

13/5/24



ARKA JAIN University
Jharkhand



END SEM EXAMINATION
School of Health & Allied Science

Program	Bachelor of Pharmacy	
Subject Name	Novel Drug Delivery System-Theory	Semester VII
		Year Nov/Dec 2024
Time: 3 Hour Max. Marks : 75	<ul style="list-style-type: none"> Start writing from 2nd page onwards; don't Write on the 1st Page Backside Answer all Questions of Section A (Compulsory) Answer Any Two out of Three of Section B Answer Any Seven out of Nine of Section C Possession of Mobile Phones or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will Result in the <u>Cancellation of the Papers.</u> 	
Knowledge Level (KL)	K1 : Remembering	K5 : Evaluating
	K2 : Understanding	K3 : Applying K4 : Analysing K6 : Creating

Section A (Each question Carry 01 Mark from Q1-i to xx) - 20 Marks					
Q.N	QUESTIONS	Marks	COs	KL	PO
i	Which amongst this is a physicochemical factor of the drug that should be considered while formulating a controlled drug delivery system? a) Diffusivity b) Half-life c) Side effects d) Absorption	1	CO1	K2, K1	PO1
ii	Which factor affects drug release rate in controlled release formulations? a) Drug solubility b) Particle size c) Polymer composition d) All of the above	1	CO1	K1	PO9
iii	What is the advantage of using biodegradable polymers in microencapsulation? a) Increased stability b) Prolonged shelf life c) Reduced toxicity d) Enhanced taste	1	CO2 CO6	K4, K2	PO2
iv	A non-ionic surfactant based multilamellar or unilamellar vesicular structure a) Microspheres b) Liposome c) Niosome d) Nanoparticles	1	CO4	K4	PO2
v	Which of the following does not constitute an appendageal route? a) Sweat Glands b) Hair Follicles c) Sebaceous Glands d) Stratum corneum	1	CO3	K2, K5	PO9
vi	The biological factor influencing the design and act of controlled release product is a) Partition coefficient b) Absorption	1	CO1	K1, K4	PO2

vii	c) Molecular size Polymers are used in various drug delivery systems d) Solubility	1	CO6	K1, K3	PO2
viii	a) Modify Pharmacokinetic Profile b) Modify Pharmacodynamics Profile c) For Drug Targeting d) All of the above	1	CO2	K1	PO1
ix	Advantages of mucosal drug delivery system include a) Excellent accessibility b) Painless administration c) Prolongation of residence time d) All the above	1	CO2	K1	PO1
x	Removal of which type of implant are necessary after completion of therapy a) Biodegradable implant b) Both a) and c) c) Non-biodegradable implant d) None	1	CO2	K1	PO1
xi	In microencapsulation, Wurster process is used in a) Coacervation phase separation b) Air suspension c) Multi orifice centrifugal process d) polymerization	1	CO2	K1, K2	PO1
xii	The approach used in Transdermal drug delivery system is a) Sonophoresis b) Electrophoresis c) Both a and b d) None	1	CO3	K1, K2	PO2
xiii	Intranasal administration is an attractive route for _____ action a) local b) Systemic c) None d) Both	1	CO3	K1, K2	PO9
xiv	Components of transdermal drug delivery system is/ are a) Drug substance b) Polymer matrix c) Backing membrane d) All of the above	1	CO2	K4, K6	PO1
xv	Most of the drugs get absorbed through the skin by the following mechanism a) Active transport b) Passive transport c) Facilitated transport d) Osmosis	1	CO3	K1, K4	PO1
xvi	Normal pH of the nasal secretion in adult is a) 5.5-6.5 b) 3.5-4.5 c) 6.5-7.5 d) 2.5-3.5	1	CO2	K1, K2	PO2
xvii	Ideal characteristics of targeted drug delivery system	1	CO4	K2, K3	PO2

xviii	a) Nontoxic and biodegradable b) Biocompatible and physicochemical stable c) Predictable and controllable rate of drug release d) All of the above	1	CO4	K2, K3	PO2
xviii	Major components of niosomes preparation a) Cholesterol b) non-ionic surfactants c) both a & b d) ionic surfactants	1	CO4	K2, K3	PO2
xix	The main goal in designing nanoparticles as a delivery system a) To control size and surface characteristics of particle b) To achieve the site-specific action of the drug c) Both a) and b) d) None of the above	1	CO5	K1, K3	PO1
xx	Hormonal IUD contain a) levonorgestron b) Progesterone c) Estrogen d) All of the above	1	CO5	K4, K6	PO1
Section B (Answer any TWO out of THREE) - 20 Marks (Each question Carry 10 Marks)					
Q. No	QUESTIONS	Marks	COs	KL	PO
2	Define controlled release drug delivery system Explain the physicochemical and biological properties of drugs of CRDDS.	10	CO1	K1, K2, K4	PO1
3	A 60-year-old male patient with hypertension has difficulty adhering to an oral medication regimen. His physician recommends switching to a transdermal patch for controlled release of the antihypertensive drug clonidine. 1. What are the benefits of using a transdermal patch over oral medications for this patient? 2. Explain the mechanism of drug absorption through the skin in transdermal delivery systems. 3. How do you enhance the permeability of TDS. Explain it briefly.	10	CO3	K4, K5, K6	PO9

