रजिस्ट्री सं. डीएल (एन)-04/0007/2003--05 REGISTERED No. DL(N)—04/0007/2003—05

सत्यमेव जयते

भारत का राजपत्र
The Gazette of India

साप्ताहिक/WEEKLY

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

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No. 19] NEW DELHI, SATURDAY, MAY 10—MAY 16, 2008 (VAISAKHA 20, 1930)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके।

(Separate paging is given to this Part in order that it may be filed as a separate compilation)

भाग III—खण्ड 4

[PART III—SECTION 4]

[सांविधिक निकायों द्वारा जारी की गई विविध अधिसूचनाएं जिसमें कि आदेश, विज्ञापन और सूचनाएं सम्मिलित हैं]

[Miscellaneous Notifications including Notifications, Orders, Advertisements and Notices issued by Statutory Bodies]

भारतीय रिज़र्व बैंक

मुंबई-400001, दिनांक 9 अप्रैल 2008

सदर्भ : बैंपविवि. सं. आईबीडी.-14241/23.13.048/2007-08--भारतीय रिज़र्व बैंक अधिनियम, 1934 (1934 का 2) की धारा 42 की उप-धारा (6) के खण्ड (ग) के अनुसरण में भारतीय रिज़र्व बैंक इसके द्वारा निदेश देता है कि उक्त अधिनियम की दूसरी अनुसूची में निम्नलिखित परिवर्तन किये जाएं :--

''अरब बांगलादेश बैंक लिमिटेड'' शब्दों के स्थान पर ''एबी बैंक लिमिटेड'' शब्द होंगे।

आनन्द सिन्हा

कार्यपालक निदेशक

[PUBLISHED IN THE GAZETTE OF INDIA, No.19, PART III, SECTION 4]

Ministry of Health and Family Welfare
(Pharmacy Council of India)

New Delhi, 10th May, 2008.

Pharm.D. Regulations 2008

Regulations framed under section 10 of the Pharmacy Act, 1948 (8 of 1948).

(As approved by the Government of India, Ministry of Health vide, letter No.V.13013/1/2007-PMS, dated the 13th March, 2008 and notified by the Pharmacy Council of India).

No.14-126/2007-PCI.— In exercise of the powers conferred by section 10 of the Pharmacy Act, 1948 (8 of 1948), the Pharmacy Council of India, with the approval of the Central Government, hereby makes the following regulations, namely:-

CHAPTER-I

1. Short title and commencement. – (1) These regulations may be called the Pharm.D. Regulations 2008.

   (2) They shall come into force from the date of their publication in the official Gazette.

2. Pharm.D. shall consist of a certificate, having passed the course of study and examination as prescribed in these regulations, for the purpose of registration as a pharmacist to practice the profession under the Pharmacy Act, 1948.

CHAPTER-II

3. Duration of the course. –

a) Pharm.D: The duration of the course shall be six academic years (five years of study and one year of internship or residency) full time with each academic year spread over a period of not less than two hundred working days. The period of six years duration is divided into two phases –

Phase I – consisting of First, Second, Third, Fourth and Fifth academic year.

Phase II – consisting of internship or residency training during sixth year involving posting in speciality units. It is a phase of training wherein a student is exposed to actual pharmacy practice or clinical pharmacy services and acquires skill under supervision so that he or she may become capable of functioning independently.

b) Pharm.D. (Post Baccalaureate): The duration of the course shall be for three academic years (two years of study and one year internship or residency) full time with each academic year spread over a period of not less than two hundred working days. The period of three years duration is divided into two phases –

Phase I – consisting of First and Second academic year.
Phase II – consisting of Internship or residency training during third year involving posting in speciality units. It is a phase of training wherein a student is exposed to actual pharmacy practice or clinical pharmacy services, and acquires skill under supervision so that he or she may become capable of functioning independently.

4. Minimum qualification for admission to. –

a) Pharm.D. Part-I Course – A pass in any of the following examinations -

(1) 10+2 examination with Physics and Chemistry as compulsory subjects along with one of the following subjects:

Mathematics or Biology.

(2) A pass in D.Pharm course from an institution approved by the Pharmacy Council of India under section 12 of the Pharmacy Act.

(3) Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations.

Provided that a student should complete the age of 17 years on or before 31st December of the year of admission to the course.

Provided that there shall be reservation of seats for the students belonging to the Scheduled Castes, Scheduled Tribes and other Backward Classes in accordance with the instructions issued by the Central Government/State Government/Union Territory Administration as the case may be from time to time.

b) Pharm.D. (Post Baccalaureate) Course -

A pass in B.Pharm from an institution approved by the Pharmacy Council of India under section 12 of the Pharmacy Act:

Provided that there shall be reservation of seats for the students belonging to the Scheduled Castes, Scheduled Tribes and other Backward Classes in accordance with the instructions issued by the Central Government/State Government/Union Territory Administration as the case may be from time to time.

5. Number of admissions in the above said programmes shall be as prescribed by the Pharmacy Council of India from time to time and presently be restricted as below –
   i) Pharm.D. Programme – 30 students.
   ii) Pharm.D. (Post Baccalaureate) Programme – 10 students.

6. Institutions running B.Pharm programme approved under section 12 of the Pharmacy Act, will only be permitted to run Pharm.D. programme. Pharm.D. (Post Baccalaureate) programme will be permitted only in those institutions which are permitted to run Pharm.D. programme.

7. Course of study. – The course of study for Pharm.D. shall include the subjects as given in the Tables below. The number of hours in a week, devoted to each subject for its teaching in theory, practical and tutorial shall not be less than that noted against it in columns (3), (4) and (5) below.

T A B L E S

First Year :

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
1.1	Human Anatomy and Physiology	3	3	1
1.2	Pharmaceutics	2	3	1
1.3	Medicinal Biochemistry	3	3	1
1.4	Pharmaceutical Organic Chemistry	3	3	1
1.5	Pharmaceutical Inorganic Chemistry	2	3	1
1.6	Remedial Mathematics/ Biology	3	3*	1
	Total hours	**16**	**18**	**6 = (40)**

* For Biology

Second Year:

S.No	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	**(2)**	**(3)**	**(4)**	**(5)**
2.1	Pathophysiology	3	-	1
2.2	Pharmaceutical Microbiology	3	3	1
2.3	Pharmacognosy & Phytopharmaceuticals	3	3	1
2.4	Pharmacology-I	3	-	1
2.5	Community Pharmacy	2	-	1
2.6	Pharmacotherapeutics-I	3	3	1
	Total Hours	**17**	**9**	**6 = 32**

Third Year:

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	**(2)**	**(3)**	**(4)**	**(5)**
3.1	Pharmacology-II	3	3	1
3.2	Pharmaceutical Analysis	3	3	1
3.3	Pharmacotherapeutics-II	3	3	1
3.4	Pharmaceutical Jurisprudence	2	-	-
3.5	Medicinal Chemistry	3	3	1
3.6	Pharmaceutical Formulations	2	3	1
	Total hours	**16**	**15**	**5 = 36**

Fourth Year:

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Practical/ Hospital Posting	No. of hours of Tutorial
(1)	**(2)**	**(3)**	**(4)**	**(5)**
4.1	Pharmacotherapeutics-III	3	3	1
4.2	Hospital Pharmacy	2	3	1
4.3	Clinical Pharmacy	3	3	1
4.4	Biostatistics & Research Methodology	2	-	1
4.5	Biopharmaceutics & Pharmacokinetics	3	3	1
4.6	Clinical Toxicology	2	-	1
	Total hours	**15**	**12**	**6 = 33**

Fifth Year:

S.No.	Name of Subject	No. of hours of Theory	No. of hours of Hospital posting*	No. of hours of Seminar
(1)	**(2)**	**(3)**	**(4)**	**(5)**
5.1	Clinical Research	3	-	1
5.2	Pharmacoepidemiology and Pharmacoeconomics	3	-	1
5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	2	-	1
5.4	Clerkship *	-	-	1
5.5	Project work (Six Months)	-	20	-
	Total hours	**8**	**20**	**4 = 32**

***** Attending ward rounds on daily basis.

Sixth Year:

Internship or residency training including postings in speciality units. Student should independently provide the clinical pharmacy services to the allotted wards.

(i) Six months in General Medicine department, and

(ii) Two months each in three other speciality departments

8. Syllabus. – The syllabus for each subject of study in the said Tables shall be as specified in Appendix -A to these regulations.

9. Approval of the authority conducting the course of study. – (1) No person, institution, society or university shall start and conduct Pharm.D or Pharm.D. (Post Baccalaureate) programme without the prior approval of the Pharmacy Council of India.

(2) Any person or pharmacy college for the purpose of obtaining permission under sub-section (1) of section 12 of the Pharmacy Act, shall submit a scheme as prescribed by the Pharmacy Council of India.

(3) The scheme referred to in sub-regulation (2) above, shall be in such form and contain such particulars and be preferred in such manner and be accompanied with such fee as may be prescribed:

Provided that the Pharmacy Council of India shall not approve any institution under these regulations unless it provides adequate arrangements for teaching in regard to building, accommodation, labs., equipments, teaching staff, non-teaching staff, etc., as specified in Appendix-B to these regulations.

10. Examination. – (1) Every year there shall be an examination to examine the students.

(2) Each examination may be held twice every year. The first examination in a year shall be the annual examination and the second examination shall be supplementary examination.

(3) The examinations shall be of written and practical (including oral nature) carrying maximum marks for each part of a subject as indicated in Tables below :

T A B L E S

First Year examination :

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
1.1	Human Anatomy and Physiology	70	30	100	70	30	100
1.2	Pharmaceutics	70	30	100	70	30	100
1.3	Medicinal Biochemistry	70	30	100	70	30	100
1.4	Pharmaceutical Organic Chemistry	70	30	100	70	30	100
1.5	Pharmaceutical Inorganic Chemistry	70	30	100	70	30	100
1.6	Remedial Mathematics/ Biology	70	30	100	70*	30*	100*
				600			600 = 1200

* for Biology.

