



**JNTUK KAKINADA**

Rules & Syllabus for the Bachelor  
of Pharmacy (B. Pharm) Course  
as approved by  
Pharmacy Council of India  
New Delhi

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[Framed under Regulation 6, 7 & 8 of the Bachelor of  
Pharmacy (B. Pharm) course regulations 2014]

## **CHAPTER- I: REGULATIONS**

### **1. Short Title and Commencement**

These regulations shall be called as “The Revised Regulations for the B. Pharm. Degree Program (CBCS)of the Pharmacy Council of India, New Delhi”. They shall come into effect from the Academic Year 2016-17. The regulations framed are subject to modifications from time to time by Pharmacy Council of India.

### **2. Minimum qualification for admission**

#### **2.1 First year B. Pharm:**

Candidate shall have passed 10+2 examination conducted by the respective state/central government authorities recognized as equivalent to 10+2 examination by the Association of Indian Universities (AIU) with English as one of the subjects and Physics, Chemistry, Mathematics (P.C.M) and or Biology (P.C.B / P.C.M.B.) as optional subjects individually. Any other qualification approved by the Pharmacy Council of India as equivalent to any of the above examinations.

#### **2.2. B. Pharm lateral entry (to third semester):**

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

### **3. Duration of the program**

The course of study for B.Pharm shall extend over a period of eight semesters (four academic years) and six semesters (three academic years) for lateral entry students. The curricula and syllabi for the program shall be prescribed from time to time by Pharmacy Council of India, New Delhi.

### **4. Medium of instruction and examinations**

Medium of instruction and examination shall be in English.

### **5. Working days in each semester**

Each semestershall consist of not less than 100 working days. The odd semesters shall be conducted from the month of June/July to November/December and the even semesters shall be conducted from December/January to May/June in every calendar year.

### **6. Attendance and progress**

A candidate is required to put in at least 80% attendance in individual courses considering theory and practical separately. The candidate shall complete the prescribed course satisfactorily to be eligible to appear for the respective examinations.

## **7. Program/Course credit structure**

As per the philosophy of Credit Based Semester System, certain quantum of academic work viz. theory classes, tutorial hours, practical classes, etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly, the credit associated with any of the other academic, co/extra-curricular activities is dependent upon the quantum of work expected to be put in for each of these activities per week.

### **7.1. Credit assignment**

#### **7.1.1. Theory and Laboratory courses**

Courses are broadly classified as Theory and Practical. Theory courses consist of lecture (L) and /or tutorial (T) hours, and Practical (P) courses consist of hours spent in the laboratory. Credits (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and tutorial hours, and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having three lectures and one tutorial per week throughout the semester carries a credit of 4. Similarly, a practical having four laboratory hours per week throughout semester carries a credit of 2.

### **7.2. Minimum credit requirements**

The minimum credit points required for award of a B. Pharm. degree is 208. These credits are divided into Theory courses, Tutorials, Practical, Practice School and Project over the duration of eight semesters. The credits are distributed semester-wise as shown in Table IX. Courses generally progress in sequences, building competencies and their positioning indicates certain academic maturity on the part of the learners. Learners are expected to follow the semester-wise schedule of courses given in the syllabus.

The lateral entry students shall get 52 credit points transferred from their D. Pharm program. Such students shall take up additional remedial courses of 'Communication Skills' (Theory and Practical) and 'Computer Applications in Pharmacy' (Theory and Practical) equivalent to 3 and 4 credit points respectively, a total of 7 credit points to attain 59 credit points, the maximum of I and II semesters.

## **8. Academic work**

A regular record of attendance both in Theory and Practical shall be maintained by the teaching staff of respective courses.

### 9. Course of study

The course of study for B. Pharm shall include Semester Wise Theory & Practical as given in Table – I to VIII. The number of hours to be devoted to each theory, tutorial and practical course in any semester shall not be less than that shown in Table – I to VIII.

**Table-I: Course of study for semester I**

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP101T	Human Anatomy and Physiology I– Theory	3	1	4
BP102T	Pharmaceutical Analysis I – Theory	3	1	4
BP103T	Pharmaceutics I – Theory	3	1	4
BP104T	Pharmaceutical Inorganic Chemistry – Theory	3	1	4
BP105T	Communication skills – Theory *	2	-	2
BP106RBT BP106RMT	Remedial Biology/ Remedial Mathematics – Theory*	2	-	2
BP107P	Human Anatomy and Physiology – Practical	4	-	2
BP108P	Pharmaceutical Analysis I – Practical	4	-	2
BP109P	Pharmaceutics I – Practical	4	-	2
BP110P	Pharmaceutical Inorganic Chemistry – Practical	4	-	2
BP111P	Communication skills – Practical*	2	-	1
BP112RBP	Remedial Biology – Practical*	2	-	1
<b>Total</b>		<b>32/34<sup>§</sup>/36<sup>#</sup></b>	<b>4</b>	<b>27/29<sup>§</sup>/30<sup>#</sup></b>

<sup>#</sup>Applicable ONLY for the students who have studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology (RB)course.

<sup>§</sup>Applicable ONLY for the students who have studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics (RM)course.

\* Non University Examination (NUE)

**Table-II: Course of study for semester II**

<b>Course Code</b>	<b>Name of the course</b>	<b>No. of hours</b>	<b>Tutorial</b>	<b>Credit points</b>
BP201T	Human Anatomy and Physiology II – Theory	3	1	4
BP202T	Pharmaceutical Organic Chemistry I – Theory	3	1	4
BP203T	Biochemistry – Theory	3	1	4
BP204T	Pathophysiology – Theory	3	1	4
BP205T	Computer Applications in Pharmacy – Theory *	3	-	3
BP206T	Environmental sciences – Theory *	3	-	3
BP207P	Human Anatomy and Physiology II –Practical	4	-	2
BP208P	Pharmaceutical Organic Chemistry I– Practical	4	-	2
BP209P	Biochemistry – Practical	4	-	2
BP210P	Computer Applications in Pharmacy – Practical*	2	-	1
<b>Total</b>		<b>32</b>	<b>4</b>	<b>29</b>

\*Non University Examination (NUE)

**Table-III: Course of study for semester III**

<b>Course code</b>	<b>Name of the course</b>	<b>No. of hours</b>	<b>Tutorial</b>	<b>Credit points</b>
BP301T	Pharmaceutical Organic Chemistry II – Theory	3	1	4
BP302T	Physical Pharmaceutics I – Theory	3	1	4
BP303T	Pharmaceutical Microbiology – Theory	3	1	4
BP304T	Pharmaceutical Engineering – Theory	3	1	4
BP305P	Pharmaceutical Organic Chemistry II – Practical	4	-	2
BP306P	Physical Pharmaceutics I – Practical	4	-	2
BP307P	Pharmaceutical Microbiology – Practical	4	-	2
BP 308P	Pharmaceutical Engineering –Practical	4	-	2
<b>Total</b>		<b>28</b>	<b>4</b>	<b>24</b>

**Table-IV: Course of study for semester IV**

<b>Course code</b>	<b>Name of the course</b>	<b>No. of hours</b>	<b>Tutorial</b>	<b>Credit points</b>
BP401T	Pharmaceutical Organic Chemistry III– Theory	3	1	4
BP402T	Medicinal Chemistry I – Theory	3	1	4
BP403T	Physical Pharmaceutics II – Theory	3	1	4
BP404T	Pharmacology I – Theory	3	1	4
BP405T	Pharmacognosy and Phytochemistry I– Theory	3	1	4
BP406P	Medicinal Chemistry I – Practical	4	-	2
BP407P	Physical Pharmaceutics II – Practical	4		2
BP408P	Pharmacology I – Practical	4	-	2
BP409P	Pharmacognosy and Phytochemistry I – Practical	4	-	2
<b>Total</b>		<b>31</b>	<b>5</b>	<b>28</b>

**Table-V: Course of study for semester V**

<b>Course code</b>	<b>Name of the course</b>	<b>No. of hours</b>	<b>Tutorial</b>	<b>Credit points</b>
BP501T	Medicinal Chemistry II – Theory	3	1	4
BP502T	Industrial PharmacyI– Theory	3	1	4
BP503T	Pharmacology II – Theory	3	1	4
BP504T	Pharmacognosy and Phytochemistry II– Theory	3	1	4
BP505T	Pharmaceutical Jurisprudence – Theory	3	1	4
BP506P	Industrial PharmacyI – Practical	4	-	2
BP507P	Pharmacology II – Practical	4	-	2
BP508P	Pharmacognosy and Phytochemistry II – Practical	4	-	2
<b>Total</b>		<b>27</b>	<b>5</b>	<b>26</b>

**Table-VI: Course of study for semester VI**

<b>Course code</b>	<b>Name of the course</b>	<b>No. of hours</b>	<b>Tutorial</b>	<b>Credit points</b>
BP601T	Medicinal Chemistry III – Theory	3	1	4
BP602T	Pharmacology III – Theory	3	1	4
BP603T	Herbal Drug Technology – Theory	3	1	4
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	3	1	4
BP605T	Pharmaceutical Biotechnology – Theory	3	1	4
BP606T	Quality Assurance –Theory	3	1	4
BP607P	Medicinal chemistry III – Practical	4	-	2
BP608P	Pharmacology III – Practical	4	-	2
BP609P	Herbal Drug Technology – Practical	4	-	2
<b>Total</b>		<b>30</b>	<b>6</b>	<b>30</b>

**Table-VII: Course of study for semester VII**

<b>Course code</b>	<b>Name of the course</b>	<b>No. of hours</b>	<b>Tutorial</b>	<b>Credit points</b>
BP701T	Instrumental Methods of Analysis – Theory	3	1	4
BP702T	Industrial PharmacyII – Theory	3	1	4
BP703T	Pharmacy Practice – Theory	3	1	4
BP704T	Novel Drug Delivery System – Theory	3	1	4
BP705P	Instrumental Methods of Analysis – Practical	4	-	2
BP706PS	Practice School*	12	-	6
<b>Total</b>		<b>28</b>	<b>5</b>	<b>24</b>

\* Non University Examination (NUE)

**Table-VIII: Course of study for semester VIII**

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP801T	Biostatistics and Research Methodology	3	1	4
BP802T	Social and Preventive Pharmacy	3	1	4
BP803ET	Pharma Marketing Management	3 + 3 = 6	1 + 1 = 2	4 + 4 = 8
BP804ET	Pharmaceutical Regulatory Science			
BP805ET	Pharmacovigilance			
BP806ET	Quality Control and Standardization of Herbals			
BP807ET	Computer Aided Drug Design			
BP808ET	Cell and Molecular Biology			
BP809ET	Cosmetic Science			
BP810ET	Experimental Pharmacology			
BP811ET	Advanced Instrumentation Techniques			
BP812ET	Dietary Supplements and Nutraceuticals			
BP813PW	Project Work	12	-	6
<b>Total</b>		<b>24</b>	<b>4</b>	<b>22</b>

**Table-IX: Semester wise credits distribution**

Semester	Credit Points
I	27/29 <sup>§</sup> /30 <sup>#</sup>
II	29
III	26
IV	28
V	26
VI	26
VII	24
VIII	22
Extracurricular/ Co curricular activities	01*
<b>Total credit points for the program</b>	<b>209/211<sup>§</sup>/212<sup>#</sup></b>

\* The credit points assigned for extracurricular and or co-curricular activities shall be given by the Principals of the colleges and the same shall be submitted to the University. The criteria to acquire this credit point shall be defined by the colleges from time to time.

<sup>§</sup>Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics course.

<sup>#</sup>Applicable ONLY for the students studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology course.



## **10. Program Committee**

1. The B. Pharm. program shall have a Program Committee constituted by the Head of the institution in consultation with all the Heads of the departments.

2. The composition of the Program Committee shall be as follows:

A senior teacher shall be the Chairperson; One Teacher from each department handling B.Pharm courses; and four student representatives of the program (one from each academic year), nominated by the Head of the institution.

3. Duties of the Program Committee:

- i. Periodically reviewing the progress of the classes.
- ii. Discussing the problems concerning curriculum, syllabus and the conduct of classes.
- iii. Discussing with the course teachers on the nature and scope of assessment for the course and the same shall be announced to the students at the beginning of respective semesters.
- iv. Communicating its recommendation to the Head of the institution on academic matters.
- v. The Program Committee shall meet at least thrice in a semester preferably at the end of each Sessionalexam (Internal Assessment) and before the end semester exam.

## **11. Examinations/Assessments**

The scheme for internal assessment and end semester examinations is given in Table – X.

### **11.1. End semester examinations**

The End Semester Examinations for each theory and practical coursethrough semesters I to VIII shall be conducted by the university except for the subjects with asterix symbol (\*) in table I and II for which examinations shall be conducted by the subject experts at college level and the marks/grades shall be submitted to the university.

**Tables-X: Schemes for internal assessments and end semester examinations semester wise**

**Semester I**

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP101T	Human Anatomy and Physiology I– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP102T	Pharmaceutical Analysis I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP103T	Pharmaceutics I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP104T	Pharmaceutical Inorganic Chemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP105T	Communication skills – Theory *	5	10	1 Hr	15	35	1.5 Hrs	50
BP106RBT BP106RMT	Remedial Biology/ Mathematics – Theory*	5	10	1 Hr	15	35	1.5 Hrs	50
BP107P	Human Anatomy and Physiology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP108P	Pharmaceutical Analysis I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP109P	Pharmaceutics I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP110P	Pharmaceutical Inorganic Chemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP111P	Communication skills – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
BP112RBP	Remedial Biology – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
<b>Total</b>		<b>70/75<sup>§</sup>/80<sup>#</sup></b>	<b>115/125<sup>§</sup>/130<sup>#</sup></b>	<b>23/24<sup>§</sup>/26<sup>#</sup> Hrs</b>	<b>185/200<sup>§</sup>/210<sup>#</sup></b>	<b>490/525<sup>§</sup>/ 540<sup>#</sup></b>	<b>31.5/33<sup>§</sup>/ 35<sup>#</sup> Hrs</b>	<b>675/725<sup>§</sup>/ 750<sup>#</sup></b>

<sup>#</sup>Applicable ONLY for the students studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology (RB)course.

<sup>§</sup>Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics (RM)course.

\* Non University Examination (NUE)

## Semester II

Course code	Name of the course	Internal Assessment			End Semester Exams		Total Marks	
		Continuous Mode	Sessional Exams		Total	Marks		Duration
			Marks	Duration				
BP201T	Human Anatomy and Physiology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP202T	Pharmaceutical Organic Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP203T	Biochemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP204T	Pathophysiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP205T	Computer Applications in Pharmacy – Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP206T	Environmental sciences – Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP207P	Human Anatomy and Physiology II – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP208P	Pharmaceutical Organic Chemistry I– Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP209P	Biochemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP210P	Computer Applications in Pharmacy – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
<b>Total</b>		<b>80</b>	<b>125</b>	<b>20 Hrs</b>	<b>205</b>	<b>520</b>	<b>30 Hrs</b>	<b>725</b>

\* The subject experts at college level shall conduct examinations

### Semester III

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP301T	Pharmaceutical Organic Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP302T	PhysicalPharmaceuticsI –Theory	10	15	1 Hr	25	75	3 Hrs	100
BP303T	Pharmaceutical Microbiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP304T	Pharmaceutical Engineering – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP305P	Pharmaceutical Organic Chemistry II – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP306P	Physical Pharmaceutics I – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP307P	Pharmaceutical Microbiology – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP308P	Pharmaceutical Engineering – Practical	5	10	4 Hr	15	35	4 Hrs	50
<b>Total</b>		<b>60</b>	<b>100</b>	<b>20</b>	<b>160</b>	<b>440</b>	<b>28Hrs</b>	<b>600</b>

**Semester IV**

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP401T	Pharmaceutical Organic Chemistry III– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP402T	Medicinal Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP403T	Physical Pharmaceutics II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP404T	Pharmacology I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP405T	Pharmacognosy I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP406P	Medicinal Chemistry I – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP407P	Physical Pharmaceutics II – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP408P	Pharmacology I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP409P	Pharmacognosy I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
<b>Total</b>		<b>70</b>	<b>115</b>	<b>21 Hrs</b>	<b>185</b>	<b>515</b>	<b>31 Hrs</b>	<b>700</b>

### Semester V

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP501T	Medicinal Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP502T	Industrial PharmacyI– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP503T	Pharmacology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP504T	Pharmacognosy II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP505T	Pharmaceutical Jurisprudence – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP506P	Industrial PharmacyI– Practical	5	10	4 Hr	15	35	4 Hrs	50
BP507P	Pharmacology II – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP508P	Pharmacognosy II – Practical	5	10	4 Hr	15	35	4 Hrs	50
<b>Total</b>		<b>65</b>	<b>105</b>	<b>17 Hr</b>	<b>170</b>	<b>480</b>	<b>27 Hrs</b>	<b>650</b>

### Semester VI

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP601T	Medicinal Chemistry III – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP602T	Pharmacology III – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP603T	Herbal Drug Technology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP605T	Pharmaceutical Biotechnology– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP606T	Quality Assurance– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP607P	Medicinal chemistry III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP608P	Pharmacology III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP609P	Herbal Drug Technology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
<b>Total</b>		<b>75</b>	<b>120</b>	<b>18 Hrs</b>	<b>195</b>	<b>555</b>	<b>30 Hrs</b>	<b>750</b>

### Semester VII

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP701T	Instrumental Methods of Analysis – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP702T	Industrial Pharmacy – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP703T	Pharmacy Practice – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP704T	Novel Drug Delivery System – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP705 P	Instrumental Methods of Analysis – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP706 PS	Practice School*	25	-	-	25	125	5 Hrs	150
<b>Total</b>		<b>70</b>	<b>70</b>	<b>8Hrs</b>	<b>140</b>	<b>460</b>	<b>21 Hrs</b>	<b>600</b>

\* The subject experts at college level shall conduct examinations



**Semester VIII**

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP801T	Biostatistics and Research Methodology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP802T	Social and Preventive Pharmacy – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP803ET	Pharmaceutical Marketing – Theory	10 + 10 = 20	15 + 15 = 30	1 + 1 = 2 Hrs	25 + 25 = 50	75 + 75 = 150	3 + 3 = 6 Hrs	100 + 100 = 200
BP804ET	Pharmaceutical Regulatory Science – Theory							
BP805ET	Pharmacovigilance – Theory							
BP806ET	Quality Control and Standardization of Herbals – Theory							
BP807ET	Computer Aided Drug Design – Theory							
BP808ET	Cell and Molecular Biology – Theory							
BP809ET	Cosmetic Science – Theory							
BP810ET	Experimental Pharmacology – Theory							
BP811ET	Advanced Instrumentation Techniques – Theory							
BP812PW	Project Work	-	-	-	-	150	4 Hrs	150

<b>Total</b>	<b>40</b>	<b>60</b>	<b>4 Hrs</b>	<b>100</b>	<b>450</b>	<b>16 Hrs</b>	<b>550</b>
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### 11.2. Internal assessment: Continuous mode

The marks allocated for Continuous mode of Internal Assessment shall be awarded as per the scheme given below.