CO- Course Outcomes,

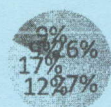
KL- Knowledge Level,

PO – Program Outcome

Course Outcomes	CO1	Understand basic needs of Statistics and Biostatistics. Learn concept of Frequency distribution, Measures of central tendency, Measures of dispersion and Correlation
	CO2	Learn basics of Regression, Parametric test and probability distribution with examples
	CO3	Learn the basics of Non-Parametric tests with examples. Learn the application of biostatistics for assessing the pharmaceutical experimental data by Curve fitting. Understand the basic need for research; protocol preparation, Experiential Design Technique, plagiarism and representation of data
	CO4	Learn basics of Blocking design and Hypothesis testing in Simple and Multiple regression models.
	CO5	Learn the confounding system for Two-level factorial design and Advantage of factorial design. Learn the basics of Response Surface methodology

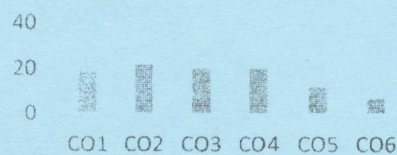
GRAPHICAL REPRESENTATION



Bloom Taxonomy Marks wise Distribution



■ K1 ■ K2 ■ K3 ■ K4 ■ K5 ■ K6

Course outcomewise marks distribution

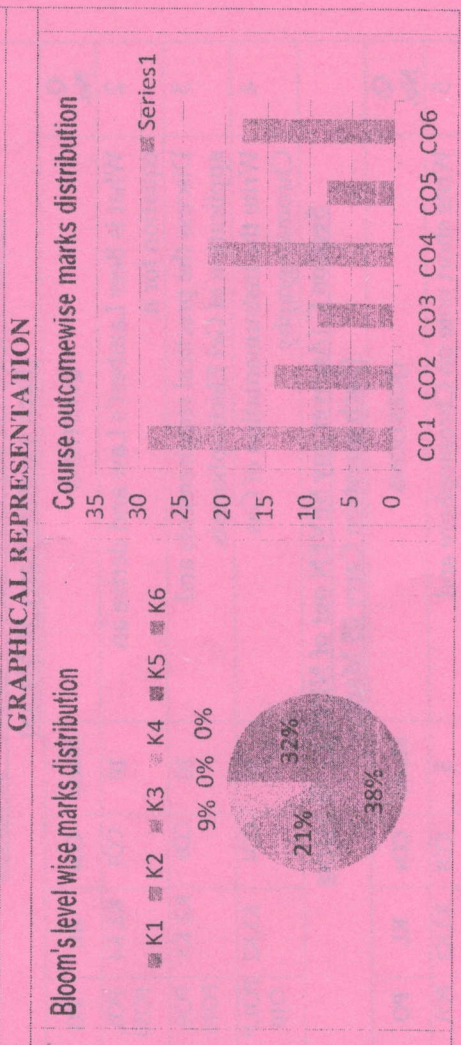


  <p>END SEM EXAMINATION School of Health & Allied Science</p>		<p>Bachelor of Pharmacy</p>	
<p>Program</p>		<p>Semester VII</p>	
<p>Subject Name</p>		<p>Year Nov/Dec 2024</p>	
<p>Instrumental Methods of Analysis</p>		<p>Time: 3 Hour Max. Marks : 75</p>	
<p>• Start writing from 2nd page onwards; don't write on the 1st Page Backside</p> <p>• Answer all Questions of Section A (Compulsory)</p> <p>• Answer Any Two out of Three of Section B</p> <p>• Answer Any Seven out of Nine of Section C</p> <p>• Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under Unfair Means and will Result in the Cancellation of the Papers.</p>		<p>Knowledge Level (KL)</p> <p>K1 : Remembering K3 : Applying K5 : Evaluating</p> <p>K2 : Understanding K4 : Analysing K6 : Creating</p>	