Second Year examination :

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
2.1	Pathophysiology	70	30	100	-	-	-
2.2	Pharmaceutical Microbiology	70	30	100	70	30	100
2.3	Pharmacognosy & Phytopharmaceuticals	70	30	100	70	30	100
2.4	Pharmacology-I	70	30	100	-	-	-
2.5	Community Pharmacy	70	30	100	-	-	-
2.6	Pharmacotherapeutics-I	70	30	100	70	30	100
				600			300 = 900

Third Year examination :

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
3.1	Pharmacology-II	70	30	100	70	30	100
3.2	Pharmaceutical Analysis	70	30	100	70	30	100
3.3	Pharmacotherapeutics-II	70	30	100	70	30	100
3.4	Pharmaceutical Jurisprudence	70	30	100	-	-	-
3.5	Medicinal Chemistry	70	30	100	70	30	100
3.6	Pharmaceutical Formulations	70	30	100	70	30	100
				600			500 = 1100

Fourth Year examination :

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
4.1	Pharmacotherapeutics-III	70	30	100	70	30	100
4.2	Hospital Pharmacy	70	30	100	70	30	100
4.3	Clinical Pharmacy	70	30	100	70	30	100
4.4	Biostatistics & Research Methodology	70	30	100	-	-	-
4.5	Biopharmaceutics & Pharmacokinetics	70	30	100	70	30	100
4.6	Clinical Toxicology	70	30	100	-	-	-
				600			400 = 1000

Fifth Year examination :

S.No.	Name of Subject	Maximum marks for Theory			Maximum marks for Practicals		
		Examination	Sessional	Total	Examination	Sessional	Total
5.1	Clinical Research	70	30	100	-	-	-
5.2	Pharmacoepidemiology and Pharmacoeconomics	70	30	100	-	-	-
5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	70	30	100	-	-	-
5.4	Clerkship *	-	-	-	70	30	100
5.5	Project work (Six Months)	-	-	-	100**	-	100
				300			200 = 500

***** Attending ward rounds on daily basis.

****** 30 marks – viva-voce (oral)
70 marks – Thesis work

11. Eligibility for appearing Examination.— Only such students who produce certificate from the Head of the Institution in which he or she has undergone the Pharm.D. or as the case may be, the Pharm.D. (Post Baccalaureate) course, in proof of his or her having regularly and satisfactorily undergone the course of study by attending not less than 80% of the classes held both in theory and in practical separately in each subject shall be eligible for appearing at examination.

12. Mode of examinations.— (1) Theory examination shall be of three hours and practical examination shall be of four hours duration.

    (2) A Student who fails in theory or practical examination of a subject shall re-appear both in theory and practical of the same subject.

    (3) Practical examination shall also consist of a viva –voce (Oral) examination.

    (4) Clerkship examination – Oral examination shall be conducted after the completion of clerkship of students. An external and an internal examiner will evaluate the student. Students may be asked to present the allotted medical cases followed by discussion. Students' capabilities in delivering clinical pharmacy services, pharmaceutical care planning and knowledge of therapeutics shall be assessed.

13. Award of sessional marks and maintenance of records.— (1) A regular record of both theory and practical class work and examinations conducted in an institution imparting training for Pharm.D. or as the case may be, Pharm.D. (Post Baccalaureate) course, shall be maintained for each student in the institution and 30 marks for each theory and 30 marks for each practical subject shall be allotted as sessional.

    (2) There shall be at least two periodic sessional examinations during each academic year and the highest aggregate of any two performances shall form the basis of calculating sessional marks.

    (3) The sessional marks in practicals shall be allotted on the following basis:-

        (i) Actual performance in the sessional examination (20 marks);
        (ii) Day to day assessment in the practical class work, promptness, viva-voce record maintenance, etc. (10 marks).

14. Minimum marks for passing examination.— A student shall not be declared to have passed examination unless he or she secures at least 50% marks in each of the subjects separately in the theory examinations, including sessional marks and at least 50% marks in each of the practical examinations including sessional marks. The students securing 60% marks or above in aggregate in all subjects in a single attempt at the Pharm.D. or as the case may be, Pharm. D. (Post Baccalaureate) course examination shall be declared to have passed in first class. Students securing 75% marks or above in any subject or subjects shall be declared to have passed with distinction in the subject or those subjects provided he or she passes in all the subjects in a single attempt.

15. Eligibility for promotion to next year.— All students who have appeared for all the subjects and passed the first year annual examination are eligible for promotion to the second year and, so on. However, failure in more than two subjects shall debar him or her from promotion to the next year classes.

16. Internship.— (1) Internship is a phase of training wherein a student is expected to conduct actual practice of pharmacy and health care and acquires skills under the supervision so that he or she may become capable of functioning independently.

    (2) Every student has to undergo one year internship as per Appendix-C to these regulations.

17. Approval of examinations.— Examinations mentioned in regulations 10 to12 and 14 shall be held by the examining authority hereinafter referred to as the university, which shall be approved by the Pharmacy Council of India under sub-section (2) of section 12 of the Pharmacy Act, 1948. Such approval shall be granted only if the examining authority concerned fulfills the conditions as specified in Appendix–D to these regulations.

18. Certificate of passing examination.— Every student who has passed the examinations for the Pharm.D. (Doctor of Pharmacy) or Pharm.D. (Post Baccalaureate) (Doctor of Pharmacy) as the case may be, shall be granted a certificate by the examining authority.

CHAPTER-III
Practical training

19. Hospital posting.— Every student shall be posted in constituent hospital for a period of not less than fifty hours to be covered in not less than 200 working days in each of second, third & fourth year course. Each student shall submit report duly certified by the preceptor and duly attested by the Head of the Department or Institution as prescribed. In the fifth year, every student shall spend half a day in the morning hours attending ward rounds on daily basis as a part of clerkship. Theory teaching may be scheduled in the afternoon.

20. Project work.— (1) To allow the student to develop data collection and reporting skills in the area of community, hospital and clinical pharmacy, a project work shall be carried out under the supervision of a teacher. The project topic must be approved by the Head of the Department or Head of the Institution. The same shall be announced to students within one month of commencement of the fifth year classes. Project work shall be presented in a written report and as a seminar at the end of the year. External and the internal examiners shall do the assessment of the project work.

    (2) Project work shall comprise of objectives of the work, methodology, results, discussions and conclusions.

21. Objectives of project work.— The main objectives of the project work is to—

    (i) show the evidence of having made accurate description of published work of others and of having recorded the findings in an impartial manner; and

    (ii) develop the students in data collection, analysis and reporting and interpretation skills.

22. Methodology.— To complete the project work following methodology shall be adopted, namely:—

    (i) students shall work in groups of not less than *two* and not more than *four* under an authorised teacher;

    (ii) project topic shall be approved by the Head of the Department or Head of the Institution;

    (iii) project work chosen shall be related to the pharmacy practice in community, hospital and clinical setup. It shall be patient and treatment (Medicine) oriented, like drug utilisation reviews, pharmacoepidemiology, pharmacovigilance or pharmacoeconomics;

    (iv) project work shall be approved by the institutional ethics committee;

    (v) student shall present at least three seminars, one in the beginning, one at middle and one at the end of the project work; and

    (vi) two-page write-up of the project indicating title, objectives, methodology anticipated benefits and references shall be submitted to the Head of the Department or Head of the Institution.

23. Reporting .— (1) Student working on the project shall submit jointly to the Head of the Department or Head of the Institution a project report of about 40-50 pages. Project report should include a certificate issued by the authorised teacher, Head of the Department as well as by the Head of the Institution

(2) Project report shall be computer typed in double space using Times Roman font on A4 paper. The title shall be in bold with font size 18, sub-tiles in bold with font size 14 and the text with font size 12. The cover page of the project report shall contain details about the name of the student and the name of the authorised teacher with font size 14.

(3) Submission of the project report shall be done at least one month prior to the commencement of annual or supplementary examination.

24. Evaluation.— The following methodology shall be adopted for evaluating the project work—

(i) Project work shall be evaluated by internal and external examiners.

(ii) Students shall be evaluated in groups for four hours (i.e., about half an hour for a group of four students).

(iii) Three seminars presented by students shall be evaluated for twenty marks each and the average of best two shall be forwarded to the university with marks of other subjects.

(iv) Evaluation shall be done on the following items:

	Marks
a) Write up of the seminar	(7.5)
b) Presentation of work	(7.5)
c) Communication skills	(7.5)
d) Question and answer skills	(7.5)
Total	(30 marks)

(v) Final evaluation of project work shall be done on the following items:

	Marks
a) Write up of the seminar	(17.5)
b) Presentation of work	(17.5)
c) Communication skills	(17.5)
d) Question and answer skills	(17.5)
Total	(70 marks)

Explanation.— For the purposes of differentiation in the evaluation in case of topic being the same for the group of students, the same shall be done based on item numbers b, c and d mentioned above.

Website: www.jntuk.edu.in
Email: dap@jntuk.edu.in

Phone: 7893407555

Directorate of Academic Planning
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
Kakinada-533003, Andhra Pradesh, INDIA
(Established by AP Government Act No. 30 of 2008)

Lr. No. JNTUK/DAP/AC/I Year/Pharm D/2023-24 *Date: 21-11-2023*

Dr. K. VENKATA REDDY,
M.Tech, Ph.D.,
Director i/c, Academic Planning

To
All the Principals of Affiliated Colleges,
JNTUK, Kakinada.

