules; filling of capsules; handling and storage of capsules, Special applications of capsules.

16. Study of immunological products like sera vaccines, toxoids & their preparations.



9

### PRACTICAL (100 hours)

Preparation (minimum number stated against each) of the following categories illustrating different techniques involved.

1. Aromatic waters . . . . . 3
2. Solutions . . . . . 4
3. Spirits . . . . . 2
4. Tinctures . . . . . 4
5. Extracts . . . . . 2
6. Creams . . . . . 2
7. Cosmetic preparations . . . . . 3
8. Capsules . . . . . 2
9. Tablets . . . . . 2
10. Preparations involving sterilisation . . . . . 2
11. Ophthalmic preparations . . . . . 2
12. Preparations involving aseptic techniques . . . . . 2

### Books Recommended : (Latest editions)

1. Remington's Pharmaceutical Sciences.
2. The Extra Pharmacopocia-Martindale.

### 1.2 PHARMACEUTICAL CHEMISTRY-I

#### Theory (75 hours)

1. General discussion on the following inorganic compounds including important physical and chemical properties, medicinal and Pharmaceutical uses, storage conditions and chemical incompatibility.

(A) Acids, bases and buffers Boric acid\*, Hydrochloric acid, strong ammonium hydroxide, Calcium hydroxide, Sodium hydroxide and official buffers.

(B) Antioxidants-Hypophosphorous acid, Sulphur dioxide, Sodium bisulphite, Sodium metabisulphite, Sodium thiosulphate, Nitrogen and Sodium Nitrite.

#### (C) Gastrointestinal agents—

(i) Acidifying agents Dilute hydrochloric acid.

(ii) Antacids-Sodium bicarbonate, Aluminium hydroxide gel, Aluminium Phosphate, Calcium carbonate, Magnesium carbonate, Magnesium trisilicate, Magnesium oxide, Combinations of antacid preparations.

(iii) Protectives and Adsorbents-Bismuth subcarbonate and Kaolin.

(iv) Saline Cathartics-Sodium Potassium tartrate and Magnesium sulphate.

#### (D) Topical Agents—

(i) Protectives-Talc, Zinc Oxide, Calamine, Zinc stearate, Titanium dioxide, Silicone polymers.

(ii) Antimicrobials and Astringents-Hydrogen

peroxide\*, Potassium permanganate, Chlorinated lime, Iodine, Solutions of Iodine, Povidone-iodine, Boric acid, Borax. Silver nitrate, Mild silver protein, Mercury, Yellow mercuric oxide, Ammoniated mercury.

(iii) Sulphur and its compounds-Sublimed sulphur precipitated sulphur, selenium sulphide.

(iv) Astringents:—Alum and Zinc Sulphate.

(E) Dental Products-Sodium Fluoride, Stannous Fluoride, Calcium carbonate, Sodium metaphosphate, Dicalcium phosphate, Strontium chloride, Zinc chloride.

(F) Inhalants-Oxygen, Carbon dioxide, Nitrous oxide.

(G) Respiratory stimulants—Ammonium Carbonate

(H) Expectorants and Emetics—Ammonium chloride,\* Potassium iodide, Antimony Potassium tartrate.

(I) Antidotes—Sodium nitrate.

#### 2. Major Intra and Extracellular electrolytes—

(A) Electrolytes used for replacement therapy—Sodium chloride and its preparations, Potassium chloride and its preparations.

(B) Physiological acid-base balance and electrolytes used-Sodium acetate, Potassium acetate, Sodium bicarbonate injection, Sodium citrate, Potassium citrate, Sodium lactate injection, Ammonium chloride and its injection.

(C) Combination of oral electrolyte powders and solutions.

3. Inorganic Official compounds of Iron, Iodine, and Calcium Ferrous Sulfate and Calcium gluconate.

4. Radio pharmaceuticals and Contrast media-Radio activity-Alpha, Beta and Gamma Radiations, Biological effects of radiations, Measurement of radio activity, G. M. Counter Radio isotopes-their uses, storage and precautions with special reference to the official preparations.

Radio opaque Contrast media-Barium sulfate.

5. Quality control of Drugs and Pharmaceuticals-Importance of quality control, significant errors, methods used for quality control, sources of impurities in Pharmaceuticals, Limit tests for Arsenic, chloride, sulphate, Iron and Heavy metals.

6. Identification tests for cations and anions as per Indian Pharmacopocia.

Classification, qualitative tests. Diseases related to carbohydrate metabolism.

4. Brief chemistry and role of Lipids, Classification, qualitative tests. Diseases related to lipids metabolism.

5. Brief chemistry and role of Vitamins and Coenzymes.

6. Role of minerals and water in life processes.

7. Enzymes : Brief concept of enzymic action. Factors affecting it. Therapeutic and pharmaceutical importance.

8. Brief concept of normal and abnormal metabolism of proteins, carbohydrates and lipids.

9. Introduction to pathology of blood and urine.

(a) Lymphocytes and Platelets, their role in health and disease.

(b) Erythrocytes Abnormal cells and their significance.

(c) Abnormal constituents of urine and their significance in diseases.

### PRACTICAL (75 hours)

1. Detection and identification of Proteins, Amino acids, Carbohydrates and lipids.

2. Analysis of normal and abnormal constituents of Blood and Urine (Glucose, Urea, Creatine, creatinine, cholesterol, alkaline phosphatase, acid phosphatase, Bilirubin, SGPT, SGOT, Calcium, Diastase, Lipase).

3. Examination of sputum and faeces (microscopic and staining).

4. Practice in injecting drugs by intramuscular, subcutaneous and intravenous routes. Withdrawal of blood samples.

### 1.5. HUMAN ANATOMY AND PHYSIOLOGY THEORY (75 hours)

1. Scope of Anatomy and Physiology.

Definition of various terms used in Anatomy

2. Structure of cell, function of its components with special reference to mitochondria and microsome.

3. Elementary tissues of the body. i.e. epithelial tissue, muscular tissue, connective tissue and nervous tissue.

4. Structure and function of skeleton. Classification of joints and their function, Joint disorder.

5. Composition of blood, functions of blood elements. Blood group and coagulation of blood. Brief information regarding disorders of blood.

6. Name and functions of lymph glands.

7. Structure and functions of various parts of the heart. Arterial and venous system with special reference to the names and positions of main arteries and veins. Blood pressure and its recording. Brief information about cardiovascular disorders.

8. Various parts of respiratory system and their functions. Physiology of respiration.

9. Various parts of urinary system and their functions, structure and functions of kidney. Physiology of Urine formation. Pathophysiology of renal diseases and oedema.

10. Structure of skeletal muscle. Physiology of muscle contraction. Names, position, attachments and functions of various skeletal muscles. Physiology of neuromuscular junction.

11. Various parts of central nervous system, brain and its parts, functions and reflex action. Anatomy and Physiology of autonomic nervous system.

12. Elementary knowledge of structure and functions of the organs of taste, smell, ear, eye and skin. Physiology of pain.

13. Digestive system; names of the various parts of digestive system and their functions. Structure and functions of liver, physiology of digestion and absorption.