**Table-XI: Scheme for awarding internal assessment: Continuous mode**

<b>Theory</b>		
<b>Criteria</b>	<b>Maximum Marks</b>	
Attendance (Refer Table – XII)	4	2
Academic activities (Average of any 3 activities e.g. quiz, assignment, open book test, field work, group discussion and seminar)	3	1.5
Student – Teacher interaction	3	1.5
<b>Total</b>	<b>10</b>	<b>5</b>
<b>Practical</b>		
Attendance (Refer Table – XII)	2	
Based on Practical Records, Regular viva voce, etc.	3	
<b>Total</b>	<b>5</b>	

**Table- XII: Guidelines for the allotment of marks for attendance**

<b>Percentage of Attendance</b>	<b>Theory</b>	<b>Practical</b>
95 – 100	4	2
90 – 94	3	1.5
85 – 89	2	1
80 – 84	1	0.5
Less than 80	0	0

#### 11.2.1. Sessional Exams

Two Sessional exams shall be conducted for each theory / practical course as per the schedule fixed by the college(s). The scheme of question paper for theory and practical Sessional examinations is given below. The average marks of two Sessional exams shall be computed for internal assessment as per the requirements given in tables – X.

Sessional exam shall be conducted for 30 marks for theory and shall be computed for 15 marks. Similarly Sessional exam for practical shall be conducted for 40 marks and shall be computed for 10 marks.

#### Question paper pattern for theory Sessional examinations

##### For subjects having University examination

I. Multiple Choice Questions (MCQs)	=	10 x 1 = 10
OR		OR
Objective Type Questions (5 x 2) (Answer all the questions)	=	05 x 2 = 10
I. Long Answers (Answer 1 out of 2)	=	1 x 10 = 10
II. Short Answers (Answer 2 out of 3)	=	2 x 5 = 10
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<b>Total</b>	<b>=</b>	<b>30 marks</b>

**For subjects having Non University Examination**

I. Long Answers (Answer 1 out of 2)	=	1 x 10 = 10
II. Short Answers (Answer 4 out of 6)	=	4 x 5 = 20
		-----
Total	=	30 marks
		-----

**Question paper pattern for practical sessional examinations**

I. Synopsis	=	10
II. Experiments	=	25
III. Viva voce	=	05
		-----
Total	=	40 marks
		-----

**12. Promotion and award of grades**

A student shall be declared PASS and eligible for getting grade in a course of B.Pharm. program if he/she secures at least 50% marks in that particular course including internal assessment. For example, to be declared as PASS and to get grade, the student has to secure a minimum of 50 marks for the total of 100 including continuous mode of assessment and end semester theory examination and has to secure a minimum of 25 marks for the total 50 including internal assessment and end semester practical examination.

**13. Carry forward of marks**

In case a student fails to secure the minimum 50% in any Theory or Practical course as specified in 12, then he/she shall reappear for the end semester examination of that course. However his/her marks of the Internal Assessments shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.

**14. Improvement of internal assessment**

A student shall have the opportunity to improve his/her performance only once in the Sessional exam component of the internal assessment. The re-conduct of the Sessional exam shall be completed before the commencement of next end semester theory examinations.

**15. Re-examination of end semester examinations**

Reexamination of end semester examinations shall be conducted as per the schedule given in table XIII. The exact dates of examinations shall be notified from time to time.

**Table-XIII: Tentative schedule of end semester examinations**

Semester	For Regular Candidates	For Failed Candidates
I, III, V and VII	November / December	May / June
II, IV, VI and VIII	May / June	November / December

**Question paper pattern for end semester theory examinations**

**For 75 marks paper**

- I. Multiple Choice Questions(MCQs) = 20 x 1 = 20  
OR  
Objective Type Questions (10 x 2) = 10 x 2 = 20  
(Answer all the questions)
- II. Long Answers (Answer 2 out of 3) = 2 x 10 = 20  
III. Short Answers (Answer 7 out of 9) = 7 x 5 = 35

Total = 75 marks

**For 50 marks paper**

- I. Long Answers (Answer 2 out of 3) = 2 x 10 = 20  
II. Short Answers (Answer 6 out of 8) = 6 x 5 = 30

Total = 50 marks

**For 35 marks paper**

- I. Long Answers (Answer 1 out of 2) = 1 x 10 = 10  
II. Short Answers (Answer 5 out of 7) = 5 x 5 = 25

Total = 35 marks

**Question paper pattern for end semester practical examinations**

- I. Synopsis = 5  
II. Experiments = 25  
III. Viva voce = 5

Total = 35 marks

**16. Academic Progression:**

No student shall be admitted to any examination unless he/she fulfills the norms given in 6. Academic progression rules are applicable as follows:

A student shall be eligible to carry forward all the courses of I, II and III semesters till the IV semester examinations. However, he/she shall not be eligible to attend the courses of V semester until all the courses of I and II semesters are successfully completed.

A student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of I, II, III and IV semesters are successfully completed.

A student shall be eligible to carry forward all the courses of V, VI and VII semesters till the VIII semester examinations. However, he/she shall not be eligible to get the course completion certificate until all the courses of I, II, III, IV, V and VI semesters are successfully completed.

A student shall be eligible to get his/her CGPA upon successful completion of the courses of I to VIII semesters within the stipulated time period as per the norms specified in 26.

A lateral entry student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of III and IV semesters are successfully completed.

A lateral entry student shall be eligible to carry forward all the courses of V, VI and VII semesters till the VIII semester examinations. However, he/she shall not be eligible to get the course completion certificate until all the courses of III, IV, V and VI semesters are successfully completed.

A lateral entry student shall be eligible to get his/her CGPA upon successful completion of the courses of III to VIII semesters within the stipulated time period as per the norms specified in 26.

Any student who has given more than 4 chances for successful completion of I / III semester courses and more than 3 chances for successful completion of II / IV semester courses shall be permitted to attend V / VII semester classes ONLY during the subsequent academic year as the case may be. In simpler terms there shall NOT be any ODD BATCH for any semester.

Note: Grade AB should be considered as failed and treated as one head for deciding academic progression. Such rules are also applicable for those students who fail to register for examination(s) of any course in any semester.

## 17. Grading of performances

### 17.1. Letter grades and grade points allocations:

Based on the performances, each student shall be awarded a final letter grade at the end of the semester for each course. The letter grades and their corresponding grade points are given in Table – XII.

**Table – XII: Letter grades and grade points equivalent to Percentage of marks and performances**

Percentage of Marks Obtained	Letter Grade	Grade Point	Performance
90.00 – 100	O	10	Outstanding
80.00 – 89.99	A	9	Excellent
70.00 – 79.99	B	8	Good
60.00 – 69.99	C	7	Fair
50.00 – 59.99	D	6	Average
Less than 50	F	0	Fail
Absent	AB	0	Fail

A learner who remains absent for any end semester examination shall be assigned a letter grade of AB and a corresponding grade point of zero. He/she should reappear for the said evaluation/examination in due course.

## 18. The Semester grade point average (SGPA)

The performance of a student in a semester is indicated by a number called ‘Semester Grade Point Average’ (SGPA). The SGPA is the weighted average of the grade points obtained in all the courses by the student during the semester. For example, if a student takes five courses (Theory/Practical) in a semester with credits C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>, C<sub>4</sub> and C<sub>5</sub> and the student’s grade points in these courses are G<sub>1</sub>, G<sub>2</sub>, G<sub>3</sub>, G<sub>4</sub> and G<sub>5</sub>, respectively, and then students’ SGPA is equal to:

$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

The SGPA is calculated to two decimal points. It should be noted that, the SGPA for any semester shall take into consideration the F and AB grade awarded in that semester. For example if a learner has a F or AB grade in course 4, the SGPA shall then be computed as:

$$C_1G_1 + C_2G_2 + C_3G_3 + C_4* \text{ZERO} + C_5G_5$$

$$\text{SGPA} = \frac{\text{-----}}{C_1 + C_2 + C_3 + C_4 + C_5}$$

**19. Cumulative Grade Point Average (CGPA)**

The CGPA is calculated with the SGPA of all the VIII semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all VIII semesters and their courses. The CGPA shall reflect the failed status in case of F grade(s), till the course(s) is/are passed. When the course(s) is/are passed by obtaining a pass grade on subsequent examination(s) the CGPA shall only reflect the new grade and not the fail grades earned earlier. The CGPA is calculated as:

$$\text{CGPA} = \frac{C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4 + C_5S_5 + C_6S_6 + C_7S_7 + C_8S_8}{\text{-----}}$$

$$C_1 + C_2 + C_3 + C_4 + C_5 + C_6 + C_7 + C_8$$

where C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>,... is the total number of credits for semester I,II,III,... and S<sub>1</sub>,S<sub>2</sub>, S<sub>3</sub>,... is the SGPA of semester I,II,III,....

**20. Declaration of class**

The class shall be awarded on the basis of CGPA as follows:

- First Class with Distinction = CGPA of 7.50 and above
- First Class = CGPA of 6.00 to 7.49
- Second Class = CGPA of 5.00 to 5.99

**21. Project work**

All the students shall undertake a project under the supervision of a teacher and submit a report. The area of the project shall directly relate any one of the elective subject opted by the student in semester VIII. The project shall be carried out in group not exceeding 5 in number. The project report shall be submitted in triplicate (typed & bound copy not less than 25 pages).

The internal and external examiner appointed by the University shall evaluate the project at the time of the Practical examinations of other semester(s). Students shall be evaluated in groups for four hours (i.e., about half an hour for a group of five students). The projects shall be evaluated as per the criteria given below.

***Evaluation of Dissertation Book:***

Objective(s) of the work done	15 Marks
Methodology adopted	20 Marks
Results and Discussions	20 Marks
Conclusions and Outcomes	20 Marks

---

<b>Total</b>	<b>75 Marks</b>
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***Evaluation of Presentation:***

Presentation of work	25 Marks
Communication skills	20 Marks
Question and answer skills	30 Marks

---

<b>Total</b>	<b>75 Marks</b>
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*Explanation:* The 75 marks assigned to the dissertation book shall be same for all the students in a group. However, the 75 marks assigned for presentation shall be awarded based on the performance of individual students in the given criteria.

**22. Industrial training (Desirable)**

Every candidate shall be required to work for at least 150 hours spread over four weeks in a Pharmaceutical Industry/Hospital. It includes Production unit, Quality Control department, Quality Assurance department, Analytical laboratory, Chemical manufacturing unit, Pharmaceutical R&D, Hospital (Clinical Pharmacy), Clinical Research Organization, Community Pharmacy, etc. After the Semester – VI and before the commencement of Semester – VII, and shall submit satisfactory report of such work and certificate duly signed by the authority of training organization to the head of the institute.

**23. Practice School**

In the VII semester, every candidate shall undergo practice school for a period of 150 hours evenly distributed throughout the semester. The student shall opt any one of the domains for practice school declared by the program committee from time to time.

At the end of the practice school, every student shall submit a printed report (in triplicate) on the practice school he/she attended (not more than 25 pages). Along with the exams of semester VII, the report submitted by the student, knowledge and skills acquired by the student through practice school shall be evaluated by the subject experts at college level and grade point shall be awarded.



**24. Award of Ranks**

Ranks and Medals shall be awarded on the basis of final CGPA. However, candidates who fail in one or more courses during the B.Pharm program shall not be eligible for award of ranks. Moreover, the candidates should have completed the B. Pharm program in minimum prescribed number of years, (four years) for the award of Ranks.

**25. Award of degree**

Candidates who fulfill the requirements mentioned above shall be eligible for award of degree during the ensuing convocation.

**26. Duration for completion of the program of study**

The duration for the completion of the program shall be fixed as double the actual duration of the program and the students have to pass within the said period, otherwise they have to get fresh Registration.

**27. Re-admission after break of study**

Candidate who seeks re-admission to the program after break of study has to get the approval from the university by paying a condonation fee.

No condonation is allowed for the candidate who has more than 2 years of break up period and he/she has to rejoin the program by paying the required fees.



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

Dr. No. DAP/AC/III Year/B. Tech/B. Pharmacy/2022

Date 14.09.2022

**Dr. KVSG Murali Krishna,**  
M.E, Ph.D.  
Director, Academic Planning  
JNTUK, Kakinada

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

**Academic Calendar for III Year - B. Tech/B. Pharmacy for the AY 2022-23  
(2020-21 Admitted Batch)**

I SEMESTER			
Description	From	To	Weeks
Community Service Project	15.07.2022	30.07.2022	2W
I Unit of Instruction	01.08.2022	24.09.2022	8W
I Mid Examinations	26.09.2022	01.10.2022	1W
II Unit of Instructions	03.10.2022	26.11.2022	8W
II Mid Examinations	28.11.2022	03.12.2022	1W
Preparation & Practicals	05.12.2022	10.12.2022	1W
End Examinations	12.12.2022	25.12.2022	2W
Commencement of II Semester Class Work	02.01.2023		
II SEMESTER			
I Unit of Instructions	02.01.2023	25.02.2023	8W
I Mid Examinations	27.02.2023	04.03.2023	1W
II Unit of Instructions	06.03.2023	29.04.2023	8W
II Mid Examinations	01.05.2023	06.05.2023	1W
Preparation & Practicals	08.05.2023	13.05.2023	1W
End Examinations	15.05.2023	27.05.2023	2W

\* As per the APSCH Guidelines Out of the Total 180 hours of Community Service Project leading to 4 Credits, two weeks will be offline and remaining project work can be done during the III-I semester weekends and holidays. The summer internship can be done in online cum offline during III-I and III-II semesters.

*KVSG*  
Director,  
14/9/22

Director,  
Academics & Planning, JNTUK

Director  
Academic Planning  
JNTUK Kakinada

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



*alt*  
PRINCIPAL  
VIJAYA INSTITUTE OF  
PHARMACEUTICAL SCIENCES FOR WOMEN  
NIKEPADU, VIJAYAWADA 521 10\*

**INSTITUTIONAL EXAMINATION  
COMMITTEE**

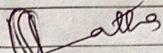
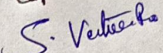
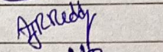
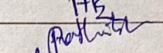
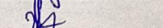
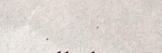
**VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN**  
**Enikepadu, Vijayawada – 521108**

**Date:** 26-07-2021

**OFFICE ORDER**

**INSTITUTIONAL EXAMINATION COMMITTEE**

The Institutional Examination Committee for the academic year 2021 – 2022 is constituted as follows and it is effective for a period of 06-09-2021 to 06-08-2022. Following staff members are appointed as Institutional Examination Committee.

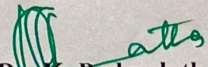
S.NO	NAME	DESIGNATION	POSITION	SIGNATURE
1	Dr. K. Padmalatha	Principal	Chairman	
2	Mr. S. Venkateswara Rao	Assoc. Professor	College Examination Officer	
3	Mr. A. Jayarami Reddy	Assoc. Professor	Member	
4	Mrs. A.V.S. Hima bindu	Asst. Professor	Member	
5	Dr. N. Prathibha	Asst. Professor	Member	
6	Dr. S. Sundar	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 assessments / sessional / end semester examinations in the college.
4. Ensure proper communication with JNTUK with regards to examination and fulfillment of university 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 examinations.
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



  
**Dr. K. Padmalatha**  
**PRINCIPAL**

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

III B.PHARMACY I SEM. (PCI)



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA**  
UNIVERSITY EXAMINATION CENTER, KAKINADA

**III B. PHARMACY - I SEMESTER (PCI REGULATION) II MID EXAMINATIONS, NOVEMBER/DECEMBER - 2022**

**TIME TABLE**

TIME: 10.00 AM TO 12.00 PM

DATE	28-11-2022 (Monday)	29-11-2022 (Tuesday)	30-11-2022 (Wednesday)	01-12-2022 (Thursday)	02-12-2022 (Friday)
SUBJECTS	MEDICINAL CHEMISTRY-II (BP501T)	INDUSTRIAL PHARMACY - I (BP502T)	PHARMACOLOGY-II (BP503T)	PHARMACOGNOSY AND PHYTOCHEMISTRY-II (BP504T)	PHARMACEUTICAL JURISPRUDENCE (BP505T)

- NOTE:** (i) ANY OMISSIONS OR CLASHES IN THIS TIME TABLE MAY PLEASE BE INFORMED TO THE CONTROLLER OF EXAMINATIONS IMMEDIATELY.  
(ii) EVEN IF GOVERNMENT DECLARES HOLIDAY ON ANY OF THE ABOVE DATES, THE EXAMINATIONS SHALL BE CONDUCTED AS USUAL.  
(iii) THE PRINCIPALS ARE REQUESTED TO INFORM THE UNIVERSITY ANY OTHER SUBSTITUTE SUBJECTS THAT ARE NOT INCLUDED IN THE ABOVE LIST IMMEDIATELY.