Academic Calendar of I Year Pharm D for Academic year 2023-24

Description	From	To	Weeks
Commencement of Class Work	20.11.2023		
Induction Programme (Zero Semester)	20.11.2023	02.12.2023	2 W
I Unit of Instruction	04.12.2023	17.02.2024	11W
I Mid Examinations	12.02.2024	17.02.2024	
II Unit of Instructions	19.02.2024	04.05.2024	11W
II Mid Examinations	29.05.2024	04.05.2024	
III Unit of Instructions	06.05.2024	20.07.2024	11W
III Mid Examinations	15.07.2024	20.07.2024	
Preparation & Practical Exams	22.07.2024	27.07.2024	1W
End Examinations	29.07.2024	10.08.2024	2W

Director i/c
Academic Planning
Director
Academic Planning
JNTUK Kakinada

Copy to the Secretary to the Hon'ble Vice Chancellor, JNTUK
Copy to Rector, JNTUK
Copy to Registrar, JNTUK
Copy to Director Academic Audit, JNTUK
Copy to Director of Evaluation, JNTUK
Copy to Controller of Examinations, JNTUK

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN ENIKEPADU VIJAYAWADA

PRINCIPAL
VIJAYA INSTITUTE OF
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA - 521 108

INSTITUTIONAL EXAMINATION COMMITTEE

VIJAYA INSTITUTE OFPHARMACEUTICAL SCIENCES FOR WOMEN
Enikepadu, Vijayawada – 521108

Date: 26-07-2023

OFFICE ORDER

INSTITUTIONAL EXAMINATION COMMITTEE

The Institutional Examination Committee has been constructed for smooth conduct of sessional / end semester examinations for the academic year 2023 – 2024 for the period of 06-09-2023 to 06-08-2024. Following staff members are appointed as Internal Squad Committee.

S.NO	NAME	DESIGNATION	POSITION	SIGNATURE
1	Dr. K. Padmalatha	Principal	President	
2	Mr. S. Venkateswara Rao	Professor	Chairman	
3	Mr. A. Jayarami Reddy	Assoc. Professor	Member	
4	Mrs. A.V.S. Hima bindu	Assoc. Professor	Member	
5	Mrs. S. Archana	Assoc. Professor	Member	

Functions and Responsibilities:

1. Ensure proper dissemination of information with regard to examination among all the stakeholders viz. students / faculty /non – teaching staff / university authorities etc.
2. Receive and submission of exam notification / schedule from JNTUK web portal.
3. To ensure proper organization of in semester assements / sessional / end semester examination in the college.
4. Ensure proper communication with JNTUK with regards to examination and fulfillment of universities circulars.
5. Appoint alternative external senior supervisor / chairman / internal examiners/ external examiners / for conduct of end semester theory / practical examination with permission of university authorities.
6. Record and issue the answer books and other exam related stationary to the invigilators / internal examiners 30 minutes before start the exam.
7. Download and print the appropriate number of question papers at least 20 minutes before the commencement of the exam and maintaining absolute confidentiality.
8. Resolve students / faculty/ university grievances with regards to examination.
9. Uploading internal theory / practical examination marks on JNTUK web portal.
10. Maintain records with regards to conduct of examination and results.

Copy to: 1. Establishment File
2. Concerned Faculty member

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN ENIKEPADU VIJAYAWADA

Dr. K. Padmalatha
PRINCIPAL

PRINCIPAL
VIJAYAINSTITUTE OF
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU VIJAYAWADA-520 108

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA – 521108

Date: 08.02.2024

I Pharm. D/ I Mid Exam Timetable, A. Y. 2023-24

Timings: **02.00 PM – 04.00 PM**

Date	Subject Name	Staff Name	Staff Signature
12.02.2024 (Monday)	Human Anatomy & Physiology (T1101)	Dr. A. Chandra Sekhar	
		Mr. A. Jayarami Reddy	
13.02.2024 (Tuesday)	Pharmaceutics (T1102)	Mrs. P. M. M. Nagalakshmi Varma	
14.02.2024 (Wednesday)	Medicinal Biochemistry (T1103)	Mrs. G. Krupamai	G. Krupamai
15.02.2024 (Thursday)	Pharmaceutical Organic Chemistry (T1104)	Mrs. P. Swathi Sudha	
16.02.2024 (Friday)	Pharmaceutical Inorganic Chemistry (T1105)	Mr. P. Raja Rao	P. Raja Rao
17.02.2024 (Saturday)	Remedial Mathematics (T1106)	Dr. V. Srinivas	

NOTE: Send the Question Papers to Exam Section Mail. Id: vipwexams@gmail.com

Exams in charge
(Dr. S. Venkateswara Rao)
EXAMS-INCHARGE
VIJAYA INSTITUTE
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, V

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU
VIJAYAWADA

Principal 08/2/24
(Dr. K. Padmalatha)
VIJAYA INSTITUTE OF
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA
PIN - 521 108

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA – 521108

Date: 27.04.2024

I Pharm. D/ II Mid Theory & Practical Exam Time Table

Date	Subject Name	Staff Name	Staff Signature
04-05-2024 (Saturday)	Remedial Mathematics (T1106)	Dr. V. Srinivas	
06-05-2024 (Monday)	Human Anatomy & Physiology (T1101)	Dr. A. Chandra Sekhar	
07-05-2024 (Tuesday)	Pharmaceutics (T1102)	Ms. Ch. Kiranmai	
08-05-2024 (Wednesday)	Medicinal Biochemistry (T1103)	Mrs. G. Krupamai	
09-05-2024 (Thursday)	Pharmaceutical Organic Chemistry (T1104)	Mrs. P. Swathi Sudha	
10-05-2024 (Friday)	Pharmaceutical Inorganic Chemistry (T1105)	Mr. P. Raja Rao	

NOTE:

1. Timings: **Theory: 10.00 AM – 12.00 PM**
   Practical: 01.30 PM – 04.30 PM
2. Send the Question Papers to Exam Section Mail. Id: vipwexams@gmail.com

Exams in charge
(Dr. S. Venkateswara Rao)
EXAMS-INCHARGE
VIJAYA INSTITUTE
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU VIJAYAWADA 521 108

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN ENIKEPADU VIJAYAWADA

Principal
(Dr. K. Padmalatha)
VIJAYA INSTITUTE OF
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA
PIN - 521 108

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA – 521108

Date: 08.07.2024

I Pharm. D/ III Mid Theory Exam Time Table

Date	Subject Name	Staff Name	Staff Signature
15-07-2024 (Monday)	Human Anatomy & Physiology (T1101)	Dr. A. Chandra Sekhar	
16-07-2024 (Tuesday)	Pharmaceutics (T1102)	Ms. Ch. Kiranmai	
18-07-2024 (Thursday)	Medicinal Biochemistry (T1103)	Mrs. G. Krupamai	
19-07-2024 (Friday)	Pharmaceutical Organic Chemistry (T1104)		
20-07-2024 (Saturday)	Pharmaceutical Inorganic Chemistry (T1105)	Mr. P. Raja Rao	
22-07-2024 (Monday)	Remedial Maths (T1106)	Dr. V. Srinivas	

NOTE:

1. Timings: **Theory: 02.00 PM – 04.00 PM**
2. Send the Question Papers to Exam Section Mail. Id: vipwexams@gmail.com

Exams in charge
(Dr. S. Venkateswara Rao)
EXAMS-INCHARGE
VIJAYA INSTITUTE
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU VIJAYAWADA 521 108

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(Dr. K. Padmalatha)
VIJAYA INSTITUTE OF
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA
PIN - 521 108

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ENIKEPADU, VIJAYAWADA – 521108.

I Pharm D II Mid Exams Invigilation Duties, May-2024

Morning : 10:00 AM TO 12:00 PM

Exam Dates	Staff Name	Staff Signature
04.05.2024 (Saturday)	Mrs. K.V.R. Rajeswari	K.V.Rajeswari
06.05.2024 (Monday)	Mr. P. Raja Rao	P.Raja Rao
07.05.2024 (Tuesday)	Mrs. K.V.R. Rajeswari	K.V.Rajeswari
08.05.2024 (Wednesday)	Ch. Kiranmai	Ch.Kiranmai
09.05.2024 (Thursday)	Mrs. P. Swathi Sudha	P.Swathi
10.05.2024 (Friday)	Mrs. K.V.R. Rajeswari	K.V.Rajeswari

S. Venkateswara Rao
Exams Incharge
(Dr. S. Venkateswara Rao)
EXAMS-INCHARGE
VIJAYA INSTITUTE
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU VIJAYAWADA 521 108

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K. Padmalatha 03/5/24
Principal
(Dr. K. Padmalatha)
VIJAYA INSTITUTE OF
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA
PIN - 521 108

INTERNAL SQUAD COMMITTEE

VIJAYA INSTITUTE OFPHARMACEUTICAL SCIENCES FOR WOMEN
Enikepadu, Vijayawada – 521108

Date: 25-07-2023

OFFICE ORDER

INTERNAL SQUAD COMMITTEE

The Internal Squad Committee has been constructed for smooth conduct of sessional / end semester examinations for the academic year 2023 – 2024 for the period of 06-09-2023 to 06-08-2024. Following staff members are appointed as Internal Squad Committee.

S.NO	NAME	DESIGNATION	POSITION	SIGNATURE
1	Dr. K. Padmalatha	Principal	President	
2	Mr. S. Venkateswara Rao	Assoc. Professor	Chairman	
3	Mr. A. Jayarami Reddy	Asst. Professor	Member	
4	Mrs. A.V.S. Hima bindu	Asst. Professor	Member	
5	Mrs. S. Archana	Asst. Professor	Member	

Responsibilities:

1. Strict checking of unfair means is sole responsibility of members of committee.
2. Before the start of examination, the committee members should check every student.
3. Care should be taken by committee members, that the students should not carry mobile phones, calculator or any sort of electronic material inside the examination hall.
4. Check weather students are carrying hall tickets by committee members to maintain environment of examination. Any issue related to the unfair means should immediately report to the principal or college examination officer.

Copy to: 1. Establishment File
2. Concerned Faculty member

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN ENIKEPADU VIJAYAWADA

Dr. K. Padmalatha
PRINCIPAL
VIJAYA INSTITUTE OF
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA-521 108.