14. Endocrine glands and Hormones. Locations of the glands, their hormones and functions. Pituitary, thyroid, Adrenal and Pancreas.

15. Reproductive system—Physiology and Anatomy of Reproductive system.

### PRACTICAL (50 Hours)

1. Study of the human skeleton.

2. Study with the help of charts and models of the following systems and organs:

- Digestive system.
- Respiratory system.
- Cardiovascular system.
- Urinary system.
- Reproductive system.
- Nervous system.
- Eye.
- Ear.

3. Microscopic examination of epithelial tissue, cardiac muscle, smooth muscle, skeletal muscle. Connective tissue and nervous tissues.

4. Examination of blood films for TLC, DLC and malarial parasite.



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5. Determination of clotting time of blood, erythrocyte sedimentation rate and Haemoglobin value.

6. Recording of body temperature, pulse, heart rate, blood pressure and ECG.

### 1.6 HEALTH EDUCATION AND COMMUNITY PHARMACY

Theory (50 hours)

1. Concept of health—Definition of physical health, mental health, social health, spiritual health determinants of health, indicators of health, concept of disease, natural history of diseases, the disease agents, concept of prevention of diseases.

2. Nutrition and health—Classification of foods requirements, disease induced due to deficiency of proteins, Vitamins and minerals—treatment and prevention.

3. Demography and family planning—Demography cycle, fertility, family planning, contraceptive methods, behavioural methods, natural family planning method, chemical method, mechanical methods, hormonal contraceptives, population problem of India.

4. First aid—Emergency treatment in shock, snake-bite, burns poisoning, heart disease, fractures and resuscitation methods. Elements of minor surgery and dressings.

5. Environment and health—Sources of water supply, water pollution, purification of water, health and air, noise light—solid waste disposal and control—medical entomology, arthropod borne diseases and their control, rodents, animals and diseases.

6. Fundamental principles of microbiology classification of microbes, isolation, staining techniques of organisms of common diseases.

7. Communicable diseases—Causative agents, modes of transmission and prevention.

(a) Respiratory infections—Chicken pox, measles, Influenza, diphtheria, whooping cough and tuberculosis.

(b) Intestinal infections: Poliomyelitis, Hepatitis, Cholera, Typhoid, Food poisoning, Hookworm infection.

(c) Arthropod borne infections—plague, Malaria, Filariasis.

(d) Surface infections—Rabies, Trachoma, Tetanus, Leprosy.

(e) Sexually transmitted diseases—Syphilis, Gonorrhoea, AIDS.

8. Non-communicable diseases—Causative agents, prevention, care and control:

Cancer, Diabetes, Blindness, Cardiovascular diseases.

9. Epidemiology—Its scope, methods, uses, dynamics of disease transmission, immunity and immunisation: Immunological products and their dose schedule. Principles of disease control and prevention, hospital acquired infection, prevention and control. Disinfection, types of disinfection, disinfection procedures, for faeces, urine, sputum, room linen, dead-bodies, instruments.

### 2.1 PHARMACEUTICS II

Theory (75 hours)

#### 1. Dispensing Pharmacy:

(i). Prescriptions—Reading and understanding of prescription; Latin terms commonly used (Detailed study is not necessary). Modern methods of prescribing, adoption of metric system. Calculations involved in dispensing.

(ii) Incompatibilities in Prescriptions—Study of various types of incompatibilities—physical, chemical and therapeutic.

(iii) Posology—Dose and Dosage of drugs, Factors influencing dose, Calculations of doses on the basis of age, sex and surface area. Veterinary doses.

#### 2. Dispensed Medications:

(Note: A detailed study of the following dispensed medication is necessary. Methods of preparation with theoretical and practical aspects, use of appropriate containers and closures. Special labelling requirements and storage conditions should be high-lighted).

(i) Powders—Types of powders—Advantages and disadvantages of powders, Granules, Cachets and Tablet triturates. Preparation of different types of powders encountered in prescriptions. Weighing methods, possible errors in weighing, minimum weighable amounts and weighing of material below the minimum weighable amount, geometric dilution and proper usage and care of dispensing balance.

#### (ii) Liquid Oral Dosage Forms:

(a) Monophasic—Theoretical aspects including commonly used vehicles, essential adjuvant like stabilizers, colourants and flavours, with examples.

Review of the following monophasic liquids with details of formulation and practical methods.

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cin, Rifampicin, Ethambutol\*, Thiacetazone, Ethionamide, Cycloserine, Pyrazinamide\*.

Antiamoebic and Anthelmintic Drugs—Emetine, Metronidazole\*, Halogenated hydroxyquinolines, diloxanidefuroate, Paramomycin Piperazine\*, Mebendazole, D.E.C.\*.

Antibiotics—Benzyl Penicillin\*, Phenoxy methyl Penicillin\*, Benzathine Penicillin, Ampicillin\*, Cloxacillin, Carbenicillin, Gentamicin, Neomycin, Erythromycin, Tetracycline, Cephalexin, Cephaloridine, Cephalothin, Griseofulvin, Chloramphenicol.

Antifungal agents—Undecylenic acid, Tolnaftate, Nystatin, Amphotericin, Hamycin.

Antimalarial Drugs—Chloroquine\*, Amodiaquine, Primaquine, Proguanil, Pyrimethamine\*, Quinine, Trimethoprim.

Tranquilizers—Chlorpromazine\*, Prochlorperazine, Trifluoperazine, Thiothixene, Haloperidol\*.

Triperidol, Oxypertine, Chlordiazepoxide, Diazepam\*, Lorazepam, Meprobamate.

Hypnotics—Phenobarbitone\*, Butobarbitone, Cyclobarbitone, Nitrazepam, Glutethimide\*, Methypylone, Paraldehyde, Triclofos sodium.

General Anaesthetics—Halothane\*, Cyclopropane\*, Diethyl ether\*, Methohexital sodium, Thiopental sodium, Trichloroethylene.

Antidepressant Drugs—Amitriptyline, Nortriptyline, Imipramine\*, Phenelzine, Tranylcypromine.

Analeptics—Theophylline, Caffeine\*, Coramine\* Dextroamphetamine.

Adrenergic Drugs—Adrenaline\*, Noradrenaline, Isoprenaline\*, Phenylephrine, Salbutamol, Terbutaline, Ephedrine\*, Pseudoephedrine.

Adrenergic Antagonist—Tolazoline, Propranolol\*, Practolol.

Cholinergic Drugs—Neostigmine\*, Pyridostigmine, Pralidoxime, Pilocarpine, Physostigmine\*.

Cholinergic Antagonists—Atropine\*, Hyoscine, Homatropine, Propantheline\*, Benztropine, Tropicamide, Biperiden\*.

Diuretic Drugs—Furosemide\*, Chlorothiazide, Hydrochlorothiazide\*, Benzthiazide, Urea\*, Mannitol\*, Ethacrynic Acid.

Cardiovascular Drugs—Ethyl nitrite\*, Glyceryl trinitrate,

Alpha methyl dopa, Guanethidine, Clofibrate, Quinidine.

Hypoglycemic Agents—Insulin, Chlorpropamide\*,

Tolbutamide, Glibenclamide, Phenformin\*, Metformin.