12	Write about two detectors used in IR spectroscopy.	5	CO2	K1,K2	PO1
13	What is Fluorescence? Write factors affecting Fluorescence intensity.	5	CO1	K1,K3	PO1

CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

Course Outcome	CO1	Understand the interaction of matter with electromagnetic radiations and its applications in drug analysis
	CO2	Understand the functional group determination by IR spectroscopy
	CO3	Gain knowledge on adsorption and partition chromatography
	CO4	Understand various instrumentation of GC and HPLC
	CO5	Understand various types of chromatographic techniques.
	CO6	Understand electrophoretic methods





Section A (Each question Carry 01 Mark from Q1-i to xx) – 20 Marks

Q. N1	QUESTIONS	Marks	COs	KL	PO
i	Which technique separates charged particles using electric field? a) Hydrolysis b) Electrophoresis c) Protein synthesis d) Protein denaturing	1	CO6	K1	PO2
ii	What is the functional group region range in IR spectroscopy? a) 600-667nm. b) 1500- 667cm ⁻¹ . c) 3000-1500cm ⁻¹ d) All of these	1	CO2	K1,K3	PO2
iii	Which device is used to convert polychromatic light radiation into monochromatic light radiation? a) Amplifier b) Detector c) Monochromator d) Slit	1	CO1	K1, K2	PO1
iv	Which detector is used in IR spectroscopy? a) Thermocouple b) Bolometer c) Thermister d) All of these	1	CO2	K1,K2	PO2
v	In Gel chromatography _____ is eluted first from the column. a) Anions b) Cations c) Bigger molecule d) Smaller molecule	1	CO5	K1	PO1
vi	Which one is not a technique of TLC plate preparation? a) Pouring b) Dipping c) Spraying d) Painting	1	CO5	K1,K2	PO1, PO2

vii	If the column length is shorter, then which type of adsorbents is used for separation in Column Chromatography? a) Weak adsorbent b) Strong adsorbent c) Both 'a' and 'b' d) None of these	1	CO3	K1, K2	PO1, PO2
viii	Which detector is not used in Gas Chromatography? a) Flame Ionisation Detector b) Bolometer c) Thermal Conductivity Detector d) Argon Ionisation Detector	1	CO4	K1, K2	PO1, PO2
ix	Which is not Requirement of mobile phase? a) It should be not toxic. b) It should be easily available. c) It should be chemically inert. d) It should be chemically active.	1	CO4	K3	PO2, PO9
x	If HETP increase then the column efficiency will be: a) Increases b) Decreases c) Equal d) None of these	1	CO4	K3	PO2, PO9
xi	What is the principle of GLC? a) Partition b) Adsorption c) Both 'a' and 'b'	1	CO4	K3	PO2, PO9
xii	The time taken to elute 50% substance from the column is expressed in terms of its a) Retention time b) Retardation factor c) Both 'a' and 'b'	1	CO4	K3	PO2, PO9
xiii	When absorption intensity of compound is decreased it is called a) Bathochromic shift b) Hypsochromic shift c) Hyperchromic shift d) Hypochromic shift	1	CO1	K1, K3	PO1, PO2
xiv	Which detector is used in Fluorimetry? a) Phototube b) Photovoltaic cell c) PMT d) All of these	1	CO1	K1, K3	PO1, PO2
xv	In photo voltaic cell which material is used as layer between cathode and anode? a) Aluminium b) Copper c) Selenium d) All of these	1	CO2	K1, K2	PO1, PO2
xvi	Which are the criteria the adsorbent used in column chromatography should have? a) Have mechanical stability b) Insoluble in mobile phase c) Allow free flow of mobile phase d) All of these	1	CO4	K1	PO1