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

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I PHARM. D / MID EXAMS

ATTENDANCE DIARY

SUBJECT NAME : Human Anatomy & Physiology (T1101)

S.NO	ROLL.NO	STUDENT SIGNATURE		
		I MID	II MID	III MID
1	237N1T0001	Arun.	Arun	Absent
2	237N1T0002	Tanu Sri	Tanu Sri	Tanu Sri
3	237N1T0003	Sindhura.	Sindhura.	Sindhura.
4	237N1T0004	Jaya	Jaya	Jaya
5	237N1T0005	B.M. Deepthi	B.M. Deepthi	B.M. Deepthi
6	237N1T0006	Ch. Mouna Sri	Ch. Mounasri	Ch. Mounasri
7	237N1T0007	Keerthana Ch	Ch. Keerthana	Ch. Keerthana
8	237N1T0008	Ch. Sai Keerthi	Ch. Sai Keerthi	Absent
9	237N1T0009	Ch. [illegible]	Ch. [illegible]	Ch [illegible]
10	237N1T0010	Dmkmelody	Dmkmelody	Dmkmelody
11	237N1T0011	D. Rasagna	D. Rasagna	D. Rasagna
12	237N1T0012	D. Vijetha Sri	D. Vijetha Sri	D. Vijetha Sri
13	237N1T0013	D. Jahnavi	D. Jahnavi	D. Jahnavi
14	237N1T0014	G. Beulah Rani	G. Beulah Rani	Absent
15	237N1T0015	J. Trisha Jyothi	J. Trisha Jyothi	J. Trisha Jyothi
16	237N1T0016	K. Prathima	K. Prathima	K. Prathima
17	237N1T0017	K. Aishwarya	K. Aishwarya	K. Shivya
18	237N1T0018	L. Manasvi	L. Manasvi	L. Manasvi
19	237N1T0019	L. Rekhayali	L. Rekhayali	L. Rekhayali
20	237N1T0020	M. Harika	M. Harika	M. Harika
21	237N1T0021	D. Mary Elizabeth	D. Mary	I. Mary
22	237N1T0022	Absent	Kavya Sri	Kavya Sri
23	237N1T0023	M. Dhruvitha	M. Dhruvitha	M. Dhruvitha
24	237N1T0024	N. Vaishnavi	N. Vaishnavi	N. Vaishnavi
25	237N1T0025	Absent	P. Priyanka	P. Priyanka
26	237N1T0026	P. Jaswanthi	P. Jaswanthi	P. Jaswanthi
27	237N1T0027	Sk. Ishrath	Sk. Ishrath	Sk. Ishrath
28	237N1T0028	Shaik. Nasreen	Shaik. Nasreen	Shaik. Nasreen
29	237N1T0029	S. Abika.	S. Abika.	S. Abika.
30	237N1T0030	V. Renuka	V. Renuka	V. Renuka
31	237N1T0031	V. Sahithi	V. Sahithi	V. Sahithi
32	237N1T0032	Y. Soumya	Y. Soumya.	Y. Soumya.
Total Number of Students Present		30	32	29
Signature of Invigilator		N. Eswaraja	P. Rajaboo	P. Rajaboo
Exams Incharge		S. Venkata	S. Venkata	S. Venkata
Signature of Head of the Institution		[signature]	[signature]	[signature]

Model of Evaluated Mid Exam

Answer Script

SRK FOUNDATION'S

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

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KNOWLEDGE IS POWER

SRK FOUNDATION

VIJAYAWADA

2023 - 2024

SESSIONAL BOOK

Name : V. RENUKA

Class : I* PHARM-D

Roll No. : 237N1T0030

Subject : PHARMACEUTICS

Internal	Objective	Subjective	Assignment	Total	Staff Sign	Student Sign
I		29		29		V. Renuka
II		28		28		V. Renuka
III		27		27		V. Renuka

Final Average : 28

Staff Sign

HOD Sign

MID - 1 13/2/24

POSOLOGY

Posology is a Greek word in which Poso - how much dose and logy means study. The branch of science that deals with the study of how much amount of drug is required for a patient to achieve desired pharmacolo -gical activity.

Dose calculation in posology

Dose is calculated in three terms

1) Age
2) Body weight
3) surface area.

Based on Age

1) Young's formula:-

It is applicable for children less than 12 years

$$\text{Dose} = \frac{\text{Age in years}}{\text{Age in years} + 12} \times \text{Adult dose.}$$

2) Dilling's formula:-

It is applicable for children between 4-12 years of age

$$\text{Dose} = \frac{\text{Age in years}}{24} \times \text{Adult dose}$$

3) Cowling's formula:-

This formula is useful to find the dose for upcoming year

$$\text{Dose} = \frac{\text{Age in years} + 1}{24} \times \text{Adult dose}$$

ied's formula.-

It is applicable for infants

$$\text{dose} = \frac{\text{Age in months}}{150} \times \text{Adult dose}$$

eastodol's formula

$$\text{Dose} = \frac{\text{Age in years} + 3}{30} \times \text{Adult dose}$$

ed on weight

lark's formula

$$\text{Dose} = \frac{\text{weight in kg/pounds}}{\text{Adult weight in kg/pounds}} \times \text{Adult dose.}$$

ed on surface area:-

· catzen formula

$$\text{Dose} = \frac{\text{surface area}}{\text{Adult surface area } (1.73)} \times \text{Adult dose.}$$

urces of errors in prescription

Abbrevation:- Due to abbrevation it is difficult to read the parts of prescription and creates confusion to pharmacist. The pharmacist should not guess

Ex:- The drug acromysin is written in abbrevated form acr the pharmacist should not guess it as acrostatin.

2) Name of drug:- Some drugs have same pronunciation but differ in spelling.

Ex: digiloxin - digoloxin

3) Strength of the drug:- As there are different strengths available in market the prescriber should mention the dose.

Ex:- paracetmol - 500mg, 650mg.

4) Dose:- The dose is very much important as the care should be taken in pediatrics as they can not tolerate to high doses except digitalis, belladona.

5) Dosage form:- As there are different dosage forms The pharmacist should take clarity from the prescriber.

6) Incompatabilities:- The pharmacist should clearly explain about the medicines to patients. And the pharmacist should not take more than one prescription at a time it leads to exchange of medicines

Ex:- Tetracyclin should not take with milk.

Monophasic liquid dosage forms:-

It is a liquid preparation in which one (or) more chemical substances are soluble in required amount of solvent is called one phase system (or) monophasic liquid dosage forms

Monophasic liquid dosage forms

- Internal
  - Mixtures
    - syrups
    - Linctus
    - Elixer
  - To skin
    - Lotion
    - Liniments
    - paints
  - In mouth
    - Gargals
    - mouth wash
    - Throat paints
- External
  - In body cavities
    - Enema
    - Nasal drops
    - Eye drops

SYRUPS:-

The aqueous solution of sugar (or) sucrose is called syrups

Advantage:-

syrups acts as antioxidants as sugars are hydrolysed in leavolase and dextrose.

syrups acts as preservatives to retard the growth of bacteria and fungi with high osmatic pressure

As Syrups are sweet in taste they are accepted by pediatrics

Good for both pediatrics and Adults

Easily soluble in water.

These are pleasant in taste.

disadvantages:-

Not suitable for diabetic patients

As these are sweet in taste they may chance of taking extra dose by children.

- If syrup is not at a certain concentration it gets degraded
- If syrup is kept in cool place it crystallizes when it is kept in hot place it gets fermented.

Types of syrups :-

Syrups are of three types

1) simple syrup
2) Medicated syrup
3) flavoured syrup

simple syrup:- The sucrose along with water is known as simple syrup It is about 66.7%.

Ex:- Simple syrup I.P

Medicated syrup:- The syrup which contains one (or) more medicaments

Ex:- Ferrous phosphate syrup

Flavoured syrup:- The simple syrup along with the FD flavouring agent

Ex:- orange syrup

Methods of preparation of syrups:-

Method associated with Heat:-

The sugar and distilled water are taken in a container and heated later on it is cooled and make up the final volume.

Method associated with agitation:-

The sugar and distilled water are taken in

emitance and agitated for some time and make up the volume

solution Method:-

The sugar is taken in a container and ie solvent water passes through the column of ystalisation The percolate is collected. It is continuous l the sugar dissolves.

rmulation:-

Formulation of components are water is used is vechile and glycerine, propylene glycol are used as nemical stabilizer with the colouring agents pproved by FD&C and flavouring agents like 'anilla, Rasberry, orange. Preservatives used are enzoic acid, sodium benzoate: Medicaments are Linomycin analgesics antematic hydrochlo ydrochloric chloropromazoine

spensing:- these are dispensed in amber colour, arrow mouthed bottles with label "SHAKE WELL FORE USE".

orage:- store in cool place where temperature is not exceeding 25°c

ference b/w lotions and liniments:-

Lotion	Liniments
Applied without friction	- Applied with friction

- Applied on wounds
- can't produce rubefacient

Ex:- castor lotion.

- Applied by dapping

- Applied on large burns not on wounds
- can produce rubefacient

Ex:- camphor liniment, turpentine liniment

- Applied by rubbing

Powders:-

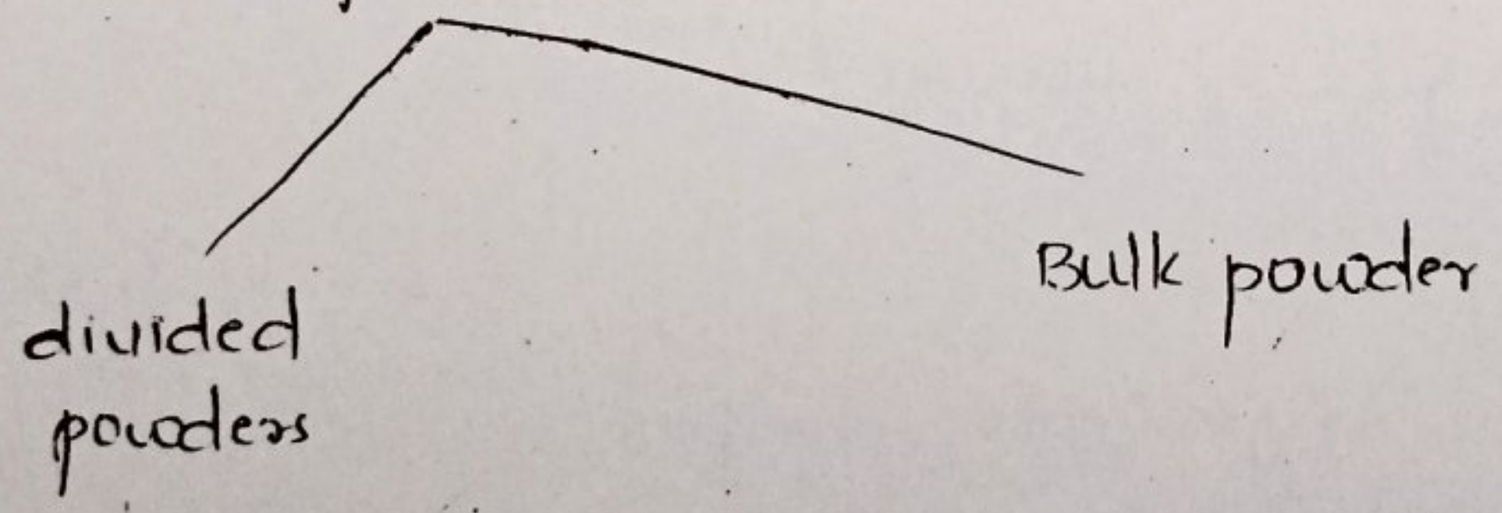
- These are the aggregates of solid particles for internal and external use
- Powders form basis for solid dosage forms these are small in size and produce large surface area for bioavailability.

classifications of powder:

powders are classified into three categories

i) powders for internal use
ii) powder for external use
iii) special category powders.

i) powders for internal use:-



1. simple powders
2. compound powders
3. powders enclosed in cachets
4. Tablet triturates

imple powders:-

The powders which contain only one medicament are called simple powders.

ethod:-

powder -the ingridients into fine particles

↓

weigh properly

↓

Ticturate the ingridients in motar and pistil

↓

Dispence into packets

ompound powders:-

The powders that contain 2 (or) more medica -ments are called compound poloders.