Coagulants and Anti-Coagulants—Heparin, Thrombin, Menadione\*, Bishydroxycoumarin, Warfarin Sodium.

Local Anaesthetics—Lignocaine\*, Procaine\*, Benzocaine.

Histamine and Anti-histaminic Agents—Histamine, Diphenhydramine\*, Promethazine, Cyproheptadine, Mepyramine, Pheniramine, Chlorpheniramine\*.

Analgesics and Anti-pyretics—Morphine, Pethidine\*, Codeine, Methadone, Aspirin\*, Paracetamol\*, Analgin, Dextropropoxyphene, Pentazocine.

Non-steroidal anti-inflammatory Agents—Indomethacin\*, phenylbutazone\*, Oxyphenbutazone, Ibuprofen, Thyroxine and Antithyroids—Thyroxine\*, Methimazole, Methylthiouracil, Propylthiouracil.

Diagnostic Agents—Iopanoic Acid, Propyliodone, Sulfobromophthalcin.

Sodium Indigotindisulfonate, Indigo Carmine, Evans blue, Congo Red, Fluorescein Sodium.

\*Anticonvulsants, cardiac glycosides, Antiarrhythmic antihypertensives & vitamins.

Steroidal Drugs—Betamethazone, Cortisone, Hydrocortisone, prednisolone, Progesterone, Testosterone, Oestradiol, Nandrolone.

Anti-Neoplastic Drugs—Actinomycins, Azathioprine, Busulphan, Chlorambucil, Cisplatin cyclophosphamide, Daunorubicin hydrochloride, Fluorouracil, Mercaptopurine, Methotrexate, Mytomycin.

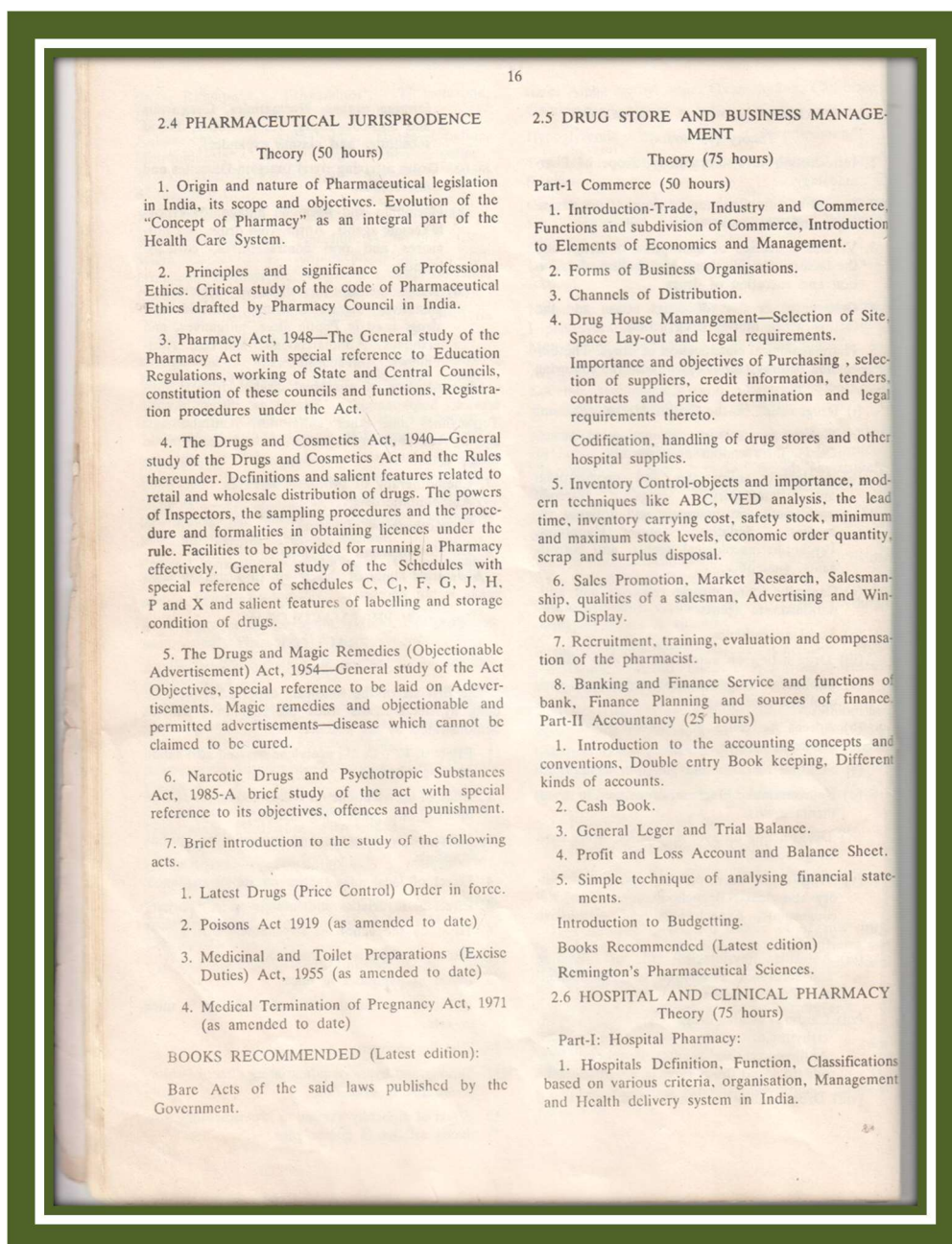
Books Recommended: (Latest editions)

1. Pharmacopocia of India.
2. British Pharmaceutical Codex.
3. Martindale The Extra Pharmacopocia.

### PRACTICAL (75 hours)

1. Systematic qualitative testing of organic drugs involving Solubility determination, melting point and boiling point, detection of elements and functional groups (10 compounds).
2. Official identification test for certain groups of drugs included in the I.P. like barbiturates, sulfonamides, phenothiazine, Antibiotics etc. (8 compounds).
3. Preparation of three simple organic preparations.





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### 2. Hospital Pharmacy:

- (a) Definition
  - (b) Functions and objectives of Hospital Pharmaceutical services.
  - (c) Location, Layout, Flow chart of material and men.
  - (d) Personnel and facilities requirements including equipments based on individual and basic needs.
  - (e) Requirements and abilities required for Hospital pharmacists.
- ### 3. Drug Distribution system in Hospitals:
- (a) Out-patient services
  - (b) In-patient services—(a) types of services (b) detailed discussion of Unit Dose system, Floor ward stock system, Satellite pharmacy services, Central sterile services, Bed Side Pharmacy.
- ### 4. Manufacturing:
- (a) Economical considerations, estimation of demand.
  - (b) Sterile manufacture—large and small volume parenterals, facilities, requirements, layout production planning, man-power requirements.
  - (c) Non-sterile manufacture—Liquid orals, externals—bulk concentrates.
  - (d) Procurement of stores and testing of raw materials.
- ### 5. Nomenclature and uses of surgical instruments and Hospital Equipments and health accessories.
- ### 6. P.T.C. (Pharmacy Therapeutic Committee), Hospital Formulary System and their organisation, functioning, composition.
- ### 7. Drug Information service and Drug Information Bulletin.
- ### 8. Surgical dressing like cotton, gauze, bandages and adhesive tapes including their pharmacopocial tests for quality. Other hospital supply e.g. T.V. sets B.G. sets, Ryals tubes, Catheters, Syringes etc.
- ### 9. Application of computer in maintenance of records, inventory control, medication monitoring, drug information and data storage and retrieval in hospital and retail pharmacy establishments.