*S. Venkatesh Rao*  
19/11/2022





















*[Signature]*  
PRINCIPAL  
**VIJAYA INSTITUTE OF**  
PHARMACEUTICAL SCIENCES FOR WOMEN  
ENIKEPADU, VIJAYAWADA - 521 108

*[Signature]*  
Controller of Examinations

**VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN**  
ENIKEPADU, VIJAYAWADA - 521108

**III B. PHARM I SEM II MID EXAMS, NOVEMBER - 2022**  
**STAFF INVIGILATION DUTIES**

**Time: 10.00 AM to 12.00 NOON**

DATE	Room - 1		Room - 2		Room - 3		Room - 4	
	Staff	Sign	Staff	Sign	Staff	Sign	Staff	Sign
28-11-2022 (Monday)	Mrs. V. N. Hepsiba		Dr. M. Vani		Ms. B. Lekhya		Mrs. M. Subbalakshmi	
29.11.2022 (Tuesday)	Mr. V. Srinivas		Ms. B. Lekhya		Dr. M. Vani		Mrs. V. N. Hepsiba	
30.11.2022 (Wednesday)	Dr. M. Vani		Mr. V. Srinivas		Ms. B. Lekhya		Mrs. V. N. Hepsiba	
01.12.2022 (Thursday)	Mrs. M. Subbalakshmi		Ms. B. Lekhya		Mrs. V. N. Hepsiba		Mrs. D. Prasanna	
02.12.2022 (Friday)	Mrs. D. Prasanna		Ms. B. Lekhya		Mrs. V. N. Hepsiba		Mr. V. Srinivas	

  
Exams Incharge  
**(Dr. S. Venkateswara Rao)**  
**VIJAYA INSTITUTE OF**  
PHARMACEUTICAL SCIENCES FOR WOMEN  
ENIKEPADU, VIJAYAWADA  
PIN - 521 108



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

# **INTERNAL SQUAD COMMITTEE**

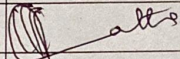
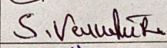



**VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN**  
**Enikepadu, Vijayawada – 521108**

Date: 26-07-2021

**OFFICE ORDER**

**INTERNAL SQUAD COMMITTEE**

The Internal Squad Committee has been constructed for smooth conduct of sessional / end semester examinations for the academic year 2021 – 2022 for the period of 06-09-2021 to 06-08-2022. 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. Ch. Anupama Swathi	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 whether 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



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





**III B. PHARM/ I SEM (PCI) MID EXAM  
ATTENDANCE DAIRY**

Sub: Industrial Pharmacy-I (BP502T)

S. No	Hall-Ticket No	STUDENT SIGNATURE	
		I MID	II MID
1	207N1R0001	M. Poajeetha	M. Poajeetha
2	207N1R0003	K. Lohitha	K. Lohitha
3	207N1R0004	G. Iediya Grace	G. Iediya Grace
4	207N1R0005	Poletha Sri	Poletha Sri
5	207N1R0006	V. Neenajoy S. Rani	V. Neenajoy S. Rani
6	207N1R0007	T. Lakshmi Sravani	T. Lakshmi Sravani
7	207N1R0008	G. Kavya.	G. Kavya
8	207N1R0009	K. Sowjanya.	K. Sowjanya.
9	207N1R0010	Ch. Manasa	Ch. Manasa
10	207N1R0011	A. Charani	A. Charani
11	207N1R0012	S. Soniya	S. Soniya
12	207N1R0013	P. Jyothina Bhavani	P. Jyothina Bhavani
13	207N1R0014	K. Haritha	K. Haritha
14	207N1R0015	D. Reshma.	D. Reshma.
15	207N1R0016	V. Dillikumari	V. Dillikumari
16	207N1R0017	P. N. K. Durga	P. N. K. Durga
17	207N1R0018	T. Raja Rajeswari	T. Raja Rajeswari
18	207N1R0019	K. N. S. L. Durga	K. N. S. L. Durga
19	207N1R0020	K. Sirisha.	K. Sirisha.
20	207N1R0021	G. Bindu.	G. Bindu.
21	207N1R0022	T. Vasundhara.	T. Vasundhara.
22	207N1R0023	K. Bhavani Tulasi	K. Bhavani
23	207N1R0024	M. Bhavani	M. Bhavani
24	207N1R0025	T. Indumathi	T. Indumathi
25	207N1R0026	K. Abinayapurna	K. Abinayapurna
Total Number of Students		25	25
Signature of Invigilator			
Exams Incharge		S. Venkatesh	S. Venkatesh
Signature of Head of the Institution			

**III B. PHARM/ I SEM (PCI) MID EXAM  
ATTENDANCE DAIRY**

**Sub: Industrial Pharmacy-I (BP502T)**

S. No	Hall-Ticket No	STUDENT SIGNATURE	
		I MID	II MID
26	207N1R0027	D. Ameena	D. Ameena
27	207N1R0028	B. Ganga Preethika	B. Ganga Preethika
28	207N1R0029	P. Kalyani	P. Kalyani
29	207N1R0030	ch. Deepika	ch. Deepika
30	207N1R0031	P. Sravani	P. Sravani
31	207N1R0032	G. Priyanka	G. Priyanka
32	207N1R0033	A. Anshu	A. Anshu
33	207N1R0034	M. Gunasri	M. Gunasri
34	207N1R0035	Absent	Absent
35	207N1R0036	MD. Jathima Zehra.	MD. Jathima Zehra.
36	207N1R0037	L. Anusha.	L. Anusha.
37	207N1R0038	B. Harshini	B. Harshini
38	207N1R0039	Absent	ch. Devi Priya
39	207N1R0040	K. Sri Padma.	K. Sri Padma
40	207N1R0041	I. Navyasri	I. Navyasri
41	207N1R0042	Absent	P. Varshitha
42	207N1R0043	M. Kalyani	M. Kalyani
43	207N1R0044	M. Poojula	M. Poojula
44	207N1R0045	G. Samrudhi	G. Samrudhi
45	207N1R0046	B. Harika Rathan.	B. Harika Rathan
46	207N1R0047	B. Santhi	B. Santhi
47	207N1R0048	Namratha.p	Namratha.p
48	207N1R0049	B. Keerthana	B. Keerthana
49	207N1R0050	K. Kshiti	K. Kshiti
50	207N1R0051	B. Vijayasudha.	B. Vijayasudha
Total Number of Students		22	24
Signature of Invigilator		M. S. Lal	W. K. R.
Exams Incharge		S. Venkatesh	S. Venkatesh
Signature of Head of the Institution			

III B. PHARM/ I SEM (PCI) MID EXAM  
ATTENDANCE DAIRY

Sub: Industrial Pharmacy-I (BP502T)

S. No	Hall-Ticket No	STUDENT SIGNATURE	
		I MID	II MID
51	207N1R0052	V. Saranya	V. Saranya
52	207N1R0053	V. Sankeerthana	V. Sankeerthana
53	207N1R0054	R. Priyadarshini	R. Priyadarshini
54	207N1R0055	P. Esther Rani	P. Esther Rani
55	207N1R0056	G. Sravanthu	G. Sravanthu
56	207N1R0057	D. Kavaya Sri	D. Kavaya Sri
57	207N1R0058	B. Sri Krishna Sravya	B. Sri Krishna Sravya
58	207N1R0059	J. Bhavya Sri	J. Bhavya Sri
59	207N1R0060	Ch. Rajeswari	Ch. Rajeswari
60	207N1R0061	B. Hemalatha	Hemalatha. B
61	207N1R0062	K. Prasanna	<del>ANSBNI</del>
62	207N1R0063	Sk. Lalisa Thousin	Sk. Lalisa Thousin
63	207N1R0064	M. Tasmine	M. Tasmine
64	207N1R0065	Sk. Sabina Taslim	Sk. Sabina Taslim
65	207N1R0066	D. Bhargavi	D. Bhargavi
66	207N1R0067	K. Venkata Yamini	K. Venkata Yamini
67	207N1R0068	R. Pujitha	R. Pujitha
68	207N1R0069	S. Sumalatha	S. Sumalatha
69	207N1R0070	S. Anu Deepika	S. Anu Deepika
70	207N1R0071	K. Anupriya	K. Anupriya
71	207N1R0072	K. Chandana Sai	K. Chandana Sai
72	207N1R0073	S. Sumavashini	S. Sumavashini
73	207N1R0074	B. Rani	B. Rani
74	207N1R0076	Harshitha. V	Harshitha. V
75	207N1R0077	Jahnavi. P	P. Jahnavi
Total Number of Students		25	24
Signature of Invigilator			
Exams Incharge		S. Venkatesh R.	S. Venkatesh R.
Signature of Head of the Institution			

**III B. PHARM/ I SEM (PCI) MID EXAM  
ATTENDANCE DAIRY**

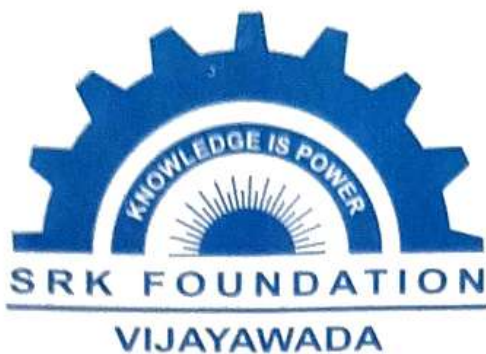
**Sub: Industrial Pharmacy-I (BP502T)**

S. No	Hall-Ticket No	STUDENT SIGNATURE	
		I MID	II MID
76	207N1R0078	SK. Farheen	SK. Farheen
77	207N1R0079	M. Hanisha.	M. Hanisha.
78	207N1R0080	Y. Hemalatha	Y. Hemalatha.
79	207N1R0081	B. Sri Nagakamya.	B. Sri Naga Ramya
80	207N1R0082	Ch. Jahnvi	Ch. Jahnvi
81	207N1R0083	G. Bindu Harshitha	G. Bindu Harshitha
82	207N1R0084	Sk. Noorjahan	Sk. Noorjahan
83	207N1R0085	V. Sivani	V. Sivani
84	207N1R0086	A. Sai Divya	A. Sai Divya
85	207N1R0087	B. Deevana.	B. Deevana.
86	207N1R0088	K. Pravallika.	K. Pravallika
87	207N1R0089	L. Rajini	L. Rajini
88	207N1R0090	D. Urmila.	D. Urmila.
89	207N1R0091	P. vijaya bhargavi	P. vijaya bhargavi
90	207N1R0092	Sk. Sharmila.	Sk. Sharmila.
91	207N1R0093	R. Sri keerthi.	R. Sri keerthi.
92	207N1R0094	G. Navyatha	G. Navyatha
93	207N1R0095	P. Tulasi	P. Tulasi
94	207N1R0096	P. Danmai	P. Danmai
95	207N1R0097	Princy. T	Princy. T
96	207N1R0099	V. Vijaya Lakshmi	V. Vijaya Lakshmi
97	207N1R00A0	Ch. Kesah Rani	Ch. Kesah Rani
98	207N1R00A1	A. C. K. Uma	A. C. K. Uma
99	207N1R00A3	T. R. Chitha Rani	T. R. Chitha Rani
100	207N1R00A4	P. Sneha Sri	P. Sneha Sri
101	207N1R00A5	K. Neha	K. Neha
102	207N1R00A6	S. Saraladevi.	S. Saraladevi.
Total Number of Students		- 27 -	27
Signature of Invigilator			
Exams Incharge		S. Venkatesh	S. Venkatesh
Signature of Head of the Institution			
103	20DR1R0054	P. S. S. Vani	P. S. S. Vani

**Model of Evaluated Mid Exam**  
**Answer Script**

SRK FOUNDATION'S  
**VIJAYA INSTITUTE OF  
PHARMACEUTICAL SCIENCES FOR WOMEN**

ENIKEPADU, VIJAYAWADA



20 - 20

**SESSIONAL BOOK**

Name : M. Prajeetha Prakash  
Class : III<sup>rd</sup> B. Pharm, A section  
Roll No. : 207N1R0001  
Subject : Industrial pharmacy-I

Internal	Objective	Subjective	Assignment	Total	Staff Sign	Student Sign
I	08	14		22	(W)	M. Prajeetha
II	02	17		19	(W)	M. Prajeetha

Final Average : 21

(W)  
Staff Sign

HOD Sign

## 1/ a preformulations:-

preformulation is testing the physical and chemical formulations of the drug with excipients is called as preformulations.

### Goals of preformulations:-

- ①. Safe, easy and efficacy of drug.
- ②. Economical use of the drug.
- ③. Stability of the drug.

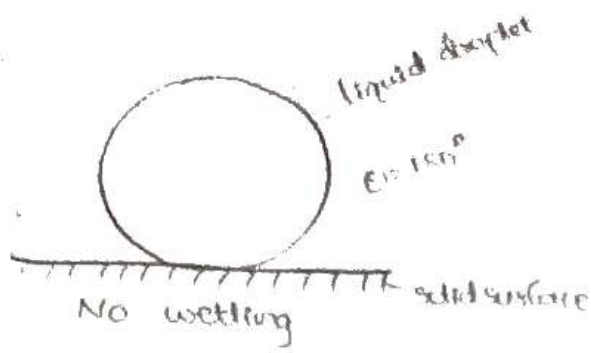
### Objectives of preformulations:-

- To identify the physical and chemical stability of a New drug.
- To identify physical properties of drug.
- To identify compatibility of drug.
- To identify stability of the drug.

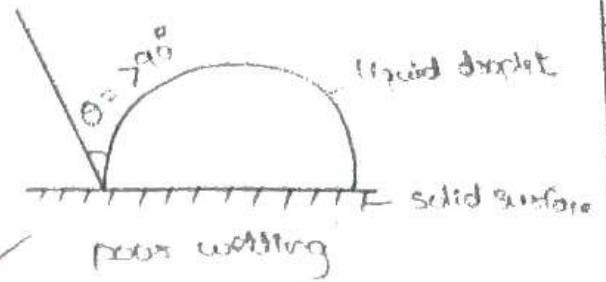
## b) wetting:-

- Wetting can be defined as the displacement of air from solid surface by a liquid and ~~(rate)~~ solid & liquid interface.
- wetting between interface of solid surface and liquid droplet is known as contact angle ( $\theta$ ).
- wetting can be occurred into 4 different angles.

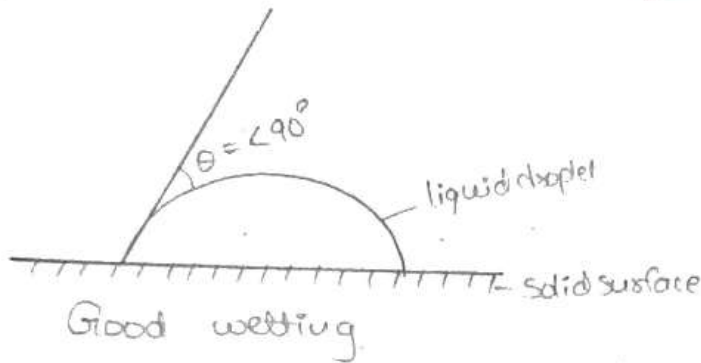
(a)



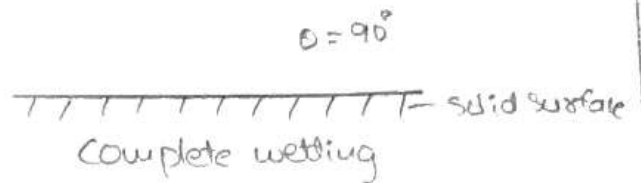
(b)



(c)



(d)



contact angle is

- when  $\theta = 180^\circ$ , it means that liquid droplet has no wetting.

- when contact angle is  $\theta > 90^\circ$ , it means the liquid droplet has poor wetting.

- when contact angle is  $\theta < 90^\circ$ , it means the liquid droplet has good wetting.

when contact angle  $\theta = 0^\circ$ , it means the liquid droplet has complete wetting.

→ wetting can explained by young's equation.

$$\Rightarrow \boxed{r_{SA} = r_{SL} + r_{LA} \cos \theta}$$



$\gamma_{SA}$  = wetting of solid surface from the air

$\gamma_{SL}$  = wetting of solid surface and liquid droplet

$\gamma_{LA}$  = wetting of liquid surface from air.

### \* Dielectric Constant :-

Dielectric Constant is the capacitance of condenser when particular condenser is placed between two plates and condenser ~~area~~ of fluid filled in fluid medium.

Some dielectric constant <sup>fluids</sup> used are

Acetone — 20.70

benzene — 2.29

chloroform — 4.80

Water — 78.50

• Dielectric Constant equation is:-

$$\Rightarrow \boxed{\epsilon = \frac{C_x}{C_0}}$$

• where Dielectric Constant is represented by ' $\epsilon$ ' Epsilon.

• where  $C_x$  = Capacitance of Condenser filled in solid medium

$C_0$  = Capacitance of Condenser filled in fluid medium.

~~Some dielectric~~

Method:-

Dielectric Constant can be determined by oscillometry.

• In this method, the required ~~plates~~ fluid filled in beaker, which dielectric constant to be measured is placed on plates where electricity is provided.

• It gives dielectric constant value to the particular fluid.