xvii	The relation of electrophoretic mobility with size of ions is: a) Directly proportional b) Both 'a' and 'c' c) Inversely proportional d) None of these	1	CO6	K1	PO2
xviii	Oxygen _____ the fluorescence intensity. a) Increases b) Decreases c) Both 'a' and 'b' d) None of these	1	CO1	K1, K2	PO1
xix	If same mobile phase combination is used throughout the separation, known as: a) Isocratic separation b) Both 'a' and 'c' c) Gradient separation d) None of these	1	CO3	K1, K2	PO1, PO2
xx	Which is not a weak adsorbent? a) Starch b) Sucrose c) Talc d) MgO	1	CO3	K1, K2	PO1, PO2
Section B (Answer any TWO out of THREE) - 20 Marks (Each question Carry 10 Marks)					
Q. No.	QUESTIONS	Marks	COs	KL	PO
2	What is Beer Lambert's Law and derive an equation for it.	10	CO1	K2, K4	PO1, PO10
3	Discuss the practical requirements and application of Gel Electrophoresis.	10	CO6	K2, K3	PO9, PO10
4	Write the instrumentation of Gas Chromatography.	10	CO4	K1, K2	PO1, PO10
Section C (Answer any SEVEN out of NINE) - 35 Marks (Each question Carry 05 Marks)					
Q. No.	QUESTIONS	Marks	COs	KL	PO
5	Write short note on Chromophore and Auxochrome.	5	CO1	K1, K2	PO1, PO2
6	What are the different types of adsorbent used in column chromatography and how to select it?	5	CO3	K1, K4	PO1, PO2
7	Describe different techniques applied for the preparation of TLC plate.	5	CO5	K2, K3	PO1, PO9
8	What are the different gases used in gas chromatography? Discuss the application of flow regulators and flow meters in GC.	5	CO4	K1, K3	PO1, PO9
9	Discuss different types of fundamental vibrations.	5	CO2	K1, K2	PO1
10	What is spectroscopy and discuss different types of spectroscopy.	5	CO1	K1, K2	PO1, PO2
11	Discuss about the continuous paper electrophoresis with its application.	5	CO6	K2, K3	PO9, PO10

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				END SEM EXAMINATION School of Health & Allied Science	
Program Bachelor of Pharmacy		Semester VII		Year Nov/Dec 2024	
Subject Name Industrial Pharmacy-II		• Start writing from 2nd page onwards; don't write on the 1st Page Backside • Answer all Questions of Section A (Compulsory) • Answer Any Two out of Three of Section B • Answer Any Seven out of Nine of Section C • Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under Unfair Means and will Result in the Cancellation of the Papers.			
Time: 3 Hour Max. Marks: 75		K1 : Remembering K2 : Understanding		K3 : Applying K4 : Analysing K5 : Evaluating K6 : Creating	
Knowledge Level (KL)					

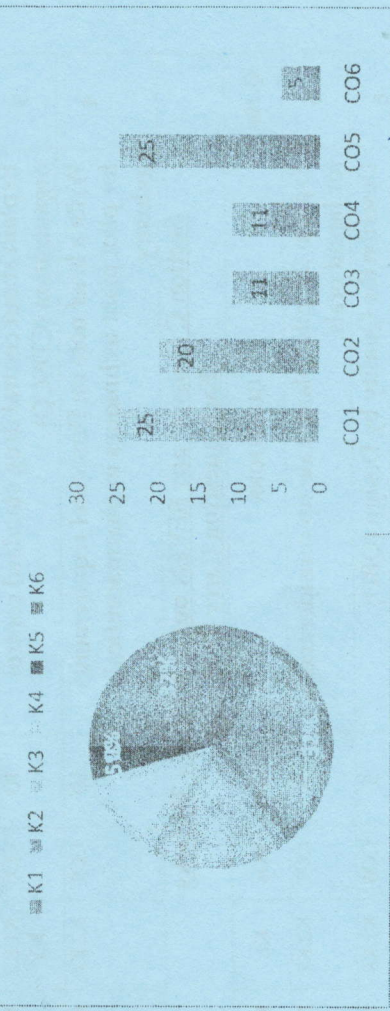
Q. N1	QUESTIONS	Marks	COs	KL	PO
i	In pilot plant scale up techniques which types of equipment are used a) Costly b) Simplest c) Capable d) Most economical	1	CO1	K2, K1	PO 9
ii	Very fine particle size causes a) Weight variation b) Mottling c) Both d) No change	1	CO1	K2, K1	PO 1
iii	Which of the following represents India in ISO? a) PFRDA b) FSSAI c) BIS d) BCCI	1	CO5	K5, K1	PO 2
iv	Bloom strength determines the strength of.... a) Tablets b) Capsules c) Pellets d) None	1	CO1	K5	PO 2
v	Pilot plant can be used for..... a) Evaluating results for laboratory studies b) Product and process correction c) Shelf life and stabilities studies d) All of above	1	CO1	K2, K1	PO 1
vi	The definition of Quality Risk Management (QRM) has been mentioned in ICH guideline is a) Q7 b) Q8 c) Q9 d) Q10	1	CO5	K1, K2	PO 2