Rx for 8 packets

Aspirn	— 300 mg	— 2400 mg
paracetmol	— 150 mg	— 1200 mg
caffiene	— 50 mg	— 400 mg

dispense into 8 packets

Method:- powder -the ingridients into fine particles

↓

weigh all ingridients

↓

Add ingridients in ascending order of their weights

↓

Ticturate them and
dispence into 8 packets

capsules / cachets:-

The powders with medicament are enclosed in a sheath made up of the mixture of rice flour and water. It is prepared by two methods

i) Dry method:-

There are two halves of sheath. where the medicament is placed in lower half and the upper one is used as lid and placed on lower half that is fixed by machine

ii) wet method:-

There are two halves. where the meclicament is placed in lower half and the upper ends are flattened ends that are moistured are pressed over lower half by machine.

Tablet ticturates:-

The contain moulding powders in the tablet. where the ingridients are mixed with alcohol

↓

forms damp mass

↓

filled percolation plate fitt and placed upon protective layer

↓

Excess is removed

↓

The tablets are removed from the moulds.

owders for external use:-

i) dusting powders
ii) Insuffolations
iii) Dentrifices

Dusting powders

These are meant for external use. These are
of two types

Dusting powders
- Applied only on wounds

surgical powders
- Applied after surgery on suture, umbilical cord of infants

thod:-

℞ powder all the ingridients into
Talc - fine particles
↓
weigh properly and addto
according to ascending order of their
weight
↓
Ticturate them and pass into sieve
number 8 we get uniform mixture
↓
Dispense in bottles with
holes on top

- The talc should be steralised at 106°c to kill any micro organisms

precautions:-

- children should be away from these as it causes pnemonia.
- The dispensed bottles should have holes.

2) Insuffolations:-

These are meant to introduce (or) spray into the body cavity of nose, ear, eg.

- These are streamed by insuffalators
- produce local anesthetic properties

℞

Methol - 5g
camphor - 5g
aluminium chloride - 30g
ligh $MgCO_3$ - 60g.

Disadvantage: Blocking of insuffalators

3) Dentrifices:-

These are applied on the surface of teeth with tooth brush

- clean food debris
- It contains magnesium carbonate, calcium carbonate

℞

ppt of sodium carbonate - 935g
soclium saccharide - 52 ml
peppermint oil - 4ml
cinnammon oil - 2ml
methyl salicylase - 2ml

weigh the ingridients

↓

Mix sodium saccharide, peppermenl oil, cinnamon oil, methiylsalicylate and titurate

↓

Add the remaining compounds are titurate

↓

Mix the both and dispense.

special category powders

i) Hygroscopic powders
ii) Eutetic powders
iii) Deliquiscent powders
iv) Elefro Efleuroscent
v) Explosive powder

lk powders :-

The amount of powder is taken in bulk amount. This is dissolved in the water.

ethod :-

Weigh all the ingridients

↓

Add according to ascending order of their weights

↓

Tricturate them

↓

pass through sieve no·5 to get uniform powder

↓

dispense into wide mouthed bottles

Effervesent powders and granules

- These are the powders (or) granules that contains medicament, acid, base
- When these effervesent granules and powder come in contact with water they produce CO_2 and effervescence
- patients are instructed to take during effervesence to mask bitter taste.

Equation:-

$$NaCO_3 + C_6H_8O_7 \cdot H_2O \longrightarrow C_6H_5Na_3O_7 + CO_2 + H_2O$$

$$NaHCO_3 + C_4H_6O_6 \cdot H_2O \longrightarrow C_4H_4Na_2O_6 + CO_2 + H_2O$$

Methods:-

Heat Method / Fusion method:-

The stainless steel evaporating plate is heated

↓

The plate should be heated before adding powder, the evaporation formed is coming from citric acid

↓

damp mass is formed

↓

pass through sieve no·8 wet granules are formed & pass through hot oven at 80°c

collect the dry granules
and dispense

Ist method:-

weigh all ingridients

↓

Titurate them according to their weights in ascending order

↓

damp / cohersant mass is formed

↓

pass through sieve number 8 to get uniform granules and pass through hot oven air 80°c

↓

dispence the granilles

MID - 02

8/7/24

18/30

Chik

Preparations of emulsions:-

Emulsions are prepared by three method:

i) Dry Gum method

ii) Wet Gum method

iii) Bottle method

Dry Gum method:-

Take required amount of oil in motar and pestle and titurate

↓

Add sufficient quantity of gum and tituate

↓

Then add a little amount of water a titurate in a uniform direction until clicking sound appears it forms a white colour cream is known as primary emulsion

↓

Add preservaties, colouring agents by dissoluing in water & tituate

↓

Now add add extra wates until the emulsion becomes in pourable consistency

↓

Transfer into measuring cylinder. Rinse the motar & pestle with water

↓

Make up the final volume & dispense.

Ex:- prepare & dispense 250 ml of Arachis oil

Arachis oil - 50 ml

water - 200 ml in ratio (4:2:1)

oil : gum : water

12.5 ml : 25 ml : 50 ml

The total volume is 87.5 ml. The remaining 112.5 ml water is used for dissolving preservatives, colouring agents

take required quantity of arachis oil in motor & pestle

↓

Add the required amount of gum & titurate

↓

Add 50 ml of water & titurate

↓

Add more water until for pourable consistency

↓

Add preservatives & colouring agents by dissolving in water

↓

dispense.

1) wet gum method:-

Take required amount of gum in motar & pestle

↓

Add sufficient quantity of water & titurate

↓

Add oil at the centre of mucilage & tituate it forms 1° emulsion by appearance of clicking sound

↓

Add extra quantity of water for powable consistency

↓

Add preservatives & colouring agents by dissoluing in water

↓

Rinse the motar & pestle with water & transfer to measuring cyclinder.

↓

Dispense

Ex:- prepare & dispene 38ml of castor oil

castor oil - 8ml (4:2:1)

water - 30ml

oil : gum : water

2ml: 4ml: 8ml

The volume is 14ml. The remaining 24ml is used to dissolve preservatives & colouring agents.

!

Take 4 ml of gum in mortor and pestle

↓

Add water & tituate

↓

Add oil at centre of mucilage

↓

Add preservatives, colouring agents by dissolving in water

↓

Rinse the motar & pestle

↓

Transfer into measuring cylinder & dispense.

Bottle gum method:-

Take required quantity of oil in bottle

↓

Add given quantity of gum & shake well

↓

Add required amount of water and mix properly

↓

Add preservatives, colouring agents into the bottle

↓

Transfer into measuring cylinder & make up the volume

↓

Dispense.

Stability problems of emulsions

1) Creaming:-

The particles are seperated based up on density. The particles of lower density floats and particles of higher density sink.

- The can be redispersed upon shaking.
- creaming is of 2 types
  1) upward creaming
  2) downward creaming.
- upward creaming. in which the dispersed phase has lower density particles & continous phase has high denser particles.
- downward creaming in which the dispersed phase have high density particles that gets pulled down by gravitational force.

stroke's law :-

$$V = \frac{2r^2 (d_1 - d_2) g}{9\eta}$$

V - velocity of particles
r - radius of particles
d_1 - density of dispersed phase
d_2 - density of continuos phase
g - gravitational constant
η - viscocity.

ıxıdıscence :-

The process in which particles come close together and fuse to form large globule. Decresed particles count

Aggregation:-

The process in which particles come close together but do not fuse.

racking:-

In this there is complete sepeation of the dispersed and continuos phase. They are very difficult to re-disperse.

Reasons:-

- Addition of emulsifying agent on opposite side
- By decomposition
- change in tempt
- Microbial contamination.

hase inversion:-

The phenomena occurs due to change of oil in water emulsion to water in oil emulsion due to adding wrong emulsifing agents, tempt.

Evaluation of suspensions suppositories

1) Appearance:- colour, odour, surface, shape

2) weight uniformity:-

Weigh the weight of 20 suppositories individually

Weigh all the 20 suppositories = W

Weigh the average weight of suppository i.e = W/20

Limit:- Not more than 2 supporities have differ the average value more than 5%.

No suppositories differ from average value more than 10%.

3) Melting Range Test:-

It is time required to melt the complete suppository at in water bath at a tempt of 37°C. It is called disintegration test. It is time taken for dispersion (or) melting of suppository. It causes change in the shape of suppository.

4) Liquification Test / softening test:-

The drug is placed in the contriction part of the 'U' tube. It rnd above the glass rod is placed. It is the time required by the glass rod to reach the drug present in the contriction part of the 'U' tube.

Breaking Test:-

This method is used to designate the brittleness/ fragility of drug. Here we need add the weights in increasing order.

For suppose,

we have added 600gm in 1min but the suppository was not broken then add 200gm for every one min.