### Part-II: Clinical Pharmacy:

### 1. Introduction to Clinical Pharmacy Practice—Definition, scope.

2. Modern dispensing aspects—Pharmacists and Patient counselling and advice for the use of common drugs, medication history.

3. Common daily terminology used in the Practice of Medicine.

4. Disease, manifestation and pathophysiology including salient symptoms to understand the disease like Tuberculosis, Hepatitis, Rheumatoid Arthritis, Cardiovascular diseases, Epilepsy, Diabetes, Peptic Ulcer, Hypertension.

5. Physiological parameters with their significance.

### 6. Drug Interactions:

- (a) Definition and introduction.
- (b) Mechanism of Drug Interaction.
- (c) Drug—drug interaction with reference to analgesics, diuretics, cardiovascular drugs, Gastro-intestinal agents, Vitamins and Hypoglycemic agents.
- (d) Drug—food interaction.

### 7. Adverse Drug Reactions:

- (a) Definition and Significance.
- (b) Drug—induced diseases and Teratogenicity.

8. Drugs in Clinical Toxicity—Introduction, general treatment of poisoning, systematic antidotes. Treatment of insecticide poisoning, heavy metal poison, Narcotic drugs, Barbiturate, Organophosphorus poisons.

9. Drug dependences, Drug abuse, addictive drugs and their treatment, complications.

10. Bio-availability of drugs, including factors affecting it.

Books recommended (latest editions)

1. Remington's Pharmaceutical Sciences.
2. Martindale The Extra Pharmacopocia.

### PRACTICAL (50 hours)

1. Preparation of transfusion fluids.
2. Testing of raw materials used in (1).
3. Evaluation of surgical dressings.
4. Sterilization of surgical instruments, glass ware and other hospital supplies.
5. Handling and use of data processing equipments.



### PHARMACEUTICS – THEORY

#### Topics

- History of the profession of Pharmacy in India in relation to Pharmacy education, industry, pharmacy practice, and various professional associations.
- Pharmacy as a career
- Pharmacopoeia: Introduction to IP, BP, USP, NF and Extra Pharmacopoeia. Salient features of Indian Pharmacopoeia

**Packaging materials:** Types, selection criteria, advantages and disadvantages of glass, plastic, metal, rubber as packaging materials

**Pharmaceutical aids:** Organoleptic (Colouring, flavouring, and sweetening) agents

**Preservatives:** Definition, types with examples and uses

**Unit operations:** Definition, objectives/applications, principles, construction, and workings of:

**Size reduction:** hammer mill and ball mill

**Size separation:** Classification of powders according to IP, Cyclone separator, Sieves and standards of sieves

**Mixing:** Double cone blender, Turbine mixer, Triple roller mill and Silverson mixer homogenizer

**Filtration:** Theory of filtration, membrane filter and sintered glass filter

**Drying:** working of fluidized bed dryer and process of freeze drying

**Extraction:** Definition, Classification, method, and applications

**Tablets** – coated and uncoated, various modified tablets (sustained release, extended-release, fast dissolving, multi-layered, etc.)

**Capsules** - hard and soft gelatine capsules

**Liquid oral preparations** - solution, syrup, elixir, emulsion, suspension, dry powder for reconstitution

**Topical preparations** - ointments, creams, pastes, gels, liniments and lotions, suppositories, and pessaries  
Nasal preparations, Ear preparations

**Powders and granules** - Insufflations, dusting powders, effervescent powders, and effervescent granules

**Sterile formulations** – Injectables, eye drops and eye ointments

**Immunological products:** Sera, vaccines, toxoids, and their manufacturing methods.



**Basic structure, layout, sections, and activities of pharmaceutical manufacturing plant** 132  
**Quality control and quality assurance:** Definition and concepts of quality control, quality assurance, current good manufacturing practice (cGMP), Introduction to the concept of calibration and validation  
**Novel drug delivery systems:** Introduction, Classification with examples, advantages, and challenges

### Practicals

1. Handling and referring the official references: Pharmacopoeias, Formularies, etc. for retrieving formulas, procedures, etc.
2. Formulation of the following dosage forms as per monograph standards and dispensing with appropriate packaging and labelling
  - **Liquid Oral:** Simple syrup, Piperazine citrate elixir, Aqueous Iodine solution
  - **Emulsion:** Castor oil emulsion, Cod liver oil emulsion
  - **Suspension:** Calamine lotion, Magnesium hydroxide mixture
  - **Ointment:** Simple ointment base, Sulphur ointment
  - **Cream:** Cetrimide cream
  - **Gel:** Sodium alginate gel
  - **Liniment:** Turpentine liniment, White liniment BPC
  - **Dry powder:** Effervescent powder granules, Dusting powder
  - **Sterile Injection:** Normal Saline, Calcium gluconate Injection
  - **Hard Gelatine Capsule:** Tetracycline capsules
  - **Tablet:** Paracetamol tablets
3. Formulation of at least five commonly used cosmetic preparations — e.g. cold cream, shampoo, lotion, toothpaste etc
4. Demonstration on various stages of tablet manufacturing processes
5. Appropriate methods of usage and storage of all dosage forms including special dosage such as different types of inhalers, spacers, insulin pens
6. Demonstration of quality control tests and evaluation of common dosage forms viz. tablets, capsules, emulsion, sterile injections as per the monographs

## PHARMACEUTICAL CHEMISTRY – THEORY

## Topic

**Introduction to Pharmaceutical chemistry:** Scope and objectives

**Sources and types of errors:** Accuracy, precision, significant figures

**Impurities in Pharmaceuticals:** Source and effect of impurities in Pharmacopoeial substances, importance of limit test, Principle and procedures of Limit tests for chlorides, sulphates, iron, heavy metals and arsenic.