## \* Hygroscopicity:-



- Hygroscopic substance has natural tendency to absorb moisture ~~to~~ when it is exposed outside to the environment.
- Hygroscopicity occurs <sup>due to</sup> some problems like
  - Drug degradation.
  - Chemical degradation.
  - Physical degradation.
  - Change in pH causes difference in degradation of drug.
- Disintegration may cause hygroscopicity.

## ② (a) Tablets:-

- These are the pharmaceutical unit or single dosage forms for administering.
- Tablets can be prepared by moulding or compression methods.

### Advantages:-

- It can be easily available.
- These are produced in large scale.
- These are easily to handle and attractive for appearance.

- These are Variants when compared with other dosage forms.
- These are masked with sugar coating to waste the bitter taste.
- These are easy to swallow.

### Disadvantages:-

- These are difficult to administer in children below 3 years.
- These are also difficult to administer for elderly patients who has difficulty in swallowing.
- Manufacturing of tablets require series of unit operation.
- These are difficult to use for unconscious patients like in comma conditions.

### Types of Tablets:-

There are different types of tablets based on routes of administration.

- Tablets injected orally:- (~~Compressed tablet~~)
  - \*Compressed tablets\* - Eg: paracetamol with round shape
  - \* Multiple compressed tablets - paracetamol + ascorbic acid.
  - \* Sugar coated tablets - Eg: Mannitol, Sorbitol
  - \* Film coated tablets - Eg: losartan, Valsartan

\* Enteric coated tablets - Eg: Meclizine and Memantyl HCl

\* Immediate release tablets - Eg: Diltiazem, propranolol

\* Sustain release tablets - Eg: Nifedipine, Cimetidine

\* Chewable tablets - Eg: Vitamin-C, Orbit.

\* Gelatin coated tablets - Famotidine.

• Oral route :-

\* Lozenges - Eg: Strepsils which gives soothing effect for sore throat.

\* Dental cures (~~Eg: Antiseptic~~) Eg: Antiseptic or antibiotic

• Tablets administered in other routes:-

\* Vaginal Route - Eg: Chlorotrimazole

\* Rectal Route - Eg: Suppositories, trimidazole.

• Tablets used for solutions:

\* Effervescent tablets - which gives effervescence bubbles like gases.

These are ~~Eg~~ combined with API's and organic mixtures like citric acid, bicarbonate etc.

Eg: Vitamin-C

\* Dispersible - which are dissolved in water.

Eg: Aspirin, Ibuprofen

\* Hydrotomic tablets - which are water for injections or sterile water for injections.

\* (~~Hydro~~) Molting tablets - Eg: Alpr~~o~~stidine.

b) ~~Methods~~ Methods of manufacturing of tablets:-

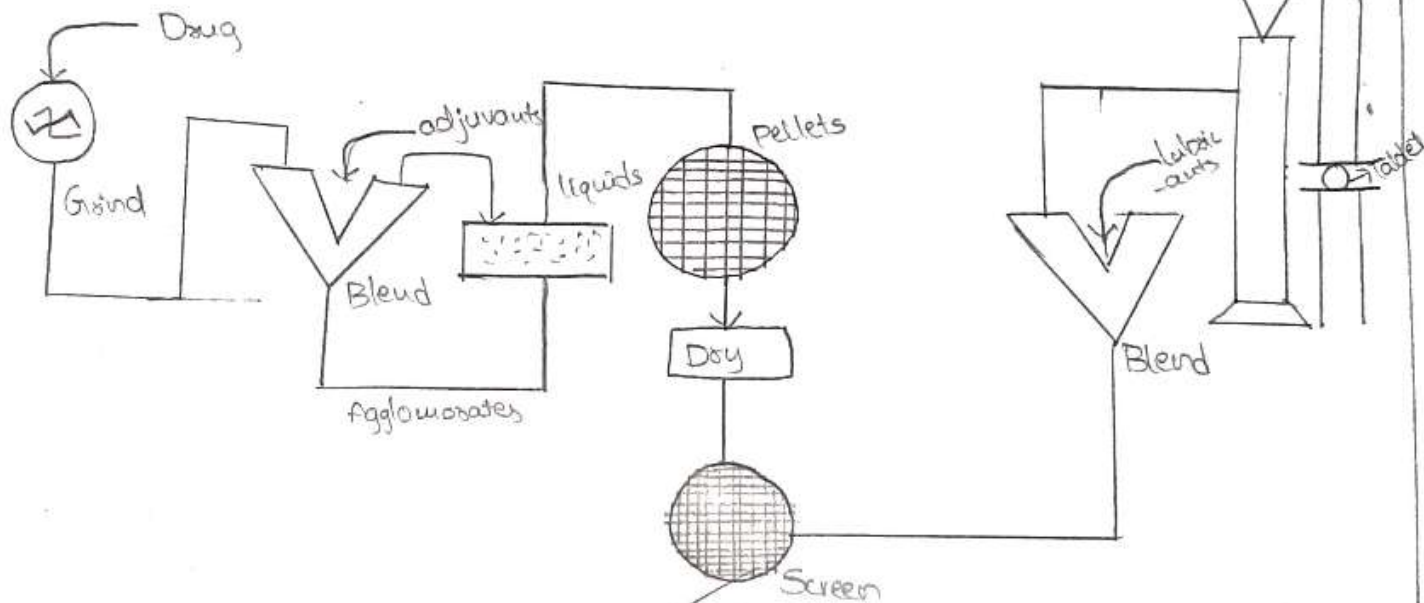
there are three methods for manufacturing:-

①. Wet granulation

②. Dry granulation

③. Direct compression.

wet granulation:-



Steps:-

①. weighing and blending:-

In this Active drug disintegrants, solvents etc. are used.

• In this starch, MCC,  $\text{CaCO}_3$  etc are used.

• starch is used to increase compatibility and stability.

• Starch, MCC, cellulose phthalate etc.. and some ingredients are added by weighing and it is blended in V cone blender.

### ②. preparing dough mass:-

Some liquid binders are added to powder particles and mixed uniformly to facilitate a dough mass or results in granulation.

### ③. Screening:-

Screening undergoes pellets or granules. Dough mass is passed through sieves. These are done by hand or using machine.

These are then spread on to filter paper to dry.

### ④. Drying:-

The material is dried by passing hot air or by tray drier. The drug is kept for drying for certain temperature.

### ⑤. Sizing of granules by Dry Screening:-

The granules are again passed through sieves for uniform screening. Size of granules depends on the size of the sieves taken.

### ⑥. Addition of lubricants or glidants:-

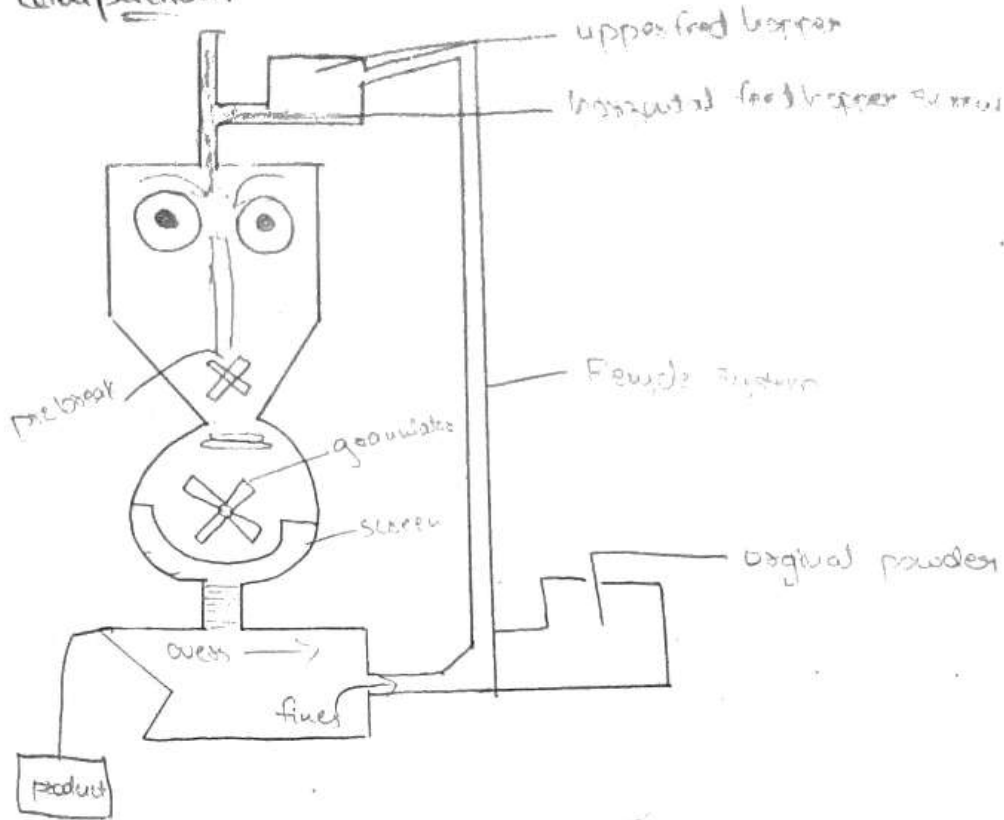
In this step, lubricants or glidants are added for good flow property.

⑦. Forming tablets by compression:

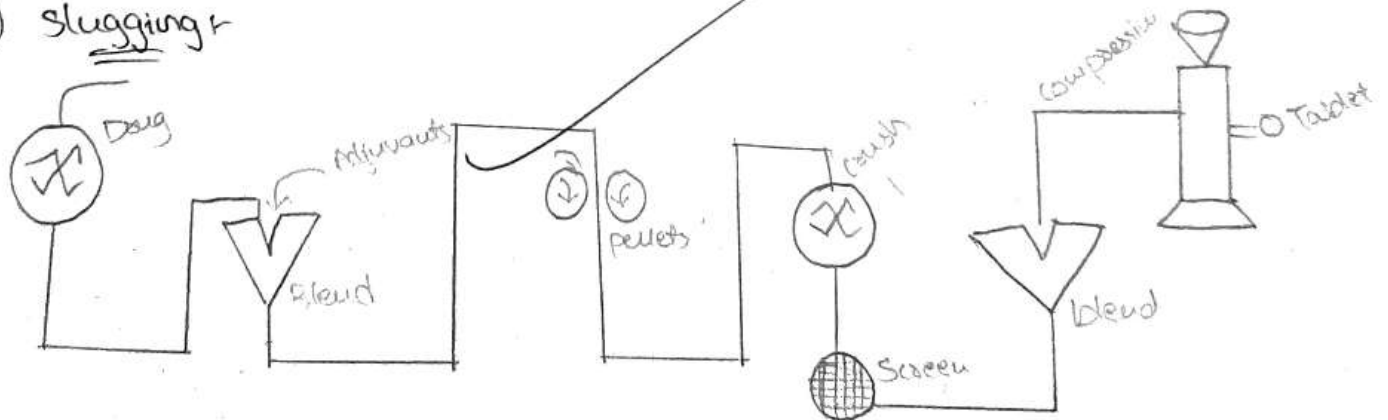
In this step, granules undergo compression where we get required quantity of tablets.

①. Dry granulations:

①. Roller compaction:

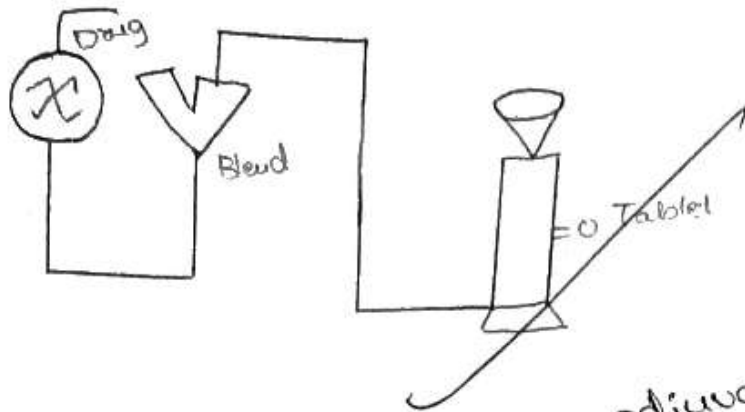


⑥. Slugging:



In this method, it is same as wet granulation, but here no lubricants are added remaining process is same as wet granulation.

### ③. Direct Compression:



In this no lubricants or adjuvants are added. Directly the drug is blended and undergoes compression.

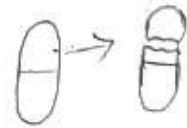
In this NaCl, KCl, NaBr can be directly compressed.

1/4

### ①. Defects during tablet Manufacturing for uncoated tablets:-

① Tablet processing problems:-

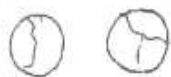
①. Capping :- Removal or Separation of tablet by top or bottom part of tablet.



②. Lamination: In this forming more than 2 layers of tablets.



③. Cracking: In this tablet can see cracks on it.



④. Weight variation: In this we can observe the difference in weight of the tablet.



## ① Hardness Variation

We can observe the variation in hardness of tablet.

## ② Excipient Related problems

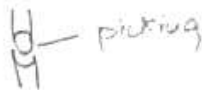
①. Chipping :- Edges of tablet is removed or broken.



②. Sticking :- In this the upper part is attached to upper punch & lower part to lower punch.



③. Picking :- In this upper part is attached to upper punch of tablet.



④. Mottling :- In this black or brown spots are observed on the tablet



③ Machine related problems :- Double impression.

→ problems in coated tablets:



①. Blistering :- causes entrapment of gases and swells on tablet.

②. Picking :- while compression upper part is separated and attached to upper punch.

③. Capping :- Separation of top and bottom part of tablet

④. Blooming :- Colour of tablet changes during on long storage.

③. Orange peel effect:-

causes rough surface which looks similar as orange.

④. Cracking :- appears cracks on tablets

⑤. colour variation:- colour will be changed on the tablet.

②. Solutions :-

These are liquid preparations where more than two solvents are mixed mutually.

Types:

①. Syrups

②. Elixirs

③. Linctus

④. Gargles / Mouthwashes.

→ Syrups are liquid form solutions by adding sugar substances.

→ Elixirs are hydroalcoholic liquid dosage forms.

→ Linctus are used to clear throat infections.

→ Mouthwashes (gargles) are used to clean oral cavity or infections and to keep hygienic (and) oral cavity.



Duration: 10 min

Marks: 10M

1. Dissolution of drug particle is described by  
a) Noyes-Whitney equation b) Stokes equation c) Drags equation d) None (a) ✓
2. The first and most commonly used diluent in tablet formulation is  
a) Dextrose b) Lactose c) Micro crystalline cellulose d) Starch (b) ✓
3. Which of the following is a water soluble lubricant  
a) Steric acid b) Mineral Oil c) Poly ethylene glycol d) Magnesium stearate (c) ✓
4. Which of the following is not a commercially available starch product  
a) Sta-Rx1500 b) Celutab c) Emdex d) Sugar tab (d) ✓
5. Aerosil is a  
a) Glidant b) Lubricant c) Anti adherant d) None (c) ✓
6. Which of the following is used as opacifier  
a) Titanium dioxide b) Magnesium dioxide c) Silicates d) All the above (d) ✓
7. Empty capsule has moisture content in the range of  
a) 60% b) 12-15% c) 50-70% d) 30% (b) ✓
8. Example for certified red colour  
a) Caramel b) Tartarazine c) Amaranath d) Sunset (c) ✓
9. The substances added to form deflocculated suspensions  
a) *Suspendimg agent* b) *Wetting agent* c) *Electrolytes* d) *Dispersing agent* (c) ✓
10. Lozenzes tablets are intended for  
a) Slow dissolution in mouth b) Fast dissolution in stomach  
c) None d) a&b (a) ✓

Parenterals:-

In greek paraenteron means beside the intestine.

- It is defined as the route other than oral route.
- It differs from other drugs, these parenterals are directly injected into body tissue through primary human system i.e; skin and mucous membrane.

Ideal properties:-

- It should be injected <sup>carefully</sup> into body tissue (~~carefully~~) through skin.
- It should be non-irritant or non-toxic.
- It should be less toxic to the body.
- It should maintain tonicity to the body.
- It should be easily handled.

Formulation Ingredients of parenterals:-

These are different formulating ingredients for parenterals as follows:-

- ①. Solutes
- ②. Additives
- ③. Antimicrobial agents
- ④. Buffering agents.
- ⑤. Anti-oxidants.
- ⑥. Tonicity modifiers.
- ⑦. Cryoprotectants.
- ⑧. Lyoprotectants.

- ⑨. Suspending agents
- ⑩. Emulsifying agents
- ⑪. Chelating agents.
- ⑫. Co-solvents.

### Solutes:-

These are dry powders added with excipients and APIs.

The formulation of solutes ~~to~~ preparations should be handled carefully like :

- It should ~~be~~ <sup>have</sup> low microbial agents.
- less pyrogens.
- permissible amounts of pyrogens and endotoxins.
- Non-existence of chemical impurities.
- usage of best quality or graded chemicals.

Preventive measures should also be measured ~~to~~ while formulating solutes like :

- It should interact with cross-contamination.
- using WFI for rinsing equipments.
- using of closed systems.
- It should be stored properly to avoid the entrance of foreign particles.

Additives:- These are non-drug substances.

Additives are added to increase and maintain Drug Solubility.

### Antimicrobial agents:-

During parenteral preparations there will be a chance of entering foreign particles or micro-organisms like algae, fungus, bacteria... etc.. To avoid this, we use anti-microbial agents.

### Buffering agents:-

while preparing parenterals there will be some changes in pH of the drug and may <sup>also</sup> cause interaction with containers.

To avoid this, we use buffering agents as they maintain the pH to become neutral state.

### Anti-oxidants :-

These are used to prevent oxidation -

(i) By being oxidized (reducing agents).