Note:- The headness of the drug can be calculated by the following. If the drug is broken in last min. The weight of suppository is cancelled in that of last min.

Dissolution Test:-

It is performed in specialised equipment called dissolution apparatus. Where the 'U' tube is placed in water bath of tempt. aroumt 35-37°C Here we need to change the dissolution liquid for certain intervales like 10 min, 20, 30 ----- 60min. It is performed in invitro manner.

) Stability Test:-

coca butter upon a long storage forms a white colour powder on the surface called blooms.

- It can be avoided by packing in the foils.
- The stability of suppository can be determined by the softening test.
- These instabilities can be avoided by proper storage like packing in butter papers, foils.

Formulation of Suspensions

i) floculating agent
ii) Thickening agent
iii) Wetting agent
iv) preservatives
v) organoleptic additives.

i) floculating agent:-

- prevents hard cake formation
- promote dispersion of particles
- Responsible to prevent interfacial tension b/w particles
- Reduces hard cake formation

Ex:- Tweens, Spans.

ii) Thickening Agents:-

Natural:-

Gum Acacia:-

- It is a best suspending agent when combined with tragacanth
- It is formed by 20% Acacia, 20% starch, 15% tragacanth and remaining sucrose.

these are more attractive
They contain an enzyme oxyzme / oxidase that causes degradation of the product

) Tragacanth :-

It is used as suspending, thickening and emulsifing agent.

It has high viscocity & combines with other.

) starch :-

starch is avalable in the form of mucilage with high viscocity and unsticky in natue.

) Sodium Alginate :-

- Anionic suspending agents incompatable with the cationic suspending agents

It combines with tragacanth to form compound tragacanth powder

1% of sodium alginate = 1% of tragancanth powder.

:mi- synthetic

Sodium carboxy methyl cellulose

conc. 0.25 - 0f 1%.

It is incompatable with cationic suspending agents

It is meant of oral, tropical, parietal administration

Also known as caramellose.

' Methyl cellulose :-

conc 0.5 - 2%.

Meant for external & internal prepn

- Incompatable with the silver nitrate, resorcinol.

Crystalline methyl cellulose :-

- produced by acid hydrolysis
- It combines with water and forms colloidal suspension

Inorganic salts :-

- These are meant for internal & external prep'n
- 2% of cal suspension is used in calomine lotion.
- The are useful to absorb large quantities of water

Veegum :-

- Veegum is best suspending agent
- used in the prep'n meant for internal & external use.

Aluminium Hydroxide :-

It make the compounds to soluble complexes in the given solvents.

carbomer :-

- conc. 0.1 - 0.4 %
- Meant for external use prep'n

silicon colloidal suspension.

Wetting Agents

Reduces the infacial tension b/w the solid and liquid particles

Ex:- surfactants - Tweens, spans

Hydrocolloid - It consists of the solid particles

covered by protective layer multi molecular fill for protection.

Preservatives :-

To prevent microbial growth / contamination

ex:- benzoic acid, sodium benzoate, methyl paraben, propyl paraben.

Organoleptic Additives :-

It consists of colouring & flavouring agent.

Evaluation of suspensions :-

1 Sedimentation Method :-

The sediment is the important parameter for the estimation of stability of suspension.

it can be determined by taking suspension c in cylindrical cylinder and remain undisturbed for some time. Note the readings of formation of Sediment at different intervals of time.

plot a graph b/w the time on x-axis and sediment formation readings on y-axis.

The stable suspension shows horizontal curve (flocculated)

The unstable suspension shows steep curve (deflocculated)

Sedimentation Rate :-

$$\text{sediment height} = \frac{\text{ultimate height}}{\text{initial height}} = \frac{H_u}{H_0}$$

The sediment rate can be obtained by the graph plot aganist time and height.

Degree of floculation = $\frac{H_\infty / H_0}{H_u / H_0} = \frac{H_\infty}{H_0}$

- In floculation the formation of sediment is small and negligble. and is expressed as H_∞

ii) Rheological Method :-

- It information about setling behaviour. provides
- Brookfield viscometer is used to determine the viscocity of suspension.
- It is mounted upon helical poth (helimoth) with the help of T- bar spindle
- The T-bar spindle made to rotate and desend into the sapst suspension slowly with motar and dial reading are displayed.
- The graph is plotted b/w the dial reading and no. of spindle turns.

iii) Electrokinetic Method :-

- The surface charge (or) zeta potential are used to measure the stability.
- It can be calculated by migrating velocities of particles
- It can be measured by electrophorotic instrument

Micrometric Method:-

The particle get increased and leads to the formation of lumps.

- The increase in the particle size with respect to the time gives information about the stability.
- The increased particle size (or) the crystals can be determined by microscopy studies and laser counter studies.
- Sometimes due to artificial stress there is increase of particle size.

  Ex:- Hydrocolloids.

MID - III

2+1

Physical incompatibility:-

When two ingridients are mixed together they form an inappropriate product which causes change in physical state.

Ex: oil in H_2O,
decreased intensity of colour

There are four types of physical incompatibility.

- Immiscibility
- Insolubulity
- precipitation
- Liquification.

These incompatability can be corrected by

10
- change in solvent
- order of mixing
- Adding emulsifing and suspending agents.

Immiscibility :-

- When two liquids are not miscible with each other

Ex:- oil / water (o/w) type

- It can be corrected by adding emulsifing agents.

Insolubility :-

- It is the inability of compound to dissolve in the particular solvent
- It occurs between the organic substances and inorganic substances.
- The organic substances are insoluble in water.

some of the compounds gets particularly soluble in the particular solvent. Due to this it leads to insolubility in another solvent.

Wetting agents like saponins, polysorbates are used in the combination where the sulphur is precipitated and increases the solubility.

Examples for inorganic compounds:

- Hg (mercurous, mercuric)

  Mercurous is insoluble in water

  Mercuric is soluble in water.

- stanous flouride is soluble in water

- 'Al' compounds are soluble in ccly but it is insoluble in water.

- Boric acid, borax are soluble in water.

- Bismith compounds are insoluble in water.

* This method can be overcomed by adding suspending and thickening agents.

Examples for organic compounds:-

- The organic compounds has H^+ and OH^- i.e polar and non polar.

- The solubulity depends upon the presence of H^+ and OH^-

- It is favourible for formation of H-bond.

- Due to H-bond it increases the solubility.

Ex:- Amines, aldehydes, ketones, carboxylic acids etc....

Due to ionisation compounds:-

These are acidic and basic in nature where these compounds mix with acids and bases to form the respective salts.

- The salts of phenols, carboxylic acids are insoluble but they are soluble by treating them with the alkali solution.
- The sodium salts of bismuth, phenols, carboxylic acids are directly soluble in H_2O. i.e water.

iii) precipitation:-

- When the compounds are made to dissolve in the they get precipitated.
- Even precipitation occurs when the compounds are not completely dissolved.
- Ex:- Tinctures (contains Resins)

↓

The resins are insoluble in water.

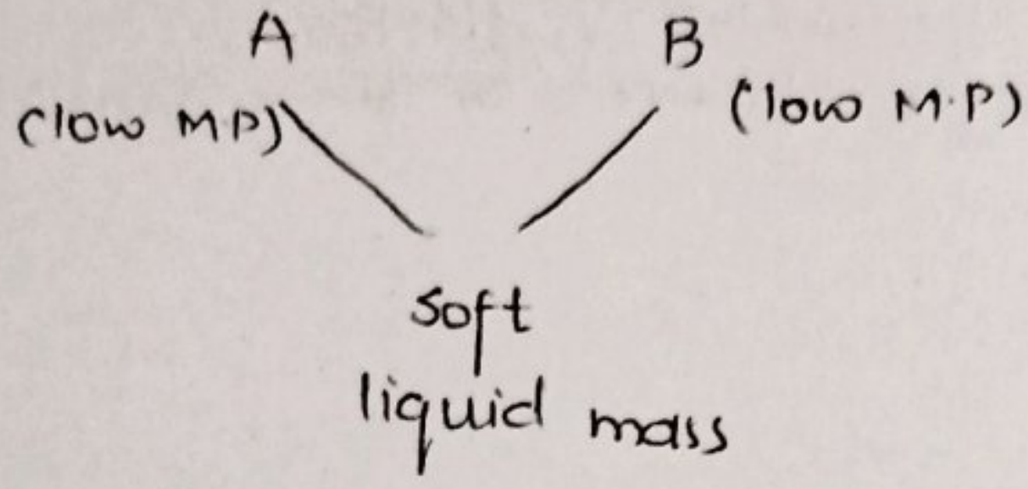
- If the resins are intended to made soluble in the solvent they form lumps.
- To overcome the ppt rxn we need to add dilute tincture slowly by stirring rapidly or by changing the solvent

1) Liquification:

- In this process the two compounds having low melting point are mixed together to form a soft mass

- This soft mass is called as eutetic mixture.
- It is effected due to temperature, humidity & many external factors.

Ex: 1) camphor
Methanol
NH_4Cl
light MgO



Ex:- Methanol, camphor

- we can add adsorbants like kaolin, light MgO, Mg_2CO_3.

The Adsorbands are added in two ways

(i) Mix all the ingridients and add the adsorbant and tituate

(ii) Add an ingrident with respective adsorbants and mix the ingridents by adding adsorbants to each ingridients.

Methods to overcome

The methods that are used to overcome the physcial incompatibility are

In immiscibility - by adding emulsifing agents

In Insolubility - by adding suspending and thickening agents

In precipitation - by changing the solvent.

In liquification - by adding adsorbants.

sutures and ligatures :-

The European surgeon Rhaz used the hard strings of the small intestine of sheep for the abdominal wounds.

- sutures are used connecto the edges of tissues by using the needle.

ligature are used to seal the blood vessels.

The materials are obtained for horse hair, animals hair veg material.

- These are of 2 types

I) Ad Absorbable type

II) Non - Absorbable type.

The properties of the sutures and ligatures are

- Readily absorbable
- Non - irritant
- It should have adequet tensile strength to that it should

iformed.

ne sutures that can rapidly degrade into the tissue
oithin 60 days is called as absorbable suture.

ne suture that can retain their tensile strength
ifter completeon of 60 days is called as non-absorba
ble suture.