**Volumetric analysis:** Fundamentals of volumetric analysis, Acid-base titration, non-aqueous titration, precipitation titration, complexometric titration, redox titration

**Gravimetric analysis:** Principle and method.

**Inorganic Pharmaceuticals:** Pharmaceutical formulations, market preparations, storage conditions and uses of

- **Haematinics:** Ferrous sulphate, Ferrous fumarate, Ferric ammonium citrate, Ferrous ascorbate, Carbonyl iron
- **Gastro-intestinal Agents:** Antacids :Aluminium hydroxide gel, Magnesium hydroxide, Magaldrate, Sodium bicarbonate, Calcium Carbonate, Acidifying agents, Adsorbents, Protectives, Cathartics
- **Topical agents:** Silver Nitrate, Ionic Silver, Chlorhexidine Gluconate, Hydrogen peroxide, Boric acid, Bleaching powder, Potassium permanganate
- **Dental products:** Calcium carbonate, Sodium fluoride, Denture cleaners, Denture adhesives, Mouth washes
- **Medicinal gases:** Carbon dioxide, nitrous oxide, oxygen  
Introduction to nomenclature of organic chemical systems with particular Reference to heterocyclic compounds containing up to Three rings

**Study of the following category of medicinal compounds with respect to classification, chemical name, chemical structure (compounds marked with\*) uses, stability and storage conditions, different types of formulations**

**and their popular brand names**

**Drugs Acting on Central Nervous System**

- **Anaesthetics:** Thiopental Sodium\*, Ketamine Hydrochloride\*, Propofol
- **Sedatives and Hypnotics:** Diazepam\*, Alprazolam\*, Nitrazepam, Phenobarbital\*
- **Antipsychotics:** Chlorpromazine Hydrochloride\*, Haloperidol\*, Risperidone\*, Sulpiride\*, Olanzapine, Quetiapine, Lurasidone
- **Anticonvulsants:** Phenytoin\*, Carbamazepine\*, Clonazepam, Valproic Acid\*, Gabapentin\*, Topiramate, Vigabatrin, Lamotrigine
- **Anti-Depressants:** Amitriptyline Hydrochloride\*, Imipramine Hydrochloride\*, Fluoxetine\*, Venlafaxine, Duloxetine, Sertraline, Citalopram, Escitalopram, Fluvoxamine, Paroxetine

**Drugs Acting on Autonomic Nervous System**

- **Sympathomimetic Agents:** *Direct Acting:* Nor-Epinephrine\*, Epinephrine, Phenylephrine, Dopamine\*, Terbutaline, Salbutamol (Albuterol), Naphazoline\*, Tetrahydrozoline. *Indirect Acting Agents:* Hydroxy Amphetamine, Pseudoephedrine. Agents With Mixed Mechanism: Ephedrine, Metaraminol
- **Adrenergic Antagonists:** Alpha Adrenergic Blockers: Tolazoline, Phentolamine
- Phenoxybenzamine, Prazosin. Beta Adrenergic Blockers: Propranolol\*, Atenolol\*, Carvedilol
- **Cholinergic Drugs and Related Agents:** Direct Acting Agents: Acetylcholine\*, Carbachol, And Pilocarpine. Cholinesterase Inhibitors: Neostigmine\*, Edrophonium Chloride, Tacrine Hydrochloride, Pralidoxime Chloride, Echothiophate Iodide
- **Cholinergic Blocking Agents:** Atropine Sulphate\*, Ipratropium Bromide  
*Synthetic Cholinergic Blocking Agents:* Tropicamide, Cyclopentolate Hydrochloride, Clidinium Bromide, Dicyclomine Hydrochloride\*

### Drugs Acting on Cardiovascular System

- **Anti-Arrhythmic Drugs:** Quinidine Sulphate, Procainamide Hydrochloride, Verapamil, Phenytoin Sodium\*, Lidocaine Hydrochloride, Lorcainide Hydrochloride, Amiodarone and Sotalol
- **Anti-Hypertensive Agents:** Propranolol\*, Captopril\*, Ramipril, Methyldopate Hydrochloride, Clonidine Hydrochloride, Hydralazine Hydrochloride, Nifedipine,
- **Antianginal Agents:** Isosorbide Dinitrate
- **Diuretics:** Acetazolamide, Frusemide\*, Bumetanide, Chlorthalidone, Benzthiazide, Metolazone, Xipamide,

Spironolactone

**Hypoglycemic Agents:** Insulin and Its Preparations, Metformin\*, Glibenclamide\*, Glimepiride, Pioglitazone,

Repaglinide, Gliflozins, Gliptins

**Analgesic And Anti-Inflammatory Agents:** Morphine Analogues, Narcotic Antagonists; **Nonsteroidal Anti- Inflammatory Agents (NSAIDs)** - Aspirin\*, Diclofenac, Ibuprofen\*, Piroxicam, Celecoxib, Mefenamic Acid, Paracetamol\*, Aceclofenac

### Anti-Infective Agents

- **Antifungal Agents:** Amphotericin-B, Griseofulvin, Miconazole, Ketoconazole\*, Itraconazole, Fluconazole\*, Naftifine Hydrochloride
- **Urinary Tract Anti-Infective Agents:** Norfloxacin, Ciprofloxacin, Ofloxacin\*, Moxifloxacin,
- **Anti-Tubercular Agents:** INH\*, Ethambutol, ParaAmino Salicylic Acid, Pyrazinamide,

Rifampicin, Bedaquiline, Delamanid, Pretomanid\*

- **Antiviral Agents:** Amantadine Hydrochloride, Idoxuridine, Acyclovir\*, Foscarnet, Zidovudine, Ribavirin, Remdesivir, Favipiravir
- **Antimalarials:** Quinine Sulphate, Chloroquine Phosphate\*, Primaquine Phosphate, Mefloquine\*, Cycloguanil, Pyrimethamine, Artemisinin
- **Sulfonamides:** Sulfanilamide, Sulfadiazine, Sulfamethoxazole, Sulfacetamide\*, Mafenide Acetate, Cotrimoxazole, Dapsone\*

**Antibiotics:** Penicillin G, Amoxicillin\*, Cloxacillin, Streptomycin, **Tetracyclines:** Doxycycline, Minocycline, **Macrolides:** Erythromycin, Azithromycin, **Miscellaneous:** Chloramphenicol\* Clindamycin

**Anti-Neoplastic Agents:** Cyclophosphamide\*, Busulfan, Mercaptopurine, Fluorouracil\*, Methotrexate, Dactinomycin, Doxorubicin Hydrochloride, Vinblastine Sulphate, Cisplatin\*, Dromostanolone Propionate

### Experiment PR

#### Limit test for

- Chlorides; sulphate; Iron; heavy metals

Identification tests for Anions and Cations as per Indian Pharmacopoeia

#### Fundamentals of Volumetric analysis

Preparation of standard solution and standardization of Sodium Hydroxide, Potassium Permanganate

#### Assay of the following compounds

- Ferrous sulphate- by redox titration
- Calcium gluconate-by complexometric
- Sodium chloride-by Modified Volhard's method
- Ascorbic acid by iodometry
- Ibuprofen by alkalimetry

#### Fundamentals of preparative organic chemistry

Determination of Melting point and boiling point of organic compounds

#### Preparation of organic compounds

- Benzoic acid from Benzamide
- Picric acid from Phenol

#### Identification and test for purity of pharmaceuticals

Aspirin, Caffeine, Paracetamol, Sulfanilamide

Systematic Qualitative analysis experiments (4 substances)

### **PHARMACOGNOSY – THEORY Topic**

Definition, history, present status and scope of

Pharmacognosy

#### **Classification of drugs:**

- Alphabetical
- Taxonomical
- Morphological
- Pharmacological
- Chemical
- Chemo-taxonomical

#### **Quality control of crude drugs:**

- Different methods of adulteration of crude drugs
- Evaluation of crude drugs

Brief outline of occurrence, distribution, isolation, identification tests, therapeutic activity and pharmaceutical applications of alkaloids, terpenoids, glycosides, volatile oils, tannins and resins.