Eg:- Ascorbic acid.

(ii) By blocking oxidative chain reactions.

Eg:- Esters of Ascorbic acid.

### Tonicity modifiers:-

parenteral preparations should <sup>be</sup> (maintain) isotonic with blood serum and other body fluids. While preparing parenterals there will be some changes in the isotonicity. If it exists continuously, it will become toxic. So, to avoid this we use tonicity modifiers which maintain tonicity.

### Cryoprotectants:-

These are the agents used to protect protein or lipids.

### Lyoprotectants:-

These are the agents used to protect the drug material during parenteral preparation. In this, we use freeze drying technique to avoid microbial contamination.

### Suspending agents:-

These are the agents used to prevent flocculations in the drug materials.

### Emulsifying agents:-

These are used to maintain particle globule size. In this o/w type of emulsion is used or to prevent phase separation.

### Chelating agents:-

In this particles of unwanted substances or impurities will not form complexes. So, we use chelating agents in parenteral (preparatory) formulation.

### Co-solvents:-

These are the solvents added in the formulation to maintain the solubility of drug like glycerin, methylene etc...

## \* Quality Control tests for parenterals:

These are mainly four tests:-

- ①. Leakage test.
- ②. clarity test.
- ③. pyrogen test.
- ④. sterility test.

### ① Leakage test:-

In this test, we use two methods for testing the Sealing of ampoules.

They are :-

- ① Vacuum chamber method.
- ② High frequency Spark test.

### → Vacuum chamber test: Method:

- In this ampoule is undergoes vacuum and 0.1% of Methylene blue solution is added to ampoule.
- If the colour enters into ampoule then the sealing is not proper.
- So, the ~~micro-organisms~~ may enter and causes contamination.
- Thus, if it is not sealed properly then it will pass the Quality test.



## → High frequency spark test:-

To detect the bacterial toxins we use this method. In this ~~test~~ a device is used to ampoule if any toxins are present ~~in~~ they spark light. So, it will be pass the Quality test.

## ②. Clarity test:-

In this test we can detect the glass, fibres, floaters etc.

These are ~~three~~ <sup>Four</sup> Methods to test:-

- ① Visual Method
- ② Microscopic, or Membrane filtered Method
- ③. Light obstruction Method.
- ④. Coulter Counter Method.

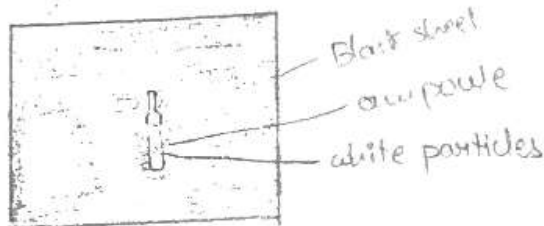
## ⊗ Visual Method:-

we can ~~at~~ two different ways to detect the particles in ampoule.

### ①. Black chart / sheet:-

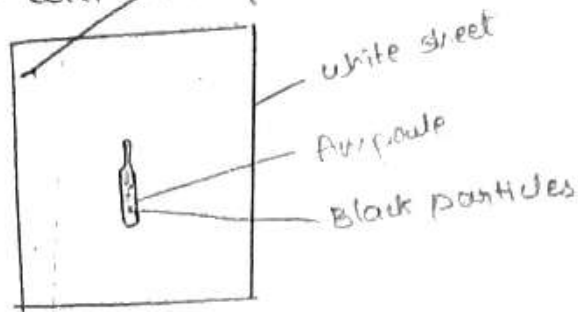
In this, ampoule is placed in front of black sheet under source of light. ~~If~~ particles of white coloured are observed

• If it is more than the limit it will not pass the test.  
If it is in limited count of white particles it will ~~pass~~ the quality test.



### ② White sheet :-

In this, ampoule is placed in front of white sheet and observe black coloured particles. If they are in limited count it will ~~the~~ pass the test.

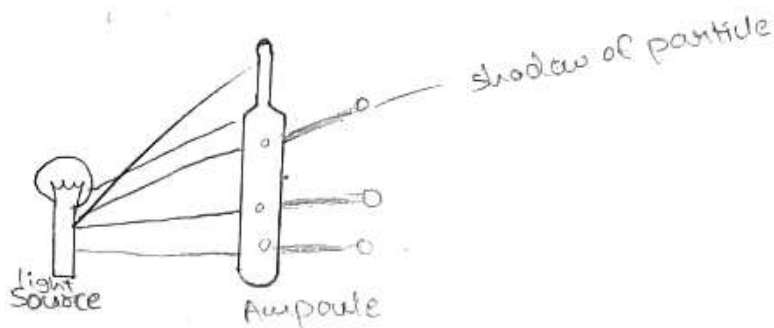


### \* Microscopic method :-

In this, we detect the count of particle size by using microscope with 100x magnification lens and observe under microscope and count the particle sizes.

### \* Light obstruction Method :-

In this, source of light is passed through the ampoule and the shadow of particles are seen and we can count the particles.



### \* Coulter Counter Method :-

In this, we detect particle size. Two electrodes are used and solution is drawn from orifice and electric resistance is produced. particle size below 0.1 um can be determined.

### ③ pyrogen test

In this, we use Rabbit Method and LAL test.

#### Rabbit Method:

- Good healthy Rabbit is selected.
- Drug is injected through ear.
- Thermometer is incorporated through rectal route.
- observe the temperature for each time interval.
- If temperature is normal then it will pass the test.
- If temperature rises, use 3 more rabbits and repeat the process.
- check all the Rabbits if it shows more than 3 Rabbits with more temp then pyrogens are present. So it will pass the quality test.

#### LAL Test (Limulus amoebocyte lysate)

we detect bacterial toxins in this test.

- Take 0.1 ml sample with LAL reagent.
- Incubate for 1 hour at 37° Celsius.
- If LAL is positive then endotoxins are present.

### ④ sterility test

In this, Membrane filtration Method is used.

- Take cellulose nitrate tissue and rinse it properly.
- cut it into two equal half.
- Keep each one half in two culture medium and incubate it.
- observe the growth of micro-organisms in the tissue.

(b) Sunscreen products

These are the Creams used when the deleterious effect of Sun rays falls on skin. There are two effects like Sun-burn and Suntan. These refer to sunscreen products.

Antiburn are used when skin is exposed to sun rays and burns.

Sun  
Anti-burn

preparation:

In this Anti-Sun burn agents are added along with suitable vehicles, Mineral oil is also added, Mix it ~~with~~ continuous stirring. Add perfumes at the end.

Ingredients	Qty for 100mg
Anti-burn agents	9g
Mineral oil	28g
water	9.5
perfume	9.5

Evaluation test:

① Spectrophotometric test:

In this ~~sunscreen~~ products are passed under UV rays with UV spectrophotometer and detect the particles in the products.

## ②. Sun Screen Index test:-

In this we detect Screening activity. The extinction concentration of 308 nm wavelength is compared with standard values.

## ③. In vivo skin test:-

we use Rabbit abdomen part of backside and apply the product and observe for few days. To test the sensitivity we use this method.

## ④. Exothermal test:-

To detect the effectiveness of the product. In this Exothermal radiations are passed to the product and observe the  $\phi$  SunScreen product.

(1)

## ② Types of Glass containers:-

- This are used for Injectable materials.
- Mainly two glass contains are used: borosilicate and soda-lime glass.

Containers	Hydrolytic Resistance	uses
Type-I or borosilicate glass	Highly resistant	used for ampoules & vials for buffer and non buffered solutions.
Type-II or soda lime (surface)	Highly resistant	used for aqueous preparations and dry powders.
Type-III or soda lime glass	Moderately resistant	used for non-aqueous and dry powders.
Type-IV or NP (Non-parenteral)	low hydrolytic resistance	Not used for parenteral packing but in packing of oral soln, suspensions etc are used.

Small volume parenterals	Large volume parenterals
<ul style="list-style-type: none"> <li>• Volume — 100ml or less</li> <li>• Dose — Single / multiple</li> <li>• Route — IM, IV, Subcutaneous</li> <li>• Preservatives are used</li> <li>• Formulations — Suspensions, solutions, emulsions</li> <li>• Isotonicity — Not essential</li> <li>• Pyrogenicity — Not essential</li> </ul> <p>used for therapeutic &amp; diagnostic purpose</p>	<ul style="list-style-type: none"> <li>• 101 - 1000 ml</li> <li>• Single dose</li> <li>• IV route</li> <li>• Preservatives are not used.</li> <li>• Solutions, o/w type emulsion</li> <li>• Isotonicity is essential</li> <li>• Pyrogenicity is essential</li> </ul> <p>used for detoxification and during surgery.</p>

### 3. Materials used for packaging of pharmaceuticals:

Packing is an art, science and technology used for distribution and storage of the products.

These are three methods:-

#### ① Primary packing:-

In this, we use Blister packing and strips for packing the products and stored properly.

#### ②. Secondary packing:-

After primary packing we consider Secondary packing. In this we use cardboard and box for packing the products like Cartons and label the boxes.

### ③. Tertiary packings:-

In this, we use containers to pack bulk products. These products are sold to retail sellers. Also, these products will not be sold directly to the customer.

Materials	Uses
Glass	Metric Medical strips, Ampoules, vials.
card board	Ampoules, vials, infusion product.
strips	used for packing primary products.
paper	Ampoules, vials

Duration: 10 min

Marks: 10M

1. Viscosity enhancer in ophthalmic preparation  
a) Poly vinyl alcohol    b) Povidone    c) Dextran    d) Macrogol    (c) ✓
2. Thiomersol belongs to which category of preservative  
a) Acidic    b) Mercurial    c) Neutral    d) Quaternary ammonium compounds    (d) ✓
3. Method used for liquid filling  
a) Gravimetric    b) Volumetric    c) Constant level method    d) All the above    (d) ✓
4. Generally pastes contain  
a) High percentage of insoluble solids    b) Low percentage of insoluble solids    c) Both    d) None    (c) ✓
5. Most widely used hydrocarbon in semisolid dosage forms  
a) Petrolatum    b) Mineral oil    c) A and B    d) None    (a) ✓
6. Which of the following is used as fatty acid used in water removable creams as emulsifier  
a) Palmitic acid    b) Stearic acid    c) Citric acid    d) All the above    (b) ✓
7. Which of the following test is performed on whole container  
a) Powder glass    b) Water attack    c) Chipping glass    d) All    (d) ✓
8. Which of the following is a synthetic anti adhesive  
a) PVP    b) MC    c) HPMC    d) Sunset HPC    (c) ✓
9. Foam stability is measured by  
a) IR Spectroscopy    b) UV Spectroscopy    c) Rotational viscometers    d) All    (d) ✓
10. Soda ash is also known as  
a) Sand    b) Sodium carbonate    c) Lime stone    d) Calcium carbonate.    (c) ✓



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

# Industrial Pharmacy I - (AP5021)

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S.No	Name of the student	Register No	I <sup>st</sup> MID			II <sup>nd</sup> MID			Final	
			CM	SM	Total	CM	SM	Total	Total	Final
1	M. Rajendra Prakash	207NIR0001	10	11	21	10	9	19	13	13
2	Kolluru. Jothita	207NIR0002	10	6	16	8	3	11	11	11
3	Gummadi. Leelja Grace	207NIR0004	10	11	21	10	11	21	14	14
4	Paratha. Lekha Sree	207NIR0005	10	10	20	10	10	20	12	13
5	V. N. Jay Elizabeth Ranj	207NIR0006	10	13	23	10	11	21	14	17
6	T. Lakshmi Sravanj	207NIR0007	10	11	21	10	10	20	14	13
7	G. kavya	207NIR0008	10	13	23	10	10	20	14	14
8	K. Sreelaxmi Lakshmi	207NIR0009	10	13	23	10	11	21	15	14
9	C. Manasa	207NIR0010	10	12	22	10	9	19	13	13
10	A. Charan	207NIR0011	10	14	24	10	11	21	14	13
11	Singipogu. Smita	207NIR0012	10	14	24	10	11	21	13	12
12	S. Jyethena Bhavanj	207NIR0013	10	10	20	10	10	20	13	12
13	Kalapala. Haritha Sri	207NIR0014	10	13	23	10	0	10	15	14
14	Dudekula. Peshma	207NIR0015	10	13	23	10	12	22	15	13
15	V. Dilip kumar	207NIR0016	10	13	23	10	13	23	15	14
16	P. Naga kanku Durga	207NIR0017	10	12	22	10	9	19	14	13
17	Tammu. Raja Rajeswarj	207NIR0018	10	13	23	10	11	21	14	13
18	K. N. Sravan Lakshmi durga	207NIR0019	10	13	23	10	13	23	14	15
19	Kolluru. Sireeta	207NIR0020	10	13	23	10	10	20	14	13
20	Gorre. Bindu	207NIR0021	10	12	22	10	8	18	14	13

S.No	Name of the student	Register No.	I. MID			II. MID			Practicals		Remarks
			CM	SM	Total	CM	SM	Total	Total	Final	
21	Jellapalli. Varundhara	2029NIR0022	10	12	22	10	11	21	15	14	
22	K. Bhavani Tulasi	2029NIR0023	10	13	23	10	10	20	14	13	
23	Masanam. Bhavana	2029NIR0024	10	12	22	10	12	22	15	13	
24	R. Indumathi	2029NIR0025	10	13	23	10	11	21	15	14	
25	K. Abhinaya Puspa	2029NIR0026	10	10	20	10	9	19	14	13	
26	Dudekula. Amrta	2029NIR0027	10	12	22	10	11	21	14	13	
27	B. Gnana Preethika	2029NIR0028	10	8	18	10	11	21	12	13	
28	Polumusi. Kalyani	2029NIR0029	10	13	23	10	12	22	14	14	
29	Chunduru. Deepika	2029NIR0030	10	12	22	10	8	18	13	13	

30	P. Sravani	2029NIR0031	10	13	23	10	11	21	15	13	
31	Gargula. Priyanka	2029NIR0032	10	13	23	10	11	21	14	14	
32	Atmakuri. Nandini	2029NIR0033	10	11	21	10	11	21	13	13	
33	Mekala. Gunasri	2029NIR0034	10	12	22	10	12	22	15	14	
34	J. Prugu. Preethi	2029NIR0035	10	0	10	10	0	10	5	5	
35	MD. Fathima Zehra	2029NIR0036	10	13	23	10	10	20	14	13	
36	L. Anusha	2029NIR0037	10	13	23	10	11	21	14	13	
37	B. Harshini	2029NIR0038	10	13	23	10	11	21	14	13	
38	C. Devi Priya	2029NIR0039	10	0	10	10	9	19	5	13	
39	Kadiyala. Sri Padma	2029NIR0040	10	13	23	10	14	24	14	13	
40	P. Naveena	2029NIR0041	10	9	19	10	9	19	14	14	

SNO	Name of the student	Register No.	I MID			II MID			Practical		Remarks
			cm	sm	Total	cm	sm	Total	Theoretical	Practical	
41	P. Varshitha Naga Sri	2029NIR0042	10	0	10	10	7	17	5	11	
42	Masimukha kalyani	2029NIR0043	10	13	23	10	10	20	14	10	
43	Majj. Sujata	2029NIR0044	10	12	22	10	11	21	14	14	
44	G. Samsudhi	2029NIR0045	10	12	22	10	11	21	13	13	
45	Bala Hasika Rathan	2029NIR0046	10	13	23	10	12	22	15	14	
46	Budala Swathi	2029NIR0047	10	12	22	10	11	21	14	14	
47	P. Namsajtha	2029NIR0048	10	10	20	10	10	20	14	13	
48	Bonda Keesthara	2029NIR0049	10	12	22	10	10	20	14	13	
49	Kotapati. Kshiti	2029NIR0050	10	12	22	10	9	19	14	13	
50	B. Vijaya Sudha	2029NIR0051	10	10	20	10	9	17	13	13	
51	V. Sai Sri Saranya	2029NIR0052	10	9	19	10	9	19	13	11	
52	V. Sarkeesthara	2029NIR0053	10	12	22	10	10	20	14	13	
53	R. Bijayadarshini	2029NIR0054	10	13	23	10	12	22	14	14	
54	P. Estheru Rani	2029NIR0055	10	13	23	10	12	22	14	13	
55	Gampa. Sravantho	2029NIR0056	10	12	22	10	11	21	13	5	
56	Dekka. Kavya Sri	2029NIR0057	10	11	21	10	10	20	13	13	
57	B. Sri Kishna Sravya	2029NIR0058	10	13	23	10	10	20	14	14	
58	Jada. Bhavya Sri	2029NIR0059	10	12	22	10	10	20	13	13	
59	Ch. Raja Rajeswari Devi	2029NIR0060	10	12	22	10	11	21	12	14	
60	Balaboyina. Hemalatha	2029NIR0061	10	13	23	10	10	20	13	13	