Absorbable suture :-

The threads that can be absorbed into the tissues of the body and after the completion of the function.

fx:- catgut, animal fibre.

at gut :-

- It is used in surgicals
- The basic constituent is collagen obtained from the connective tissue.
- The source is obtained from the submucosa layer of the sheep's intestine (or) the serosa layer of beef cattle.
- It is tough and thin.

preparation of catgut:-

- The diameter of the intestine catgut should not exceed more than 18 mm to prepare catgut.
- There are 4 layers in intesines

- Tunica serosa - outermost layer
- Tunica muscularis
  - longitudinal
  - circular
- Tunica submucosa - where the catgut is prepared
- Tunica musculosa.

① Thawing:- The catgut is sterilised and washed with water and then after thawing.

② splitting & cutting:-

It is done by a curved horn i.e cutting tool that pulls the submucosa layer.

③ cleaning:-

The layers of intestine are cleaned by alkali solution. They are shaped into ribbons of various lengths.

④ spinning:-

The ribbons are mounted upon the springs that gets over spun which lack elasticity and dried later. Due to under spun it gets increased elasticity.

⑤ polishing:-

The threads are of various diameters sh so they need to be polished.

⑥ Gauzing:-

It is used to check the the diameter of the catgut by gauze dial readings.

⑦ sterilisation:-

Until the intestine is in the animal it is free from the micro-organisms. But after deadth it gets prone to micro-organisms.

- To prevent this contamination without changing the strength & physical characters sterilisation is done.

Ex:- i) H_2O_2

↓ gives poor quality but gives colour.

ii) chloroform

↓

destroy anthrax spores but ↓ tensile strength

iii) Iddoform

↓

Suitable for large scale production.

Types of cat gut:-

(i) plain cat gut:-

- Yellow in colour readily absorbable
- Raw material is intestine of sheep.
- Thickness (2/0) finest (5/0)

(ii) chromic cat gut:-

- brown colour & absorbs slowly
- It combines with chromium trioxide to increase th

strength

- It gets chromised by the soaking in chromic acid for 3hrs.

iii) Atraumatic cat gut:-

- Detroxim is best obtained by synthetic preparation
- Used to seal blood vessels.

II) Non - Absorbable:-

- These are not absorbed by tissue of body.
- Easy to handle, sterilise and knot
- It can be remoued after healing.

Bandages:-

- It prevents deformity.
- These are four types

(i) Elastic bandages

(ii) Inelastic bandages

(iii) impregnated bandages.

(iv) Adhesive bandages

i) Elastic bandages:-

- crepe bandage
- cotton crepe bandage
- Rubber crepe bandage.

These bandages have elastic property

i) Inelastic bandages

1. conic
2. Triangular
3. Doman

Elastic banc impregnated bandages :-

1. plaster of paris
2. zinc oxide paste bandage.
3. zinc oxide cool tar bandage

(iv) Adhesive bandage :-

1. Elastic zinc oxide
2. Elastic zinc perfolated bandage

b)

percentage of alcohol required = 70%.

volume required = 600 ml

Required

Alcohol Volume = percentage required × volume required / percentage used

9

$$= \frac{70 \times 600}{95}$$

$$= \frac{42,000}{95}$$

$$= 442.1 \text{ ml}$$

the volume of 95% alcohol required is 442.1 ml to prepare 600ml of 70%.

c) The O.P of 30° = 100 + 30

= 130

a) $I_c = \frac{130}{1.732}$

$= 75.05$

The U.P of 40° = $100 - 40$

$= 60$

$I_e = \frac{60}{1.732}$

$= 34.64$

The strength of 30° U.P is 75.05 and 40° U.P is 34.64

$\text{dose} = \frac{\text{infants in months}}{150} \times \text{Adult dose}$

a) The dose $= \frac{8}{150} \times 250$

$= 13.33.$

∴ The dose of 8month infant is 13.33.

Mid exam marks scored by students are entered in the Mother register

PHARM D - I^st year

Sub:- HUMAN ANATOMY AND PHYSIOLOGY [T1101]

S.NO	Reg. NO.	Name of the Student	I^st Mid Theory	I^st Mid Practical	II^nd Mid Theory	II^nd Mid Practical	Theory Avg of Best 2 Mid	Practical Avg of Best 2 Mid
1.	237NIT0001	A. Lakshmi Archana	11	21	14	22	13	22
2.	237NIT0002	K. Tanu Sri	15	25	11	25	15	27
3.	237NIT0003	A. Sindhura	18	28	16	24	17	28
4.	237NIT0004	B. Jai Deepika Sree	17	27	18	24	18	27
5.	237NIT0005	B. Mohana Deepthi	15	24	10	24	15	26
6.	237NIT0006	Ch. Mouna Sri	17	26	15	26	17	27
7.	237NIT0007	Ch. Keerthana	17	24	15	26	16	27
8.	237NIT0008	Ch. Sai Keerthi	16	22	0	26	8	26
9.	237NIT0009	Ch. Manisha	14	22	12	28	13	28
10.	237NIT0010	D. Mani Kanthi Neha	3	22	0	25	6	27
11.	237NIT0011	D. Rasagna	13	22	16	27	15	28
12.	237NIT0012	D. Vijitha Sri	10	23	15	25	13	27
13.	237NIT0013	D. Jahnavi	18	24	15	27	17	28
14.	237NIT0014	G. Beulah Rani	16	22	16	26	16	28
15.	237NIT0015	J. Trisha Jyothi	13	22	12	26	13	27

S.No.	Reg. No:	Name of the Student	I Mid Theory	I Mid Practical	II Mid Theory	II Mid Practical	Theory Avg of best 2 Mids	Practical Avg of best 2 Mids
16.	237N1T0016	K. Prathima	24	21	20	28	20	29	22	29
17.	237N1T0017	K. Aishwarya	19	27	22	24	15	28	21	28
18.	237N1T0018	L. Manaswi	19	24	15	25	13	28	17	27
19.	237N1T0019	L. Rekhanjali	10	24	0	27	9	26	10	27
20.	237N1T0020	M. Harika	7	24	10	26	10	26	10	26
21.	237N1T0021	D. Mary Elizabeth	16	24	15	28	6	26	16	27
22.	237N1T0022	M. Kavya Sri	0	23	15	26	15	27	15	27
23.	237N1T0023	M. Dhruvitha	16	23	19	26	11	27	18	27
24.	237N1T0024	N. Vaishnavi	17	24	15	26	13	27	16	27
25.	237N1T0025	P. Varavi Priyanka	0	0	5	22	6	26	6	24
26.	237N1T0026	P. Tarvanthi	4	23	6	26	5	25	6	26
27	237N1T0027	SK. Ishrath	17	29	18	25	17	29	18	29
28.	237N1T0028	SK. Naseema	19	24	15	26	20	28	20	27
29.	237N1T0029	S. Abika	10	25	10	25	13	28	12	27
30.	237N1T0030	V. Renuka	22	26	22	27	12	26	22	27

S.No.	Reg. No	Name of the Student	1st Mid Theory	1st Mid Practical	2nd Mid Theory	2nd Mid Practical	3rd Mid Theory	3rd Mid Practical	Theory Avg of Best 2 Mids	Practical Avg of Best 2 Mids
31.	237N1T0031	V. Sahithi	18	26	17	28	10	28	18	28
32.	237N1T0032	Y. Soumya	14	24	11	27	8	26	13	27

Entered by: Ch. Kiranmai

S. Venkateswarlu
EXAMS-INCHARGE
VIJAYA INSTITUTE
PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU VIJAYAWADA 521 108

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FINAL PDF for Pharm.D I Year Internal marks

College: VIJAYA INSTITUTE OF PHARMACEUICAL SCIENCES FOR WOMEN:7N

Date:24-09-2024

HTNO	SUBJECT	MID_1	MID_2	MID_3	FINAL	SUB_TYPE	YEAR
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237N1T0017	T1105	25	17	24	25	T	1
237N1T0018	T1105	25	19	16	22	T	1
237N1T0019	T1105	7	17	23	20	T	1
237N1T0020	T1105	13	22	26	24	T	1
237N1T0021	T1105	21	20	22	22	T	1
237N1T0022	T1105	0	12	27	20	T	1
237N1T0023	T1105	22	28	15	25	T	1
237N1T0024	T1105	23	20	24	24	T	1
237N1T0025	T1105	0	21	13	17	T	1
237N1T0026	T1105	6	4	13	10	T	1
237N1T0027	T1105	23	27	28	28	T	1
237N1T0028	T1105	19	27	25	26	T	1
237N1T0029	T1105	7	14	14	14	T	1
237N1T0030	T1105	28	28	0	28	T	1
237N1T0031	T1105	23	26	25	26	T	1
237N1T0032	T1105	22	11	17	20	T	1
237N1T0001	T1106	0	12	0	6	T	1
237N1T0002	T1106	10	20	30	25	T	1
237N1T0003	T1106	29	16	28	29	T	1
237N1T0004	T1106	30	30	0	30	T	1
237N1T0005	T1106	16	14	30	23	T	1
237N1T0006	T1106	30	30	30	30	T	1
237N1T0007	T1106	29	17	24	27	T	1
237N1T0008	T1106	29	22	0	26	T	1
237N1T0009	T1106	29	14	25	27	T	1
237N1T0010	T1106	17	14	24	21	T	1
237N1T0011	T1106	30	24	26	28	T	1
237N1T0012	T1106	28	6	27	28	T	1
237N1T0013	T1106	29	22	30	30	T	1
237N1T0014	T1106	30	30	14	30	T	1
237N1T0015	T1106	16	20	26	23	T	1
237N1T0016	T1106	30	28	23	29	T	1
237N1T0017	T1106	28	10	29	29	T	1
237N1T0018	T1106	22	22	29	26	T	1
237N1T0019	T1106	15	11	12	14	T	1
237N1T0020	T1106	30	28	21	29	T	1
237N1T0021	T1106	25	24	21	25	T	1
237N1T0022	T1106	0	19	13	16	T	1
237N1T0023	T1106	29	22	20	26	T	1
237N1T0024	T1106	30	28	30	30	T	1
237N1T0025	T1106	0	12	24	18	T	1