Biological source, chemical constituents and therapeutic efficacy of the following categories of crude drugs.

Aloe, Castor oil, Ispaghula, Senna

Digitalis, Arjuna

Coriander, Fennel, Cardamom,

Ginger, Clove, Black Pepper, Asafoetida, Nutmeg,

Cinnamon

Myrobalan, Black Catechu, Pale

Catechu



- **Basic principles involved in the traditional systems of medicine like:** Ayurveda, Siddha, Unani and Homeopathy

- **Method of preparation of Ayurvedic formulations like:**  
Arista, Asava, Gutika, Taila, Churna, Lehya and Bhasma

Role of medicinal and aromatic plants in national economy and their export potential

**Herbs as health food:**

Brief introduction and therapeutic applications of: Nutraceuticals, Antioxidants, Pro-biotics, Pre-biotics, Dietary fibres, Omega-3-fatty acids, Spirulina, Carotenoids, Soya and Garlic

Introduction to herbal formulations

**Herbal cosmetics:**

Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Aloe vera gel, Almond oil, Lavender oil, Olive oil, Rosemary oil, Sandal Wood oil  
Phytochemical investigation of drugs

**Practicals**

**1. Morphological Identification of the following drugs:**

Ispaghula, Senna, Coriander, Fennel, Cardamom, Ginger, Nutmeg, Black Pepper, Cinnamon, Clove, Ephedra, Rauwolfia, Gokhru, Punarnava, Cinchona, Agar.

**2. Gross anatomical studies (Transverse Section) of the following drugs:**

Ajwain, Datura, Cinnamon, Cinchona, Coriander, Ashwagandha, Liquorice, Clove, Curcuma, Nux vomica, Vasaka

**3. Physical and chemical tests for evaluation of any FIVE of the following drugs:**

Asafoetida, Benzoin, Pale catechu, Black catechu, Castor oil, Acacia, Tragacanth, Agar, Guar gum, Gelatine.

## HUMAN ANATOMY AND PHYSIOLOGY – THEORY

## Topic

Scope of Anatomy and Physiology

Definition of various terminologies

**Structure of Cell:** Components and its functions

**Tissues of the humanbody:** Epithelial, Connective, Muscular and Nervous tissues — their sub-types and characteristics.

**Osseous system:** structure and functions of bones of axial and appendicular skeleton

Classification, types and movements of joints, disorders of joints

#### Haemopoietic system

- Composition and functions of blood
- Process of Hemopoiesis
- Characteristics and functions of RBCs, WBCs, and platelets
- Mechanism of Blood Clotting
- Importance of Blood groups

#### Lymphatic system

- Lymph and lymphatic system, composition, function and its formation.
- Structure and functions of spleen and lymph node.

#### Cardiovascular system

- Anatomy and Physiology of heart
- Blood vessels and circulation (Pulmonary, coronary and systemic circulation)
- Cardiac cycle and Heart sounds, Basics of ECG
- Blood pressure and its regulation

#### Respiratory system

- Anatomy of respiratory organs and their functions.
- Regulation, and Mechanism of respiration.
- Respiratory volumes and capacities – definitions

#### Digestive system

- Anatomy and Physiology of the GIT
- Anatomy and functions of accessory glands
- Physiology of digestion and absorption

#### Skeletal muscles

- Histology
- Physiology of muscle contraction



- Disorder of skeletal muscles

### **Nervous system**

- Classification of nervous system
- Anatomy and physiology of cerebrum, cerebellum, midbrain
- Function of hypothalamus, medulla oblongata and basalganglia
- Spinal cord-structure and reflexes
- Names and functions of cranial nerves.
- Anatomy and physiology of sympathetic and parasympathetic nervous system (ANS)

### **Sense organs - Anatomy and physiology of**

- Eye
- Ear
- Skin
- Tongue
- Nose

### **Urinary system**

- Anatomy and physiology of urinary system
- Physiology of urine formation
- Renin - angiotensin system
- Clearance tests and micturition

### **Endocrine system (Hormones and their functions)**

- Pituitary gland
- Adrenal gland
- Thyroid and parathyroid gland
- Pancreas and gonads

### **Reproductive system**

- Anatomy of male and female reproductive system
- Physiology of menstruation
- Spermatogenesis and Oogenesis
- Pregnancy and parturition

**Practicals**

1. Study of compound microscope
2. General techniques for the collection of blood
3. Microscopic examination of Epithelial tissue, Cardiac muscle, Smooth muscle, Skeletal muscle, Connective tissue, and Nervous tissue of ready / pre-prepared slides.
4. Study of Human Skeleton-Axial skeleton and appendicular skeleton
5. Determination of
  - a. Blood group
  - b. ESR
  - c. Haemoglobin content of blood
  - d. Bleeding time and Clotting time
6. Determination of WBC count of blood
7. Determination of RBC count of blood
8. Determination of Differential count of blood
9. Recording of Blood Pressure in various postures, different arms, before and after exertion and interpreting the results
10. Recording of Body temperature (using mercury, digital and IR thermometers at various locations), Pulse rate/ Heart rate (at various locations in the body, before and after exertion), Respiratory Rate
11. Recording Pulse Oxygen (before and after exertion)
12. Recording force of air expelled using Peak Flow Meter
13. Measurement of height, weight, and BMI
14. Study of various systems and organs with the help of chart, models, and specimens
  - a) Cardiovascular system
  - b) Respiratory system
  - c) Digestive system
  - d) rinary system
  - e) Endocrine system
  - f) Reproductive system
  - g) Nervous system
  - h) Eye
  - i) Ear
  - j) Skin

**SOCIAL PHARMACY – THEORY****Topic****Introduction to Social Pharmacy**

- Definition and Scope. Social Pharmacy as a discipline and its scope in improving the public health. Role of Pharmacists in Public Health. (2)
- Concept of Health -WHO Definition, various dimensions, determinants, and health indicators. (3)
- National Health Policy – Indian perspective (1)
- Public and Private Health System in India, National Health Mission (2)
- Introduction to Millennium Development Goals, Sustainable Development Goals, FIP Development Goals (1)

**Preventive healthcare – Role of Pharmacists in the following**

- Demography and Family Planning (3)
- Mother and child health, importance of breastfeeding, effects of infant milk substitutes and bottle feeding (2)
- Overview of Vaccines, types of immunity and immunization (4)
- Effect of Environment on Health — Water pollution, importance of safe drinking water, waterborne diseases, air pollution, noise pollution, sewage and solid waste disposal, occupational illnesses, Environmental pollution due to pharmaceuticals (7)
- Psychosocial Pharmacy: Drugs of misuse and abuse — psychotropics, narcotics, alcohol, tobacco products. Social Impact of these habits on social health and productivity and suicidal behaviours (2)

**Nutrition and Health**

- Basics of nutrition – Macronutrients and Micronutrients (3)
- Importance of water and fibres in diet (1)
- Balanced diet, Malnutrition, nutrition deficiency diseases, ill effects of junk foods, calorific and nutritive values of various foods, fortification of food (3)
- Introduction to food safety, adulteration of foods, effects of artificial ripening, use of pesticides, genetically modified foods (1)
- Dietary supplements, nutraceuticals, food supplements – indications, benefits, Drug-Food Interactions (2)