S.No	Name of the student	Register No	T.M.T			T.M.T			Practical		Remarks
			cm	sm	Total	cm	cm	Total	Final	Final	
61	K. Basanna	207NIR0062	10	12	22	10	0	10	12	13	
62	Shak. Lalsia Thousin	207NIR0063	10	13	23	10	9	19	13	14	
63	Munnangi. Jasmine	207NIR0064	10	13	23	10	10	20	12	13	
64	Shak. Sabiha Taslim	207NIR0065	10	12	22	10	10	20	13	13	
65	Daga. Bhargavi	207NIR0066	10	12	22	10	10	20	14	14	
66	K. Venkata Yamini	207NIR0067	10	11	21	10	9	19	13	13	
67	Regula. Pujitha	207NIR0068	10	12	22	10	10	20	13	13	
68	Samatham. Sumalatha	207NIR0069	10	13	23	10	11	21	14	14	
69	Jasipalli. Anudeepika	207NIR0070	10	11	21	10	9	19	13	13	
70	Katta. Anupriya	207NIR0071	10	11	21	10	9	19	12	12	
71	Koduri. Chandana Bai	207NIR0072	10	13	23	10	9	19	14	14	
72	Surakara. Sumavashini	207NIR0073	10	5	15	10	7	17	11	12	
73	Bobbili. Rani	207NIR0074	10	12	22	10	11	21	13	14	
74	V. Harshitha	207NIR0075	10	13	23	10	10	20	14	13	
75	Pdipseth. Jahnavi	207NIR0077	10	11	21	10	6	16	13	13	
76	Bhai K. Farheen	207NIR0078	10	13	23	10	10	20	14	13	
77	Mandapaka. Hanisha	207NIR0079	10	7	17	10	6	16	12	12	
78	V. Hemalatha	207NIR0080	10	11	21	10	10	20	13	13	
79	B. Sri Naga Ranaya	207NIR0081	10	12	22	10	12	22	14	13	
80	Ch. Lakshmi Akhila Jahnavi	207NIR0082	10	11	21	10	13	23	14	13	

S.No	Name of the Student	Register No.	I MID			II MID			Practical		Remarks
			cm	sm	Total	cm	sm	Total	Mid	Final	
81	G. Bindu Harshitha	207NIR0083	10	13	23	10	10	20	13	13	
82	Shak. Noorjahan	207NIR0084	10	13	23	10	10	20	14	12	
83	Vallabhaneni. Divani	207NIR0085	10	13	23	10	12	22	14	13	
84	Akuntul. Sai Divya	207NIR0086	10	12	22	10	10	20	15	12	
85	Batta. Deewana	207NIR0087	10	9	19	10	9	19	5	13	
86	K. Geetha Praveelika	207NIR0088	10	11	21	10	12	22	14	14	
87	Lanka. Rajini	207NIR0089	10	11	21	10	10	20	14	13	
88	Damini. Umila	207NIR0090	10	12	22	10	9	19	14	13	
89	P. Vijaya Bhargavi	207NIR0091	10	12	22	10	10	20	13	13	

90	Shak. Shaamila	207NIR0092	10	12	22	10	10	20	13	13	
91	Raya. Sri Keerthi Reddy	207NIR0093	10	11	21	10	11	21	13	13	
92	Gopu. Nayatha	207NIR0094	10	14	24	10	12	22	14	14	
93	Pasupula. Tulasi	207NIR0095	10	13	23	10	12	22	14	13	
94	Pasakat. Tapaswini	207NIR0096	10	12	22	10	11	21	15	12	
95	Thamala. Poojy	207NIR0097	10	9	19	10	8	18	13	12	
96	V. Vijaya Lakshmi	207NIR0098	10	10	20	10	9	19	13	12	
97	C. Kesava Rani	207NIR0099	10	11	21	10	10	20	13	13	
98	A. Ch. K. Gani Uma Maheswari	207NIR00A1	10	11	21	10	11	21	14	13	
99	T. Ruchitha Rani	207NIR00A3	10	10	20	10	10	20	13	13	
100	Parlee. Sneha Sri	207NIR00A4	10	12	22	10	11	21	15	13	

S.No	Name of the Student	Register no.	T.M.D			U.M.D			Practical	Remarks
			M	SM	Total	cm	em	Total		
101	Kambhampati, Neha	2021NIR00A5	10	12	22	10	11	21	13	12
102	Rudrasanam, Sravani	2021NIR00A6	10	11	21	10	10	20	13	12
103	P. Sri Satya Varf	2021NIR00A4	10	7	17	10	6	16	13	12

Entered By: G. Krupa Mai  
Ch. Keerthi

S. Srinivas  
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PHARMACEUTICAL SCIENCES FOR WOMEN  
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ENIKEPADU, VIJAYAWADA - 521-103

**Mid exam marks uploaded to  
JNTUK University online portal**





# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

FINAL PDF for Internal marks III B.Pharmacy I Semester  
College: VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN:7N

Date:09-03-2023

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0001	BP501T	10	12	10	8	20	T
207N1R0003	BP501T	8	8	9	3	14	T
207N1R0004	BP501T	9	13	9	4	18	T
207N1R0005	BP501T	8	7	7	2	12	T
207N1R0006	BP501T	9	12	9	11	21	T
207N1R0007	BP501T	9	9	8	4	15	T
207N1R0008	BP501T	9	13	9	12	22	T
207N1R0009	BP501T	9	5	9	4	14	T
207N1R0010	BP501T	8	5	8	7	14	T
207N1R0011	BP501T	9	7	9	6	16	T
207N1R0012	BP501T	9	10	9	7	18	T
207N1R0013	BP501T	9	10	9	7	18	T
207N1R0014	BP501T	10	11	10	12	22	T
207N1R0015	BP501T	10	11	9	5	18	T
207N1R0016	BP501T	10	14	10	13	24	T
207N1R0017	BP501T	9	10	9	10	19	T
207N1R0018	BP501T	10	12	10	12	22	T
207N1R0019	BP501T	10	13	10	7	20	T
207N1R0020	BP501T	10	9	10	9	19	T
207N1R0021	BP501T	9	7	7	4	14	T
207N1R0022	BP501T	10	10	10	10	20	T
207N1R0023	BP501T	9	8	9	8	17	T
207N1R0024	BP501T	9	9	10	7	18	T
207N1R0025	BP501T	10	11	10	7	19	T
207N1R0026	BP501T	9	9	9	5	16	T
207N1R0027	BP501T	10	13	10	13	23	T
207N1R0028	BP501T	9	6	9	4	14	T
207N1R0029	BP501T	10	14	10	13	24	T
207N1R0030	BP501T	10	12	9	6	19	T
207N1R0031	BP501T	10	13	9	10	21	T
207N1R0032	BP501T	10	14	10	11	23	T
207N1R0033	BP501T	10	12	9	10	21	T
207N1R0034	BP501T	10	15	10	14	25	T
207N1R0035	BP501T	10	0	10	0	10	T
207N1R0036	BP501T	9	7	9	5	15	T
207N1R0037	BP501T	10	13	10	10	22	T
207N1R0038	BP501T	10	13	10	8	21	T
207N1R0039	BP501T	9	0	9	7	13	T
207N1R0040	BP501T	10	13	10	10	22	T
207N1R0041	BP501T	10	12	10	8	20	T
207N1R0042	BP501T	10	0	10	4	12	T
207N1R0043	BP501T	10	14	10	14	24	T

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0044	BP501T	10	12	10	10	21	T
207N1R0045	BP501T	10	15	10	12	24	T
207N1R0046	BP501T	10	14	10	10	22	T
207N1R0047	BP501T	10	12	10	8	20	T
207N1R0048	BP501T	10	12	10	9	21	T
207N1R0049	BP501T	10	10	10	10	20	T
207N1R0050	BP501T	9	9	9	3	15	T
207N1R0051	BP501T	10	12	10	6	19	T
207N1R0052	BP501T	9	5	10	5	15	T
207N1R0053	BP501T	10	11	10	6	19	T
207N1R0054	BP501T	10	13	10	10	22	T
207N1R0055	BP501T	9	12	10	12	22	T
207N1R0056	BP501T	10	14	10	11	23	T
207N1R0057	BP501T	9	10	9	6	17	T
207N1R0058	BP501T	10	13	10	10	22	T
207N1R0059	BP501T	10	15	10	13	24	T
207N1R0060	BP501T	9	13	10	12	22	T
207N1R0061	BP501T	9	10	10	7	18	T
207N1R0062	BP501T	10	9	9	0	14	T
207N1R0063	BP501T	10	11	10	6	19	T
207N1R0064	BP501T	10	7	10	11	19	T
207N1R0065	BP501T	10	7	10	12	20	T
207N1R0066	BP501T	10	12	10	11	22	T
207N1R0067	BP501T	10	8	10	10	19	T
207N1R0068	BP501T	10	13	10	12	23	T
207N1R0069	BP501T	10	13	10	10	22	T
207N1R0070	BP501T	9	7	10	4	15	T
207N1R0071	BP501T	9	10	10	9	19	T
207N1R0072	BP501T	10	13	10	12	23	T
207N1R0073	BP501T	8	4	9	4	13	T
207N1R0074	BP501T	10	11	10	12	22	T
207N1R0076	BP501T	10	0	10	9	15	T
207N1R0077	BP501T	10	10	10	6	18	T
207N1R0078	BP501T	10	9	10	4	17	T
207N1R0079	BP501T	10	9	9	3	16	T
207N1R0080	BP501T	10	10	10	9	20	T
207N1R0081	BP501T	10	9	10	12	21	T
207N1R0082	BP501T	10	11	10	8	20	T
207N1R0083	BP501T	10	14	10	10	22	T
207N1R0084	BP501T	10	13	10	12	23	T
207N1R0085	BP501T	10	15	10	13	24	T
207N1R0086	BP501T	9	12	10	11	21	T
207N1R0087	BP501T	8	10	10	9	19	T
207N1R0088	BP501T	10	12	10	9	21	T
207N1R0089	BP501T	9	10	10	10	20	T
207N1R0090	BP501T	10	12	10	11	22	T
207N1R0091	BP501T	10	14	10	10	22	T
207N1R0092	BP501T	10	14	10	8	21	T
207N1R0093	BP501T	9	11	10	10	20	T
207N1R0094	BP501T	10	14	10	14	24	T

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0095	BP501T	9	11	10	9	20	T
207N1R0096	BP501T	10	10	10	12	21	T
207N1R0097	BP501T	8	5	9	3	13	T
207N1R0099	BP501T	8	7	10	7	16	T
207N1R00A0	BP501T	10	11	10	8	20	T
207N1R00A1	BP501T	10	14	10	11	23	T
207N1R00A3	BP501T	10	11	10	5	18	T
207N1R00A4	BP501T	9	11	10	10	20	T
207N1R00A5	BP501T	10	15	10	14	25	T
207N1R00A6	BP501T	10	11	10	12	22	T
20DR1R0054	BP501T	9	6	10	7	16	T
207N1R0001	BP502T	10	11	10	9	20	T
207N1R0003	BP502T	10	6	8	3	14	T
207N1R0004	BP502T	10	11	10	11	21	T
207N1R0005	BP502T	10	10	10	10	20	T
207N1R0006	BP502T	10	13	10	11	22	T
207N1R0007	BP502T	10	11	10	10	21	T
207N1R0008	BP502T	10	13	10	10	22	T
207N1R0009	BP502T	10	13	10	11	22	T
207N1R0010	BP502T	10	12	10	9	21	T
207N1R0011	BP502T	10	14	10	11	23	T
207N1R0012	BP502T	10	14	10	11	23	T
207N1R0013	BP502T	10	10	10	10	20	T
207N1R0014	BP502T	10	13	10	0	17	T
207N1R0015	BP502T	10	13	10	12	23	T
207N1R0016	BP502T	10	13	10	13	23	T
207N1R0017	BP502T	10	12	10	9	21	T
207N1R0018	BP502T	10	13	10	11	22	T
207N1R0019	BP502T	10	13	10	13	23	T
207N1R0020	BP502T	10	13	10	10	22	T
207N1R0021	BP502T	10	12	10	8	20	T
207N1R0022	BP502T	10	12	10	11	22	T
207N1R0023	BP502T	10	13	10	10	22	T
207N1R0024	BP502T	10	12	10	12	22	T
207N1R0025	BP502T	10	13	10	11	22	T
207N1R0026	BP502T	10	10	10	9	20	T
207N1R0027	BP502T	10	12	10	11	22	T
207N1R0028	BP502T	10	8	10	11	20	T
207N1R0029	BP502T	10	13	10	12	23	T
207N1R0030	BP502T	10	12	10	8	20	T
207N1R0031	BP502T	10	13	10	11	22	T
207N1R0032	BP502T	10	13	10	11	22	T
207N1R0033	BP502T	10	11	10	11	21	T
207N1R0034	BP502T	10	12	10	12	22	T
207N1R0035	BP502T	10	0	10	0	10	T
207N1R0036	BP502T	10	13	10	10	22	T
207N1R0037	BP502T	10	13	10	11	22	T
207N1R0038	BP502T	10	13	10	11	22	T
207N1R0039	BP502T	10	0	10	9	15	T
207N1R0040	BP502T	10	13	10	14	24	T

<b>HTNO</b>	<b>SUBJECT</b>	<b>CM1</b>	<b>SE1</b>	<b>CM2</b>	<b>SE2</b>	<b>Total</b>	<b>SUB_TYPE</b>
207N1R0041	BP502T	10	9	10	9	19	T
207N1R0042	BP502T	10	0	10	7	14	T
207N1R0043	BP502T	10	13	10	10	22	T
207N1R0044	BP502T	10	12	10	11	22	T
207N1R0045	BP502T	10	12	10	11	22	T
207N1R0046	BP502T	10	13	10	12	23	T
207N1R0047	BP502T	10	12	10	11	22	T
207N1R0048	BP502T	10	10	10	10	20	T
207N1R0049	BP502T	10	12	10	10	21	T
207N1R0050	BP502T	10	12	10	9	21	T
207N1R0051	BP502T	10	10	10	9	20	T
207N1R0052	BP502T	10	9	10	9	19	T
207N1R0053	BP502T	10	12	10	10	21	T
207N1R0054	BP502T	10	13	10	12	23	T
207N1R0055	BP502T	10	13	10	12	23	T
207N1R0056	BP502T	10	12	10	11	22	T
207N1R0057	BP502T	10	11	10	10	21	T
207N1R0058	BP502T	10	13	10	10	22	T
207N1R0059	BP502T	10	12	10	10	21	T
207N1R0060	BP502T	10	13	10	11	22	T
207N1R0061	BP502T	10	13	10	10	22	T
207N1R0062	BP502T	10	12	10	0	16	T
207N1R0063	BP502T	10	13	10	9	21	T
207N1R0064	BP502T	10	13	10	10	22	T
207N1R0065	BP502T	10	12	10	10	21	T
207N1R0066	BP502T	10	12	10	10	21	T
207N1R0067	BP502T	10	11	10	9	20	T
207N1R0068	BP502T	10	12	10	10	21	T
207N1R0069	BP502T	10	13	10	11	22	T
207N1R0070	BP502T	10	11	10	9	20	T
207N1R0071	BP502T	10	11	10	9	20	T
207N1R0072	BP502T	10	13	10	9	21	T
207N1R0073	BP502T	10	5	10	7	16	T
207N1R0074	BP502T	10	12	10	11	22	T
207N1R0076	BP502T	10	13	10	10	22	T
207N1R0077	BP502T	10	11	10	6	19	T
207N1R0078	BP502T	10	13	10	10	22	T
207N1R0079	BP502T	10	7	10	6	17	T
207N1R0080	BP502T	10	11	10	10	21	T
207N1R0081	BP502T	10	12	10	12	22	T
207N1R0082	BP502T	10	11	10	13	22	T
207N1R0083	BP502T	10	13	10	10	22	T
207N1R0084	BP502T	10	13	10	10	22	T
207N1R0085	BP502T	10	13	10	13	23	T
207N1R0086	BP502T	10	12	10	10	21	T
207N1R0087	BP502T	10	9	10	9	19	T
207N1R0088	BP502T	10	11	10	12	22	T
207N1R0089	BP502T	10	11	10	10	21	T
207N1R0090	BP502T	10	12	10	9	21	T
207N1R0091	BP502T	10	12	10	10	21	T

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0092	BP502T	10	12	10	10	21	T
207N1R0093	BP502T	10	11	10	11	21	T
207N1R0094	BP502T	10	14	10	12	23	T
207N1R0095	BP502T	10	13	10	12	23	T
207N1R0096	BP502T	10	12	10	11	22	T
207N1R0097	BP502T	10	9	10	8	19	T
207N1R0099	BP502T	10	10	10	9	20	T
207N1R00A0	BP502T	10	11	10	10	21	T
207N1R00A1	BP502T	10	11	10	11	21	T
207N1R00A3	BP502T	10	10	10	10	20	T
207N1R00A4	BP502T	10	12	10	11	22	T
207N1R00A5	BP502T	10	12	10	11	22	T
207N1R00A6	BP502T	10	11	10	10	21	T
20DR1R0054	BP502T	10	7	10	6	17	T
207N1R0001	BP503T	10	8	10	11	20	T
207N1R0003	BP503T	10	7	10	7	17	T
207N1R0004	BP503T	10	11	10	11	21	T
207N1R0005	BP503T	10	4	10	8	16	T
207N1R0006	BP503T	10	8	10	12	20	T
207N1R0007	BP503T	10	7	10	9	18	T
207N1R0008	BP503T	10	10	10	12	21	T
207N1R0009	BP503T	10	8	10	12	20	T
207N1R0010	BP503T	10	4	10	10	17	T
207N1R0011	BP503T	10	8	10	10	19	T
207N1R0012	BP503T	10	10	10	12	21	T
207N1R0013	BP503T	10	8	10	11	20	T
207N1R0014	BP503T	10	11	10	13	22	T
207N1R0015	BP503T	10	9	10	12	21	T
207N1R0016	BP503T	10	11	10	13	22	T
207N1R0017	BP503T	10	8	10	11	20	T
207N1R0018	BP503T	10	9	10	11	20	T
207N1R0019	BP503T	10	8	10	12	20	T
207N1R0020	BP503T	10	7	10	10	19	T
207N1R0021	BP503T	10	3	10	10	17	T
207N1R0022	BP503T	10	9	10	11	20	T
207N1R0023	BP503T	10	7	10	9	18	T
207N1R0024	BP503T	10	6	10	11	19	T
207N1R0025	BP503T	10	9	10	11	20	T
207N1R0026	BP503T	10	8	10	8	18	T
207N1R0027	BP503T	10	9	10	12	21	T
207N1R0028	BP503T	10	4	10	9	17	T
207N1R0029	BP503T	10	11	10	10	21	T
207N1R0030	BP503T	10	7	10	7	17	T
207N1R0031	BP503T	10	9	10	11	20	T
207N1R0032	BP503T	10	10	10	9	20	T
207N1R0033	BP503T	10	10	10	10	20	T
207N1R0034	BP503T	10	10	10	12	21	T
207N1R0035	BP503T	10	0	10	0	10	T
207N1R0036	BP503T	10	9	10	7	18	T
207N1R0037	BP503T	10	9	10	11	20	T