HTNO	SUBJECT	MID_1	MID_2	MID_3	FINAL	SUB_TYPE	YEAR
237N1T0026	T1106	13	0	22	18	T	1
237N1T0027	T1106	27	23	25	26	T	1
237N1T0028	T1106	28	15	25	27	T	1
237N1T0029	T1106	24	3	28	26	T	1
237N1T0030	T1106	30	30	0	30	T	1
237N1T0031	T1106	30	21	18	26	T	1
237N1T0032	T1106	25	17	23	24	T	1
237N1T0001	T1108	0	0	22	22	L	1
237N1T0002	T1108	0	0	27	27	L	1
237N1T0003	T1108	0	0	28	28	L	1
237N1T0004	T1108	0	0	27	27	L	1
237N1T0005	T1108	0	0	26	26	L	1
237N1T0006	T1108	0	0	27	27	L	1
237N1T0007	T1108	0	0	27	27	L	1
237N1T0008	T1108	0	0	26	26	L	1
237N1T0009	T1108	0	0	28	28	L	1
237N1T0010	T1108	0	0	27	27	L	1
237N1T0011	T1108	0	0	28	28	L	1
237N1T0012	T1108	0	0	27	27	L	1
237N1T0013	T1108	0	0	28	28	L	1
237N1T0014	T1108	0	0	28	28	L	1
237N1T0015	T1108	0	0	27	27	L	1
237N1T0016	T1108	0	0	29	29	L	1
237N1T0017	T1108	0	0	28	28	L	1
237N1T0018	T1108	0	0	27	27	L	1
237N1T0019	T1108	0	0	27	27	L	1
237N1T0020	T1108	0	0	26	26	L	1
237N1T0021	T1108	0	0	27	27	L	1
237N1T0022	T1108	0	0	27	27	L	1
237N1T0023	T1108	0	0	27	27	L	1
237N1T0024	T1108	0	0	27	27	L	1
237N1T0025	T1108	0	0	24	24	L	1
237N1T0026	T1108	0	0	26	26	L	1
237N1T0027	T1108	0	0	29	29	L	1
237N1T0028	T1108	0	0	27	27	L	1
237N1T0029	T1108	0	0	27	27	L	1
237N1T0030	T1108	0	0	27	27	L	1
237N1T0031	T1108	0	0	28	28	L	1
237N1T0032	T1108	0	0	27	27	L	1
237N1T0001	T1109	0	0	0	0	L	1
237N1T0002	T1109	0	0	25	25	L	1
237N1T0003	T1109	0	0	28	28	L	1
237N1T0004	T1109	0	0	27	27	L	1
237N1T0005	T1109	0	0	25	25	L	1
237N1T0006	T1109	0	0	26	26	L	1
237N1T0007	T1109	0	0	26	26	L	1
237N1T0008	T1109	0	0	25	25	L	1
237N1T0009	T1109	0	0	24	24	L	1

HTNO	SUBJECT	MID_1	MID_2	MID_3	FINAL	SUB_TYPE	YEAR
237N1T0010	T1109	0	0	24	24	L	1
237N1T0011	T1109	0	0	25	25	L	1
237N1T0012	T1109	0	0	25	25	L	1
237N1T0013	T1109	0	0	26	26	L	1
237N1T0014	T1109	0	0	27	27	L	1
237N1T0015	T1109	0	0	25	25	L	1
237N1T0016	T1109	0	0	28	28	L	1
237N1T0017	T1109	0	0	26	26	L	1
237N1T0018	T1109	0	0	25	25	L	1
237N1T0019	T1109	0	0	25	25	L	1
237N1T0020	T1109	0	0	26	26	L	1
237N1T0021	T1109	0	0	26	26	L	1
237N1T0022	T1109	0	0	25	25	L	1
237N1T0023	T1109	0	0	27	27	L	1
237N1T0024	T1109	0	0	26	26	L	1
237N1T0025	T1109	0	0	24	24	L	1
237N1T0026	T1109	0	0	23	23	L	1
237N1T0027	T1109	0	0	27	27	L	1
237N1T0028	T1109	0	0	27	27	L	1
237N1T0029	T1109	0	0	25	25	L	1
237N1T0030	T1109	0	0	28	28	L	1
237N1T0031	T1109	0	0	28	28	L	1
237N1T0032	T1109	0	0	25	25	L	1
237N1T0001	T110A	0	0	22	22	L	1
237N1T0002	T110A	0	0	26	26	L	1
237N1T0003	T110A	0	0	27	27	L	1
237N1T0004	T110A	0	0	27	27	L	1
237N1T0005	T110A	0	0	25	25	L	1
237N1T0006	T110A	0	0	28	28	L	1
237N1T0007	T110A	0	0	26	26	L	1
237N1T0008	T110A	0	0	25	25	L	1
237N1T0009	T110A	0	0	25	25	L	1
237N1T0010	T110A	0	0	24	24	L	1
237N1T0011	T110A	0	0	24	24	L	1
237N1T0012	T110A	0	0	26	26	L	1
237N1T0013	T110A	0	0	26	26	L	1
237N1T0014	T110A	0	0	29	29	L	1
237N1T0015	T110A	0	0	26	26	L	1
237N1T0016	T110A	0	0	29	29	L	1
237N1T0017	T110A	0	0	27	27	L	1
237N1T0018	T110A	0	0	26	26	L	1
237N1T0019	T110A	0	0	25	25	L	1
237N1T0020	T110A	0	0	26	26	L	1
237N1T0021	T110A	0	0	25	25	L	1
237N1T0022	T110A	0	0	24	24	L	1
237N1T0023	T110A	0	0	26	26	L	1
237N1T0024	T110A	0	0	26	26	L	1
237N1T0025	T110A	0	0	23	23	L	1

HTNO	SUBJECT	MID_1	MID_2	MID_3	FINAL	SUB_TYPE	YEAR
237N1T0026	T110A	0	0	24	24	L	1
237N1T0027	T110A	0	0	27	27	L	1
237N1T0028	T110A	0	0	25	25	L	1
237N1T0029	T110A	0	0	25	25	L	1
237N1T0030	T110A	0	0	28	28	L	1
237N1T0031	T110A	0	0	27	27	L	1
237N1T0032	T110A	0	0	25	25	L	1
237N1T0001	T110B	0	0	24	24	L	1
237N1T0002	T110B	0	0	26	26	L	1
237N1T0003	T110B	0	0	26	26	L	1
237N1T0004	T110B	0	0	28	28	L	1
237N1T0005	T110B	0	0	25	25	L	1
237N1T0006	T110B	0	0	28	28	L	1
237N1T0007	T110B	0	0	26	26	L	1
237N1T0008	T110B	0	0	27	27	L	1
237N1T0009	T110B	0	0	25	25	L	1
237N1T0010	T110B	0	0	24	24	L	1
237N1T0011	T110B	0	0	26	26	L	1
237N1T0012	T110B	0	0	26	26	L	1
237N1T0013	T110B	0	0	25	25	L	1
237N1T0014	T110B	0	0	27	27	L	1
237N1T0015	T110B	0	0	25	25	L	1
237N1T0016	T110B	0	0	28	28	L	1
237N1T0017	T110B	0	0	25	25	L	1
237N1T0018	T110B	0	0	27	27	L	1
237N1T0019	T110B	0	0	25	25	L	1
237N1T0020	T110B	0	0	26	26	L	1
237N1T0021	T110B	0	0	26	26	L	1
237N1T0022	T110B	0	0	24	24	L	1
237N1T0023	T110B	0	0	27	27	L	1
237N1T0024	T110B	0	0	25	25	L	1
237N1T0025	T110B	0	0	23	23	L	1
237N1T0026	T110B	0	0	23	23	L	1
237N1T0027	T110B	0	0	29	29	L	1
237N1T0028	T110B	0	0	25	25	L	1
237N1T0029	T110B	0	0	24	24	L	1
237N1T0030	T110B	0	0	29	29	L	1
237N1T0031	T110B	0	0	26	26	L	1
237N1T0032	T110B	0	0	25	25	L	1
237N1T0001	T110C	0	0	25	25	L	1
237N1T0002	T110C	0	0	26	26	L	1
237N1T0003	T110C	0	0	27	27	L	1
237N1T0004	T110C	0	0	27	27	L	1
237N1T0005	T110C	0	0	26	26	L	1
237N1T0006	T110C	0	0	29	29	L	1
237N1T0007	T110C	0	0	25	25	L	1
237N1T0008	T110C	0	0	26	26	L	1
237N1T0009	T110C	0	0	27	27	L	1

HTNO	SUBJECT	MID_1	MID_2	MID_3	FINAL	SUB_TYPE	YEAR
237N1T0010	T110C	0	0	25	25	L	1
237N1T0011	T110C	0	0	27	27	L	1
237N1T0012	T110C	0	0	25	25	L	1
237N1T0013	T110C	0	0	27	27	L	1
237N1T0014	T110C	0	0	28	28	L	1
237N1T0015	T110C	0	0	26	26	L	1
237N1T0016	T110C	0	0	29	29	L	1
237N1T0017	T110C	0	0	27	27	L	1
237N1T0018	T110C	0	0	27	27	L	1
237N1T0019	T110C	0	0	26	26	L	1
237N1T0020	T110C	0	0	26	26	L	1
237N1T0021	T110C	0	0	27	27	L	1
237N1T0022	T110C	0	0	25	25	L	1
237N1T0023	T110C	0	0	27	27	L	1
237N1T0024	T110C	0	0	24	24	L	1
237N1T0025	T110C	0	0	24	24	L	1
237N1T0026	T110C	0	0	23	23	L	1
237N1T0027	T110C	0	0	26	26	L	1
237N1T0028	T110C	0	0	25	25	L	1
237N1T0029	T110C	0	0	25	25	L	1
237N1T0030	T110C	0	0	27	27	L	1
237N1T0031	T110C	0	0	26	26	L	1
237N1T0032	T110C	0	0	26	26	L	1

Verified by: PRINCIPAL ***Controller of Examinations***

Date and Time:24-09-2024 12:38