Introduction to Microbiology and common microorganisms (3)

**Epidemiology:** Introduction to epidemiology, and its applications. Understanding of terms such as epidemic, pandemic, endemic, mode of transmission, outbreak, quarantine, isolation, incubation period, contact tracing, morbidity, mortality, . (2)

Causative agents, epidemiology and clinical presentations and Role of Pharmacists in educating the public in prevention of the following communicable diseases:

- Respiratory infections – chickenpox, measles, rubella, mumps, influenza (including Avian-Flu, H1N1, SARS, MERS, COVID-19), diphtheria, whooping cough, meningococcal meningitis, acute respiratory infections, tuberculosis, Ebola (7)
- Intestinal infections — poliomyelitis, viral hepatitis, cholera, acute diarrheal diseases, typhoid, amebiasis, worm infestations, food poisoning (7)
- Arthropod-borne infections - dengue, malaria, filariasis and, chikungunya (4)
- Surface infections – trachoma, tetanus, leprosy (2)
- STDs, HIV/AIDS (3)

Introduction to health systems and **all ongoing National Health programs** in India, their objectives, functioning, outcome, and the role of pharmacists.

**Pharmacoeconomics** – Introduction, basic terminologies, importance of Pharmacoeconomics

#### Practicals

1. National immunization schedule for children, adult vaccine schedule, Vaccines which are not included in the National Immunization Program.
2. RCH – reproductive and child health – nutritional aspects, relevant national health programmes.
3. Family planning devices
4. Microscopical observation of different microbes (readymade slides)
5. Oral Health and Hygiene
6. Personal hygiene and etiquettes — hand washing techniques, Cough and sneeze etiquettes.
7. Various types of masks, PPE gear, wearing/using them, and disposal.
8. Menstrual hygiene, products used
9. First Aid — Theory, basics, demonstration, hands on training, audio-visuals, and practice, BSL (Basic Life Support) Systems [SCA - Sudden Cardiac Arrest, FBAO - Foreign Body Airway Obstruction, CPR, Defibrillation (using AED) (Includes CPR techniques, First Responder).

10. Emergency treatment for all medical emergency cases viz. snake bite, dog bite, insecticide poisoning, fractures, burns, epilepsy etc.
11. Role of Pharmacist in Disaster Management.
12. Marketed preparations of disinfectants, antiseptics, fumigating agents, antilarval agents, mosquito repellents, etc.
13. Health Communication: Audio / Video podcasts, Images, Power Point Slides, Short Films, etc. in regional language(s) for mass communication / education / Awareness on 5 different communicable diseases, their signs and symptoms, and prevention.
14. Water purification techniques, use of water testing kit, calculation of Content/percentage of  $\text{KMnO}_4$ , bleaching powder to be used for wells/tanks
15. Counselling children on junk foods, balanced diets — using Information, Education and Communication (IEC), counselling, etc. (Simulation Experiments).
16. Preparation of various charts on nutrition, sources of various nutrients from Locally available foods, calculation of caloric needs of different groups (e.g. child, mother, sedentary lifestyle, etc.). Chart of glycemic index of foods.
17. Tobacco cessation, counselling, identifying various tobacco containing products through charts/pictures.



# CRITERION ANNEXURE- III

## SAMPLE TIME TABLE

### VIDYABHARATI COLLEGE OF PHARMACY, AMRAVATI

TIME TABLE OF DIPLOMA IN PHARMACY 2019-2020 W.E.F. 26/06/2019

Day	R.No.	11.00 to 12.00	12.00 to 01.00	01.00 to 02.00	02.00 TO 02.30	02.30 to 03.30	03.30 to 04.30	04.30 to 05.30	R.No.
MON	C.I.R.1 (S-01) F-12	P'chem - I (VRM)	BCP (ABT)	HAP (PH)	R	Pharma Chem. I (VRM)	Pract. Batch A	Tutorial (DCP - I)	G-17
	F-05	*P'Ceutics - II (VRM)	Pract. (AWD) - batch C	batch C		P'ecology (LJG)	P'juris (ARJ)	DSBM (AWD)	F-08
TUE	C.I.R.1 (S-01) F-12	HAP (PH)	BCP (ABT)	P'chem - I (VRM)		Pharma Chem. I (VRM)	Pract. Batch C	Tutorial (DCP - I)	G-17
	F-05	*P'Ceutics - II (VRM)	Pract. (ARJ) - batch C	batch B	E	P'juris (ARJ)	DSBM (AWD)	P'ecology (LJG)	C.I.R.1 (S-01) F-08
WED	C.I.R.1 (S-01) F-12	HAP (PH)	P'chem - I (VRM)	P'ceutics - I (ARJ)		Pharma Chem. I (VRM)	Pract. Batch B	Tutorial (DCP - I)	G-17
	F-05	*P'Ceutics - II (VRM)	Pract. (VRM) - batch A	batch A	C	DSBM (AWD)	P'ecology (LJG)	P'chem - II (ABT)	C.I.R.1 (S-01) F-08
THU	C.I.R.1 (S-01) G-17	P'ecology Pract. (LJG)	HECP (LJG)	P'ecognosy (AWD)		Pharma Cognosy (AWD) Pract. Batch A			F-08 F-12 G-17
	G-17	Pharma Chem. II (ABT) Pract. Batch B				* Pharmaceutics - I (LJG) Pract. Batch - B BCP (ABT) Pract. Batch C			
FRI	C.I.R.1 (S-01) G-17	HCP Pract. Batch A (PH)	P'ecognosy (AWD)	Tutorial (DCP - II)	E	P'ceutics - II (VRM)	P'chem - II (ABT)	HCP (PH)	C.I.R.1 (S-01) F-08 F-12 G-17
	G-17	HCP Pract. Batch B (PH)	P'ceutics - I (ARJ)	Tutorial (DCP - I)	S	P'chem - II (ABT)	HCP (PH)	P'ceutics - II (VRM)	C.I.R.1 (S-01) F-08 F-12 G-17
SAT	C.I.R.1 (S-01) G-17	HCP Pract. Batch C (PH)	P'ceutics - I (ARJ)	Tutorial (DCP - I)		Pharma Cognosy (AWD) Pract. Batch C			F-08 F-12 G-17
	G-17	HCP Pract. Batch A (PH)	P'ceutics - I (ARJ)	Tutorial (DCP - I)		BCP (ABT) Pract. Batch A			C.I.R.1 (S-01) F-08 F-12 G-17

Note :- \* Practical timing 2.00 PM to 06.00 PM. DCP I (Pharmaceutics I)

\* Practical timing 10.00 AM to 02.00 PM. DCP II (Pharmaceutics II)

- 1) KKT - Dr.K.K. Tapar
- 2) ARJ - Mr. A.R. Jaiswal
- 3) LJG - Miss. Lovina Gonsalves
- 4) PH - Miss. Pooja Hindecha
- 5) AWD - Mr. A.W. Dahekar
- 6) VRM - Mr. V.R. Mehare
- 7) ABT - Mrs.A.B. Tasare