<b>HTNO</b>	<b>SUBJECT</b>	<b>CM1</b>	<b>SE1</b>	<b>CM2</b>	<b>SE2</b>	<b>Total</b>	<b>SUB_TYPE</b>
207N1R0038	BP503T	10	9	10	10	20	T
207N1R0039	BP503T	10	0	10	9	15	T
207N1R0040	BP503T	10	12	10	12	22	T
207N1R0041	BP503T	10	10	10	13	22	T
207N1R0042	BP503T	10	0	10	9	15	T
207N1R0043	BP503T	10	12	10	14	23	T
207N1R0044	BP503T	10	9	10	11	20	T
207N1R0045	BP503T	10	9	10	10	20	T
207N1R0046	BP503T	10	11	10	13	22	T
207N1R0047	BP503T	10	7	10	9	18	T
207N1R0048	BP503T	10	9	10	10	20	T
207N1R0049	BP503T	10	9	10	11	20	T
207N1R0050	BP503T	10	7	10	9	18	T
207N1R0051	BP503T	10	5	10	8	17	T
207N1R0052	BP503T	10	6	10	9	18	T
207N1R0053	BP503T	10	8	10	11	20	T
207N1R0054	BP503T	10	10	10	11	21	T
207N1R0055	BP503T	10	11	10	12	22	T
207N1R0056	BP503T	10	9	10	11	20	T
207N1R0057	BP503T	10	6	10	10	18	T
207N1R0058	BP503T	10	11	10	12	22	T
207N1R0059	BP503T	10	9	10	11	20	T
207N1R0060	BP503T	10	10	10	13	22	T
207N1R0061	BP503T	10	6	10	11	19	T
207N1R0062	BP503T	10	9	10	0	15	T
207N1R0063	BP503T	10	10	10	12	21	T
207N1R0064	BP503T	10	7	10	9	18	T
207N1R0065	BP503T	10	9	10	10	20	T
207N1R0066	BP503T	10	10	10	13	22	T
207N1R0067	BP503T	10	5	10	10	18	T
207N1R0068	BP503T	10	10	10	12	21	T
207N1R0069	BP503T	10	8	10	10	19	T
207N1R0070	BP503T	10	3	10	6	15	T
207N1R0071	BP503T	10	7	10	9	18	T
207N1R0072	BP503T	10	10	10	11	21	T
207N1R0073	BP503T	10	2	10	4	13	T
207N1R0074	BP503T	10	10	10	10	20	T
207N1R0076	BP503T	10	8	10	8	18	T
207N1R0077	BP503T	10	4	10	7	16	T
207N1R0078	BP503T	10	4	10	9	17	T
207N1R0079	BP503T	10	4	10	3	14	T
207N1R0080	BP503T	10	6	10	9	18	T
207N1R0081	BP503T	10	8	10	12	20	T
207N1R0082	BP503T	10	5	10	11	18	T
207N1R0083	BP503T	10	11	10	10	21	T
207N1R0084	BP503T	10	11	10	10	21	T
207N1R0085	BP503T	10	13	10	12	23	T
207N1R0086	BP503T	10	7	10	12	20	T
207N1R0087	BP503T	10	5	10	10	18	T
207N1R0088	BP503T	10	9	10	8	19	T

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0089	BP503T	10	5	10	9	17	T
207N1R0090	BP503T	10	10	10	10	20	T
207N1R0091	BP503T	10	10	10	12	21	T
207N1R0092	BP503T	10	10	10	11	21	T
207N1R0093	BP503T	10	4	10	9	17	T
207N1R0094	BP503T	10	12	10	14	23	T
207N1R0095	BP503T	10	9	10	11	20	T
207N1R0096	BP503T	10	8	10	11	20	T
207N1R0097	BP503T	10	4	10	4	14	T
207N1R0099	BP503T	10	7	10	7	17	T
207N1R00A0	BP503T	10	5	10	9	17	T
207N1R00A1	BP503T	10	9	10	10	20	T
207N1R00A3	BP503T	10	3	10	8	16	T
207N1R00A4	BP503T	10	9	10	11	20	T
207N1R00A5	BP503T	10	8	10	10	19	T
207N1R00A6	BP503T	10	9	10	11	20	T
20DR1R0054	BP503T	10	3	10	9	16	T
207N1R0001	BP504T	10	12	10	14	23	T
207N1R0003	BP504T	10	7	10	9	18	T
207N1R0004	BP504T	10	10	10	13	22	T
207N1R0005	BP504T	10	0	10	10	15	T
207N1R0006	BP504T	10	11	10	11	21	T
207N1R0007	BP504T	10	10	10	10	20	T
207N1R0008	BP504T	10	13	10	12	23	T
207N1R0009	BP504T	10	11	10	12	22	T
207N1R0010	BP504T	10	10	10	9	20	T
207N1R0011	BP504T	10	11	10	13	22	T
207N1R0012	BP504T	10	12	10	12	22	T
207N1R0013	BP504T	10	11	10	12	22	T
207N1R0014	BP504T	10	13	10	13	23	T
207N1R0015	BP504T	10	12	10	13	23	T
207N1R0016	BP504T	10	14	10	13	24	T
207N1R0017	BP504T	10	13	10	10	22	T
207N1R0018	BP504T	10	14	10	14	24	T
207N1R0019	BP504T	10	13	10	13	23	T
207N1R0020	BP504T	10	12	10	11	22	T
207N1R0021	BP504T	10	8	10	10	19	T
207N1R0022	BP504T	10	10	10	12	21	T
207N1R0023	BP504T	10	12	10	12	22	T
207N1R0024	BP504T	10	11	10	12	22	T
207N1R0025	BP504T	10	12	10	13	23	T
207N1R0026	BP504T	10	9	10	12	21	T
207N1R0027	BP504T	10	14	10	12	23	T
207N1R0028	BP504T	10	7	10	10	19	T
207N1R0029	BP504T	10	12	10	13	23	T
207N1R0030	BP504T	10	10	10	10	20	T
207N1R0031	BP504T	10	12	10	12	22	T
207N1R0032	BP504T	10	11	10	12	22	T
207N1R0033	BP504T	10	13	10	12	23	T
207N1R0034	BP504T	10	14	10	13	24	T

<b>HTNO</b>	<b>SUBJECT</b>	<b>CM1</b>	<b>SE1</b>	<b>CM2</b>	<b>SE2</b>	<b>Total</b>	<b>SUB_TYPE</b>
207N1R0035	BP504T	10	0	10	0	10	T
207N1R0036	BP504T	10	11	10	12	22	T
207N1R0037	BP504T	10	12	10	11	22	T
207N1R0038	BP504T	10	13	10	13	23	T
207N1R0039	BP504T	10	0	10	11	16	T
207N1R0040	BP504T	10	13	10	13	23	T
207N1R0041	BP504T	10	14	10	13	24	T
207N1R0042	BP504T	10	0	10	9	15	T
207N1R0043	BP504T	10	12	10	12	22	T
207N1R0044	BP504T	10	13	10	12	23	T
207N1R0045	BP504T	10	13	10	12	23	T
207N1R0046	BP504T	10	14	10	13	24	T
207N1R0047	BP504T	10	11	10	13	22	T
207N1R0048	BP504T	10	12	10	11	22	T
207N1R0049	BP504T	10	11	10	12	22	T
207N1R0050	BP504T	10	11	10	11	21	T
207N1R0051	BP504T	10	11	10	9	20	T
207N1R0052	BP504T	10	4	10	11	18	T
207N1R0053	BP504T	10	12	10	10	21	T
207N1R0054	BP504T	10	14	10	13	24	T
207N1R0055	BP504T	10	13	10	14	24	T
207N1R0056	BP504T	10	13	10	11	22	T
207N1R0057	BP504T	10	10	10	11	21	T
207N1R0058	BP504T	10	12	10	11	22	T
207N1R0059	BP504T	10	13	10	12	23	T
207N1R0060	BP504T	10	10	10	11	21	T
207N1R0061	BP504T	10	10	10	12	21	T
207N1R0062	BP504T	10	10	10	10	20	T
207N1R0063	BP504T	10	13	10	10	22	T
207N1R0064	BP504T	10	11	10	12	22	T
207N1R0065	BP504T	10	13	10	12	23	T
207N1R0066	BP504T	10	11	10	12	22	T
207N1R0067	BP504T	10	11	10	10	21	T
207N1R0068	BP504T	10	14	10	13	24	T
207N1R0069	BP504T	10	13	10	11	22	T
207N1R0070	BP504T	10	12	10	8	20	T
207N1R0071	BP504T	10	13	10	9	21	T
207N1R0072	BP504T	10	13	10	14	24	T
207N1R0073	BP504T	10	6	10	9	18	T
207N1R0074	BP504T	10	14	10	11	23	T
207N1R0076	BP504T	10	14	10	6	20	T
207N1R0077	BP504T	10	11	10	12	22	T
207N1R0078	BP504T	10	10	10	9	20	T
207N1R0079	BP504T	10	8	10	8	18	T
207N1R0080	BP504T	10	12	10	10	21	T
207N1R0081	BP504T	10	11	10	12	22	T
207N1R0082	BP504T	10	11	10	11	21	T
207N1R0083	BP504T	10	12	10	12	22	T
207N1R0084	BP504T	10	13	10	13	23	T
207N1R0085	BP504T	10	13	10	13	23	T



HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0086	BP504T	10	14	10	14	24	T
207N1R0087	BP504T	10	13	10	11	22	T
207N1R0088	BP504T	10	12	10	13	23	T
207N1R0089	BP504T	10	9	10	13	21	T
207N1R0090	BP504T	10	12	10	12	22	T
207N1R0091	BP504T	10	13	10	13	23	T
207N1R0092	BP504T	10	13	10	12	23	T
207N1R0093	BP504T	10	7	10	12	20	T
207N1R0094	BP504T	10	11	10	14	23	T
207N1R0095	BP504T	10	13	10	9	21	T
207N1R0096	BP504T	10	12	10	12	22	T
207N1R0097	BP504T	10	10	10	10	20	T
207N1R0099	BP504T	10	13	10	12	23	T
207N1R00A0	BP504T	10	12	10	11	22	T
207N1R00A1	BP504T	10	13	10	13	23	T
207N1R00A3	BP504T	10	10	10	12	21	T
207N1R00A4	BP504T	10	13	10	13	23	T
207N1R00A5	BP504T	10	12	10	13	23	T
207N1R00A6	BP504T	10	12	10	12	22	T
20DR1R0054	BP504T	10	5	10	10	18	T
207N1R0001	BP505T	10	10	10	13	22	T
207N1R0003	BP505T	7	2	9	4	11	T
207N1R0004	BP505T	10	11	10	10	21	T
207N1R0005	BP505T	9	4	9	5	14	T
207N1R0006	BP505T	6	7	8	9	15	T
207N1R0007	BP505T	10	6	10	4	15	T
207N1R0008	BP505T	9	5	10	12	18	T
207N1R0009	BP505T	7	3	10	8	14	T
207N1R0010	BP505T	10	5	10	7	16	T
207N1R0011	BP505T	9	7	10	12	19	T
207N1R0012	BP505T	8	10	10	12	20	T
207N1R0013	BP505T	6	11	8	8	17	T
207N1R0014	BP505T	10	13	10	12	23	T
207N1R0015	BP505T	10	6	10	10	18	T
207N1R0016	BP505T	10	14	10	13	24	T
207N1R0017	BP505T	9	9	10	10	19	T
207N1R0018	BP505T	10	7	10	11	19	T
207N1R0019	BP505T	10	14	10	12	23	T
207N1R0020	BP505T	10	11	10	11	21	T
207N1R0021	BP505T	8	3	9	4	12	T
207N1R0022	BP505T	10	13	10	6	20	T
207N1R0023	BP505T	10	5	10	5	15	T
207N1R0024	BP505T	10	9	10	9	19	T
207N1R0025	BP505T	10	11	10	10	21	T
207N1R0026	BP505T	10	5	10	7	16	T
207N1R0027	BP505T	9	9	10	11	20	T
207N1R0028	BP505T	8	5	10	7	15	T
207N1R0029	BP505T	10	10	10	12	21	T
207N1R0030	BP505T	9	12	10	9	20	T
207N1R0031	BP505T	8	12	10	12	21	T

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0032	BP505T	10	12	10	11	22	T
207N1R0033	BP505T	9	9	10	14	21	T
207N1R0034	BP505T	10	14	10	15	25	T
207N1R0035	BP505T	10	0	10	0	10	T
207N1R0036	BP505T	10	4	10	6	15	T
207N1R0037	BP505T	10	9	10	9	19	T
207N1R0038	BP505T	8	10	10	13	21	T
207N1R0039	BP505T	4	0	8	5	9	T
207N1R0040	BP505T	10	15	10	14	25	T
207N1R0041	BP505T	10	8	10	3	16	T
207N1R0042	BP505T	10	0	9	4	12	T
207N1R0043	BP505T	10	12	10	13	23	T
207N1R0044	BP505T	10	11	10	11	21	T
207N1R0045	BP505T	8	10	10	13	21	T
207N1R0046	BP505T	10	10	10	13	22	T
207N1R0047	BP505T	10	13	10	13	23	T
207N1R0048	BP505T	10	10	10	9	20	T
207N1R0049	BP505T	10	7	10	11	19	T
207N1R0050	BP505T	10	8	10	7	18	T
207N1R0051	BP505T	9	5	10	8	16	T
207N1R0052	BP505T	10	4	10	5	15	T
207N1R0053	BP505T	10	4	10	6	15	T
207N1R0054	BP505T	9	7	10	13	20	T
207N1R0055	BP505T	9	12	10	12	22	T
207N1R0056	BP505T	8	9	10	12	20	T
207N1R0057	BP505T	8	6	10	8	16	T
207N1R0058	BP505T	10	10	10	10	20	T
207N1R0059	BP505T	9	8	10	10	19	T
207N1R0060	BP505T	10	13	10	12	23	T
207N1R0061	BP505T	8	3	10	7	14	T
207N1R0062	BP505T	8	4	10	4	13	T
207N1R0063	BP505T	9	11	10	10	20	T
207N1R0064	BP505T	9	6	10	10	18	T
207N1R0065	BP505T	9	7	10	9	18	T
207N1R0066	BP505T	10	6	10	10	18	T
207N1R0067	BP505T	10	9	10	10	20	T
207N1R0068	BP505T	10	8	10	11	20	T
207N1R0069	BP505T	10	7	10	9	18	T
207N1R0070	BP505T	9	4	10	5	14	T
207N1R0071	BP505T	9	8	10	5	16	T
207N1R0072	BP505T	9	11	10	12	21	T
207N1R0073	BP505T	7	3	8	1	10	T
207N1R0074	BP505T	10	10	10	6	18	T
207N1R0076	BP505T	9	7	9	4	15	T
207N1R0077	BP505T	9	6	10	4	15	T
207N1R0078	BP505T	9	5	10	4	14	T
207N1R0079	BP505T	7	3	9	5	12	T
207N1R0080	BP505T	8	5	10	6	15	T
207N1R0081	BP505T	7	9	10	13	20	T
207N1R0082	BP505T	10	8	10	12	20	T

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0083	BP505T	7	8	10	9	17	T
207N1R0084	BP505T	8	10	10	12	20	T
207N1R0085	BP505T	9	9	10	8	18	T
207N1R0086	BP505T	7	11	10	13	21	T
207N1R0087	BP505T	7	8	10	7	16	T
207N1R0088	BP505T	9	6	10	11	18	T
207N1R0089	BP505T	10	8	10	7	18	T
207N1R0090	BP505T	9	8	10	6	17	T
207N1R0091	BP505T	10	7	10	5	16	T
207N1R0092	BP505T	9	4	10	4	14	T
207N1R0093	BP505T	10	9	10	6	18	T
207N1R0094	BP505T	10	14	10	13	24	T
207N1R0095	BP505T	8	10	10	13	21	T
207N1R0096	BP505T	10	11	10	9	20	T
207N1R0097	BP505T	6	4	8	7	13	T
207N1R0099	BP505T	10	5	10	5	15	T
207N1R00A0	BP505T	10	6	10	4	15	T
207N1R00A1	BP505T	10	9	10	10	20	T
207N1R00A3	BP505T	8	4	8	4	12	T
207N1R00A4	BP505T	10	9	10	12	21	T
207N1R00A5	BP505T	7	8	10	7	16	T
207N1R00A6	BP505T	7	5	10	10	16	T
20DR1R0054	BP505T	10	7	10	8	18	T
207N1R0001	BP506P	5	8	5	8	13	L
207N1R0003	BP506P	5	6	5	6	11	L
207N1R0004	BP506P	5	9	5	9	14	L
207N1R0005	BP506P	5	7	5	8	13	L
207N1R0006	BP506P	5	9	5	8	14	L
207N1R0007	BP506P	5	9	5	8	14	L
207N1R0008	BP506P	5	9	5	9	14	L
207N1R0009	BP506P	5	10	5	9	15	L
207N1R0010	BP506P	5	8	5	8	13	L
207N1R0011	BP506P	5	9	5	8	14	L
207N1R0012	BP506P	5	8	5	7	13	L
207N1R0013	BP506P	5	8	5	7	13	L
207N1R0014	BP506P	5	10	5	9	15	L
207N1R0015	BP506P	5	10	5	8	14	L
207N1R0016	BP506P	5	10	5	9	15	L
207N1R0017	BP506P	5	9	5	8	14	L
207N1R0018	BP506P	5	9	5	8	14	L
207N1R0019	BP506P	5	9	5	8	14	L
207N1R0020	BP506P	5	9	5	8	14	L
207N1R0021	BP506P	5	9	5	8	14	L
207N1R0022	BP506P	5	10	5	9	15	L
207N1R0023	BP506P	5	9	5	8	14	L
207N1R0024	BP506P	5	10	5	8	14	L
207N1R0025	BP506P	5	10	5	9	15	L
207N1R0026	BP506P	5	9	5	8	14	L
207N1R0027	BP506P	5	9	5	8	14	L
207N1R0028	BP506P	5	7	5	8	13	L

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0029	BP506P	5	9	5	9	14	L
207N1R0030	BP506P	5	8	5	8	13	L
207N1R0031	BP506P	5	10	5	8	14	L
207N1R0032	BP506P	5	9	5	9	14	L
207N1R0033	BP506P	5	8	5	8	13	L
207N1R0034	BP506P	5	10	5	9	15	L
207N1R0035	BP506P	5	0	5	0	5	L
207N1R0036	BP506P	5	9	5	8	14	L
207N1R0037	BP506P	5	9	5	8	14	L
207N1R0038	BP506P	5	9	5	8	14	L
207N1R0039	BP506P	5	0	5	8	9	L
207N1R0040	BP506P	5	9	5	8	14	L
207N1R0041	BP506P	5	9	5	9	14	L
207N1R0042	BP506P	5	0	5	6	8	L
207N1R0043	BP506P	5	9	5	5	12	L
207N1R0044	BP506P	5	9	5	9	14	L
207N1R0045	BP506P	5	8	5	8	13	L
207N1R0046	BP506P	5	10	5	9	15	L
207N1R0047	BP506P	5	9	5	9	14	L
207N1R0048	BP506P	5	9	5	8	14	L
207N1R0049	BP506P	5	9	5	8	14	L
207N1R0050	BP506P	5	9	5	8	14	L
207N1R0051	BP506P	5	8	5	8	13	L
207N1R0052	BP506P	5	8	5	6	12	L
207N1R0053	BP506P	5	9	5	8	14	L
207N1R0054	BP506P	5	9	5	9	14	L
207N1R0055	BP506P	5	9	5	8	14	L
207N1R0056	BP506P	5	8	5	0	9	L
207N1R0057	BP506P	5	8	5	8	13	L
207N1R0058	BP506P	5	9	5	9	14	L
207N1R0059	BP506P	5	8	5	8	13	L
207N1R0060	BP506P	5	8	5	9	14	L
207N1R0061	BP506P	5	8	5	8	13	L
207N1R0062	BP506P	5	7	5	8	13	L
207N1R0063	BP506P	5	8	5	9	14	L
207N1R0064	BP506P	5	7	5	8	13	L
207N1R0065	BP506P	5	8	5	8	13	L
207N1R0066	BP506P	5	9	5	9	14	L
207N1R0067	BP506P	5	8	5	8	13	L
207N1R0068	BP506P	5	8	5	8	13	L
207N1R0069	BP506P	5	9	5	7	13	L
207N1R0070	BP506P	5	8	5	8	13	L
207N1R0071	BP506P	5	7	5	7	12	L
207N1R0072	BP506P	5	9	5	9	14	L
207N1R0073	BP506P	5	6	5	7	12	L
207N1R0074	BP506P	5	8	5	9	14	L
207N1R0076	BP506P	5	9	5	8	14	L
207N1R0077	BP506P	5	8	5	8	13	L
207N1R0078	BP506P	5	9	5	8	14	L
207N1R0079	BP506P	5	7	5	7	12	L

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0080	BP506P	5	8	5	8	13	L
207N1R0081	BP506P	5	9	5	8	14	L
207N1R0082	BP506P	5	9	5	8	14	L
207N1R0083	BP506P	5	8	5	8	13	L
207N1R0084	BP506P	5	9	5	7	13	L
207N1R0085	BP506P	5	9	5	8	14	L
207N1R0086	BP506P	5	10	5	7	14	L
207N1R0087	BP506P	5	0	5	8	9	L
207N1R0088	BP506P	5	9	5	9	14	L
207N1R0089	BP506P	5	9	5	8	14	L
207N1R0090	BP506P	5	9	5	8	14	L
207N1R0091	BP506P	5	8	5	8	13	L
207N1R0092	BP506P	5	8	5	8	13	L
207N1R0093	BP506P	5	8	5	8	13	L
207N1R0094	BP506P	5	9	5	9	14	L
207N1R0095	BP506P	5	9	5	8	14	L
207N1R0096	BP506P	5	10	5	7	14	L
207N1R0097	BP506P	5	8	5	7	13	L
207N1R0099	BP506P	5	8	5	7	13	L
207N1R00A0	BP506P	5	8	5	8	13	L
207N1R00A1	BP506P	5	9	5	8	14	L
207N1R00A3	BP506P	5	8	5	8	13	L
207N1R00A4	BP506P	5	10	5	8	14	L
207N1R00A5	BP506P	5	8	5	7	13	L
207N1R00A6	BP506P	5	8	5	7	13	L
20DR1R0054	BP506P	5	8	5	7	13	L
207N1R0001	BP507P	5	7	5	8	13	L
207N1R0003	BP507P	5	5	5	6	11	L
207N1R0004	BP507P	5	8	5	7	13	L
207N1R0005	BP507P	5	5	5	6	11	L
207N1R0006	BP507P	5	8	5	8	13	L
207N1R0007	BP507P	5	7	5	8	13	L
207N1R0008	BP507P	5	8	5	6	12	L
207N1R0009	BP507P	5	8	5	7	13	L
207N1R0010	BP507P	5	6	5	6	11	L
207N1R0011	BP507P	5	7	5	5	11	L
207N1R0012	BP507P	5	7	5	7	12	L
207N1R0013	BP507P	5	7	5	7	12	L
207N1R0014	BP507P	5	8	5	8	13	L
207N1R0015	BP507P	5	6	5	7	12	L
207N1R0016	BP507P	5	7	5	9	13	L
207N1R0017	BP507P	5	6	5	7	12	L
207N1R0018	BP507P	5	6	5	7	12	L
207N1R0019	BP507P	5	6	5	7	12	L
207N1R0020	BP507P	5	7	5	8	13	L
207N1R0021	BP507P	5	6	5	7	12	L
207N1R0022	BP507P	5	9	5	7	13	L
207N1R0023	BP507P	5	7	5	7	12	L
207N1R0024	BP507P	5	8	5	8	13	L
207N1R0025	BP507P	5	8	5	8	13	L

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0026	BP507P	5	9	5	8	14	L
207N1R0027	BP507P	5	8	5	8	13	L
207N1R0028	BP507P	5	6	5	6	11	L
207N1R0029	BP507P	5	8	5	8	13	L
207N1R0030	BP507P	5	8	5	8	13	L
207N1R0031	BP507P	5	8	5	7	13	L
207N1R0032	BP507P	5	6	5	7	12	L
207N1R0033	BP507P	5	7	5	8	13	L
207N1R0034	BP507P	5	8	5	8	13	L
207N1R0035	BP507P	5	0	5	0	5	L
207N1R0036	BP507P	5	7	5	6	12	L
207N1R0037	BP507P	5	7	5	6	12	L
207N1R0038	BP507P	5	7	5	7	12	L
207N1R0039	BP507P	5	0	5	7	9	L
207N1R0040	BP507P	5	8	5	9	14	L
207N1R0041	BP507P	5	7	5	6	12	L
207N1R0042	BP507P	5	0	5	8	9	L
207N1R0043	BP507P	5	8	5	7	13	L
207N1R0044	BP507P	5	8	5	8	13	L
207N1R0045	BP507P	5	7	5	6	12	L
207N1R0046	BP507P	5	9	5	8	14	L
207N1R0047	BP507P	5	8	5	7	13	L
207N1R0048	BP507P	5	8	5	7	13	L
207N1R0049	BP507P	5	6	5	8	12	L
207N1R0050	BP507P	5	6	5	8	12	L
207N1R0051	BP507P	5	6	5	8	12	L
207N1R0052	BP507P	5	7	5	6	12	L
207N1R0053	BP507P	5	8	5	9	14	L
207N1R0054	BP507P	5	9	5	9	14	L
207N1R0055	BP507P	5	8	5	8	13	L
207N1R0056	BP507P	5	8	5	8	13	L
207N1R0057	BP507P	5	7	5	7	12	L
207N1R0058	BP507P	5	8	5	8	13	L
207N1R0059	BP507P	5	6	5	8	12	L
207N1R0060	BP507P	5	5	5	9	12	L
207N1R0061	BP507P	5	6	5	8	12	L
207N1R0062	BP507P	5	7	5	0	9	L
207N1R0063	BP507P	5	7	5	7	12	L
207N1R0064	BP507P	5	7	5	8	13	L
207N1R0065	BP507P	5	7	5	8	13	L
207N1R0066	BP507P	5	7	5	9	13	L
207N1R0067	BP507P	5	7	5	8	13	L
207N1R0068	BP507P	5	6	5	8	12	L
207N1R0069	BP507P	5	8	5	8	13	L
207N1R0070	BP507P	5	6	5	8	12	L
207N1R0071	BP507P	5	6	5	8	12	L
207N1R0072	BP507P	5	8	5	8	13	L
207N1R0073	BP507P	5	5	5	8	12	L
207N1R0074	BP507P	5	7	5	8	13	L
207N1R0076	BP507P	5	7	5	9	13	L

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0077	BP507P	5	6	5	8	12	L
207N1R0078	BP507P	5	6	5	8	12	L
207N1R0079	BP507P	5	5	5	8	12	L
207N1R0080	BP507P	5	6	5	8	12	L
207N1R0081	BP507P	5	8	5	8	13	L
207N1R0082	BP507P	5	7	5	8	13	L
207N1R0083	BP507P	5	7	5	8	13	L
207N1R0084	BP507P	5	8	5	8	13	L
207N1R0085	BP507P	5	8	5	8	13	L
207N1R0086	BP507P	5	6	5	8	12	L
207N1R0087	BP507P	5	7	5	7	12	L
207N1R0088	BP507P	5	7	5	7	12	L
207N1R0089	BP507P	5	7	5	8	13	L
207N1R0090	BP507P	5	7	5	7	12	L
207N1R0091	BP507P	5	6	5	7	12	L
207N1R0092	BP507P	5	6	5	8	12	L
207N1R0093	BP507P	5	7	5	8	13	L
207N1R0094	BP507P	5	8	5	7	13	L
207N1R0095	BP507P	5	7	5	7	12	L
207N1R0096	BP507P	5	8	5	7	13	L
207N1R0097	BP507P	5	5	5	7	11	L
207N1R0099	BP507P	5	7	5	8	13	L
207N1R00A0	BP507P	5	7	5	8	13	L
207N1R00A1	BP507P	5	8	5	7	13	L
207N1R00A3	BP507P	5	6	5	7	12	L
207N1R00A4	BP507P	5	8	5	7	13	L
207N1R00A5	BP507P	5	8	5	8	13	L
207N1R00A6	BP507P	5	8	5	8	13	L
20DR1R0054	BP507P	5	6	5	7	12	L
207N1R0001	BP508P	5	9	5	8	14	L
207N1R0003	BP508P	5	8	5	8	13	L
207N1R0004	BP508P	5	8	5	8	13	L
207N1R0005	BP508P	5	8	5	8	13	L
207N1R0006	BP508P	5	8	5	9	14	L
207N1R0007	BP508P	5	8	5	8	13	L
207N1R0008	BP508P	5	8	5	8	13	L
207N1R0009	BP508P	5	7	5	9	13	L
207N1R0010	BP508P	5	7	5	8	13	L
207N1R0011	BP508P	5	9	5	9	14	L
207N1R0012	BP508P	5	8	5	9	14	L
207N1R0013	BP508P	5	8	5	9	14	L
207N1R0014	BP508P	5	8	5	9	14	L
207N1R0015	BP508P	5	8	5	9	14	L
207N1R0016	BP508P	5	9	5	8	14	L
207N1R0017	BP508P	5	7	5	9	13	L
207N1R0018	BP508P	5	9	5	9	14	L
207N1R0019	BP508P	5	9	5	9	14	L
207N1R0020	BP508P	5	9	5	8	14	L
207N1R0021	BP508P	5	7	5	9	13	L
207N1R0022	BP508P	5	7	5	9	13	L

HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0023	BP508P	5	7	5	8	13	L
207N1R0024	BP508P	5	7	5	9	13	L
207N1R0025	BP508P	5	7	5	8	13	L
207N1R0026	BP508P	5	7	5	8	13	L
207N1R0027	BP508P	5	7	5	8	13	L
207N1R0028	BP508P	5	8	5	9	14	L
207N1R0029	BP508P	5	8	5	8	13	L
207N1R0030	BP508P	5	9	5	9	14	L
207N1R0031	BP508P	5	8	5	9	14	L
207N1R0032	BP508P	5	8	5	9	14	L
207N1R0033	BP508P	5	8	5	9	14	L
207N1R0034	BP508P	5	9	5	10	15	L
207N1R0035	BP508P	5	0	5	0	5	L
207N1R0036	BP508P	5	8	5	9	14	L
207N1R0037	BP508P	5	8	5	8	13	L
207N1R0038	BP508P	5	9	5	8	14	L
207N1R0039	BP508P	5	0	5	9	10	L
207N1R0040	BP508P	5	8	5	9	14	L
207N1R0041	BP508P	5	8	5	9	14	L
207N1R0042	BP508P	5	0	5	10	10	L
207N1R0043	BP508P	5	9	5	10	15	L
207N1R0044	BP508P	5	8	5	9	14	L
207N1R0045	BP508P	5	8	5	9	14	L
207N1R0046	BP508P	5	9	5	8	14	L
207N1R0047	BP508P	5	9	5	8	14	L
207N1R0048	BP508P	5	9	5	9	14	L
207N1R0049	BP508P	5	9	5	8	14	L
207N1R0050	BP508P	5	8	5	8	13	L
207N1R0051	BP508P	5	8	5	8	13	L
207N1R0052	BP508P	5	7	5	8	13	L
207N1R0053	BP508P	5	7	5	8	13	L
207N1R0054	BP508P	5	8	5	9	14	L
207N1R0055	BP508P	5	7	5	8	13	L
207N1R0056	BP508P	5	7	5	9	13	L
207N1R0057	BP508P	5	7	5	7	12	L
207N1R0058	BP508P	5	7	5	9	13	L
207N1R0059	BP508P	5	8	5	9	14	L
207N1R0060	BP508P	5	8	5	8	13	L
207N1R0061	BP508P	5	7	5	8	13	L
207N1R0062	BP508P	5	8	5	0	9	L
207N1R0063	BP508P	5	8	5	8	13	L
207N1R0064	BP508P	5	7	5	8	13	L
207N1R0065	BP508P	5	7	5	8	13	L
207N1R0066	BP508P	5	7	5	8	13	L
207N1R0067	BP508P	5	7	5	8	13	L
207N1R0068	BP508P	5	8	5	9	14	L
207N1R0069	BP508P	5	8	5	8	13	L
207N1R0070	BP508P	5	8	5	8	13	L
207N1R0071	BP508P	5	8	5	8	13	L
207N1R0072	BP508P	5	8	5	8	13	L



HTNO	SUBJECT	CM1	SE1	CM2	SE2	Total	SUB_TYPE
207N1R0073	BP508P	5	6	5	8	12	L
207N1R0074	BP508P	5	0	5	8	9	L
207N1R0076	BP508P	5	8	5	8	13	L
207N1R0077	BP508P	5	8	5	8	13	L
207N1R0078	BP508P	5	7	5	8	13	L
207N1R0079	BP508P	5	8	5	8	13	L
207N1R0080	BP508P	5	7	5	8	13	L
207N1R0081	BP508P	5	7	5	8	13	L
207N1R0082	BP508P	5	9	5	8	14	L
207N1R0083	BP508P	5	8	5	8	13	L
207N1R0084	BP508P	5	9	5	9	14	L
207N1R0085	BP508P	5	8	5	9	14	L
207N1R0086	BP508P	5	8	5	9	14	L
207N1R0087	BP508P	5	8	5	9	14	L
207N1R0088	BP508P	5	7	5	8	13	L
207N1R0089	BP508P	5	8	5	8	13	L
207N1R0090	BP508P	5	9	5	8	14	L
207N1R0091	BP508P	5	9	5	8	14	L
207N1R0092	BP508P	5	8	5	8	13	L
207N1R0093	BP508P	5	8	5	8	13	L
207N1R0094	BP508P	5	9	5	9	14	L
207N1R0095	BP508P	5	9	5	8	14	L
207N1R0096	BP508P	5	8	5	9	14	L
207N1R0097	BP508P	5	7	5	8	13	L
207N1R0099	BP508P	5	9	5	8	14	L
207N1R00A0	BP508P	5	8	5	8	13	L
207N1R00A1	BP508P	5	8	5	8	13	L
207N1R00A3	BP508P	5	8	5	8	13	L
207N1R00A4	BP508P	5	8	5	9	14	L
207N1R00A5	BP508P	5	9	5	9	14	L
207N1R00A6	BP508P	5	8	5	8	13	L
20DR1R0054	BP508P	5	7	5	8	13	L

H. R. Kic

Verified by: **PRINCIPAL**

**Controller of Examinations**

Date :09-03-2023