Time-table  
Incharge

H.O.D.  
Diploma in Pharmacy,  
V.B.C.P., Amravati

Principal  
Vidyabharati College of Pharmacy,  
Amravati

### FORMAT FOR FEED BACK FROM STUDENTS (Minimum 30 regular students/half the strength of the class)

Name of Faculty:

Semester:


Subject taught:

Sr. No	Parameters	Very good	Good	Satisfactory	Poor
1	Punctuality				
2	Knowledge of the Subject				
3	Presentation Skill				
4	Interaction with students				
5	Difficulty attitude				
6	Use of teaching aids				
7	Ability to maintain discipline				
8	Overall Performance				

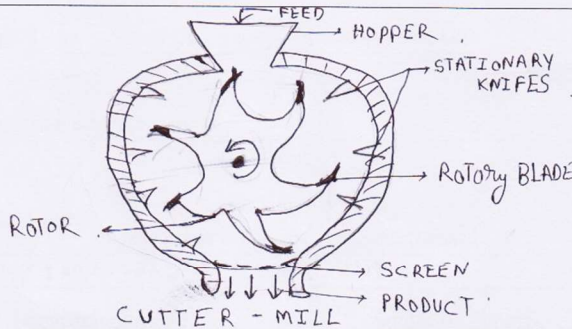
Suggestion for Improvement.

- May be revised



 <b>Vidyabharati College of Pharmacy, Amravati</b> <b>Diploma in Pharmacy Department</b> <b>Model Answer Paper</b>			
Course Code : 0805	Class : DCP – I yr	Session :2019-20	P.A. T. : 1 <sup>st</sup> sessional
Name of Course : Pharmaceutics-1		Name of Faculty : Mr.A.R. Jaiswal	

**Question No. 1 solve any four. (2 Mark each)**

Q. No.	CO No. Assigned	Questions and key words of answer expected	Distribution of marks	Level of Blooms taxonomy
a.	101.3	Enlist the type of closures.	02	(1) Remembering
Ans.		1) Plug type 2) Crown type 3) Push-fit type 4) screw type	½ mark each	
b.	101.3	Explain the types of Plastic.	02	(2) Understanding
Ans.		i) Thermoplastic type: this type of plastic get softened to a viscous fluid on heating and harden again on cooling which is influenced by the degree of cross linkages or inter-molecular attraction between the long chain molecules. ex-nylon, polystyrene ii) Thermosetting type: this type of plastic may become flexible but does not become fluid on heating because of a high degree of cross linkages. ex- phenol formaldehyde resins.	1 mark each	
c.	101.4	Draw a well labeled diagram of mill which work on principle of cutting.	02	(3) Applying
Ans.			½ mark for each labeling	
d.	101.1	Why Glycerin is used as base in Throat paints?	02	(4) Analysing
Ans.		Glycerin is commonly used as a base because being viscous it adheres to mucous membrane for along period and it possesses a sweet taste.	01 mark each	

e.	101.2	Convert the following into metric forms-i)Two Ounce ii) One Pound iii)30 grain vi)one teaspoonful.	02	(3) Applying
Ans.		i)Two Ounce=60ml ii) One Pound =450gm iii)30 grain= 2 gm vi)one teaspoonful.= 4ml	½ mark each	
f.	101.3	State the application of Aerosol packaging in Pharma industries.	02	(3) Applying
Ans.		i)They are used for spray bandages and for application of drugs meant for topical use. ii)They are used for spray administration of drugs into various body cavities. iii)They are used for administration of drug such as local anesthetics ,local analgesic, and anti-inflammatory. vi) They are used to spray cosmetic preparation. v)They are used to spray disinfections, deodorizers and air sanitizer.	Any four for ½ mark each	

#### Question No. 2 solve any four . (3 Marks each)

Q. No.	CO No. allotte d	Questions and key words of answer expected	Distribution of marks	Level of Booms taxonomy
a.	101.4	Explain the construction and working of Fluid energy mill.	03	(6) Creating
Ans.		Construction with diagram working	02 01	
b.	101.2	Write the salient features of third edition of I,P along with its year of publishing.	03	(2) Understanding
Ans.		Year of publishing Five salient features	½ mark ½ mark each	
c.	101.3	Enlist the three qualities of ideal container and mention the three disadvantages of glass as a material for packing.	03	(4) Analysing
Ans.		Three qualities Three disadvantages	½ mark each ½ mark each	
d..	101.1	Define and classify the dosage form with example.	03	(4) Analysing
Ans.		Definition Classification with example	01 mark 02 mark	
e.	101.1	Mention the properties of ideal ointment base.	03	(2) Understanding

# CRITERION ANNEXURE- V

SAMPLE MODEL ANSWER PAPER FOR INTERNAL EXAM

Ans		Six properties	½ mark each	
f.	101.1	Explain the importance of dosage forms with example	03 mark	(3)
Ans		Six importance with example explained	½ mark each.	Applying



Signature of H.O.D.





Signature of Subject Incharge



**Vidyabharati Shaikshanik Mandals  
Vidyabharati College of Pharmacy, Amravati**

Letter No. VBCP / 34 / 2019

Date : 15/06/2019

**Meeting of Governing body-34**

**Proceeding of Governing Body Meeting**

Item No. 1 :- The minutes of the last Governing Body Meeting held on 22/05/2019 were read out by the member secretary and were confirmed by Governing Body.

Item No. 2 :- The Action taken Report was read by member secretary and was confirmed by the house.

Item No. 3 :- Regarding installation of fire fighting system mandatory for NBA was approved by the house & the quotations were called & Pree Engineering Nagpur was given the contract for Rs.365,000 was approved. Allocated Budget of the session 2019-20 was approved and sanctioned.


Item No. 4 :- As it is mandatory to install CCTV cameras in class rooms & examination rooms as per M.S.BTE the house has approved for additional CCTV cameras & approved Rs.150,000 .

Item No.5 :- About the new connection of drinking water from Amravati Municipal Corporation, it was kept pending & will be decided in the next meeting.

Item No.6 : Water harvesting plant was also kept pending.

Item No.7 : Regarding moc inspection, it was decided to call senior faculty from SSBT COE Jalgaon

Item No.8 : As there was no item for discussion the meeting ended with vote of thanks.

  
Member Secretary  
Principal  
Vidyabharati College of Pharmacy  
Amravati



  
Chairman

Vidyabharati College of Pharmacy, Amravati.  
**ACTION TAKEN REPORT OF GOVERNING BODY**

( Dated :- 15/06/2019)

Item. No. 1 & 2	:-	No action was required.
Item No. 3	:-	The installation work of Fire fighting system was completed
Item No. 4	:-	The installation of additional CCTV camera in class room and examination rooms are completed.
Item No. 5	:-	The action is in pending
Item No. 6	:-	The action is in pending.
Item No. 7	:-	For Mock drill the faculty from SSBTE will be called.
Item No. 8	:-	No action was required.



  
Principal,  
Vidyabharati College of Pharmacy,  
Amravati.  
*Principal*  
Vidyabharati College of Pharmacy  
Amravati