13 Write a brief note on biostatistics in pharmaceutical product development.

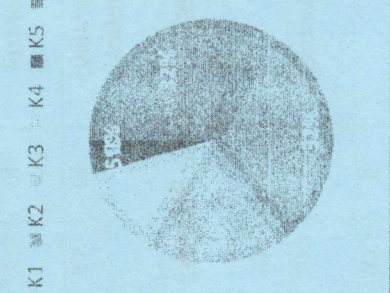
CO- Course Outcomes,	KL- Knowledge Level,	PO - Program Outcome
CO1	Know the process of pilot plant and scale up of pharmaceutical dosage forms	5 CO3 K1, K3 PO 2
CO2	Understand the process of technology transfer from lab scale to commercial batch.	
CO3	Know different laws and acts that regulate pharmaceutical industry	
CO4	Understand the approval process and regulatory requirements for drug products	
CO5	Understand the quality management systems and its certifications	
CO6	Understand the Indian Regulatory requirements and approval procedures for New Drugs	

GRAPHICAL REPRESENTATION

BLOOMS LEVEL MARKS DISTRIBUTION



Course outcome wise marks distribution



vii	The transfer of technology between sites of different companies is called as a) Inter-company transfer b) Intra-company transfer c) Technology transfer d) Technology transfer protocol	1	CO2	K1,K3	PO 1
viii	Which of the following do not have high viscosity? a) Pastes b) Gel c) Emulsion d) Ointment	1	CO2	K1,K2	PO 1
ix	Which of the quality guidelines deal with pharmaceutical quality system: a) Q2 b) Q8 c) Q10 d) Q9	1	CO4	K2,K3	PO 10
x	DCGI is appointed by: a) Central govt. b) State govt. c) Both a & b d) None of the above	1	CO2	K2,K4	PO 1
xi	Which of the following IT agency promotes Funding for biotech products? a) BCIL b) SIDBI c) NRDC d) TIFAC	1	CO2	K1,K2	PO 2
xii	National drug regulatory authority of India: a) EMA b) MHRA c) USFDA d) CDSCO	1	CO3	K1,K2	PO 1
xiii	In any blending operation, Separation depends upon: a) Particle size b) Density c) Both a and b d) None	1	CO1	K1,K2	PO 2
xiv	Which of the following unit is not there in TT? a) Adjusting unit b) sending unit c) receiving unit d) Managing unit	1	CO2	K1,K2	PO 1
xv	Which of the following is not a six-sigma belt level ranking? a) Pink Belt b) Green Belt c) Black Belt d) Yellow Belt	1	CO5	K1,K2	PO 2
xvi	Which of the following is a law passed by the Indian Government in 1919? a) The poisons Act b) The Poisonous Act c) The Non-poisonous Act d) The Non-poisons Act	1	CO4	K2,K3	PO 2
xvii	Pharmacovigilance is a part of a) ICH E1 guidelines b) ICH E3 guidelines c) ICH E2 guidelines d) ICH E2(A-F) guidelines	1	CO4	K2,K3	PO 2

xviii	Key components of TQM are a) Consumer/ Customer focus b) Continuous improvement c) Involvement of employee d) All of these	1	CO5	K4,K5	PO 2
xix	Guidelines for Environmental performance evaluation is included in a) ISO 14004 b) ISO 14001 c) ISO 14040 d) ISO 14031	1	CO5	K4,K5	PO 1
xx	The guidelines and requirements for clinical trails is provided by a) Schedule N b) Schedule K c) Schedule P d) Schedule Y	1	CO4	K4,K5	PO 1
Section B (Answer any TWO out of THREE) – 20 Marks (Each question Carry 10 Marks)					
Q. No.	QUESTIONS	Marks	COs	KL	PO
2	Explain briefly Granularity of Technology transfer process.	10	CO2	K1,K2,K4	PO 1
3	Explain about central drug standard control organization (CDSCO)	10	CO5	K1,K2,K3	PO 2
4	Write a brief note on Personnel requirements for pilot plant techniques in pharmaceutical industry.	10	CO1	K2,K1	PO 10
Section C (Answer any SEVEN out of NINE) – 35 Marks (Each question Carry 05 Marks)					
Q. No.	QUESTIONS	Marks	COs	KL	PO
5	Explain the pilot plant scale up considerations for liquid orals.	5	CO1	K2,K4	PO 1
6	Describe the Quality by Design (QBD)	5	CO5	K1,K6	PO 2
7	Write a note on Quality Risk Management.	5	CO2	K3,K5	PO 1
8	Write about role of Regulatory affairs department.	5	CO3 CO4	K1,K3	PO 2
9	Write a short note on SUPAC guidelines.	5	CO1	K1,K2	PO 2
10	Explain about six sigma concept.	5	CO5	K3	PO 4
11	Describe about NDA regulatory approval process.	5	CO4	K1, K2,K4	PO 7
12	Describe about the responsibilities of state licensing authority.	5	CO6	K2,K3	PO 2



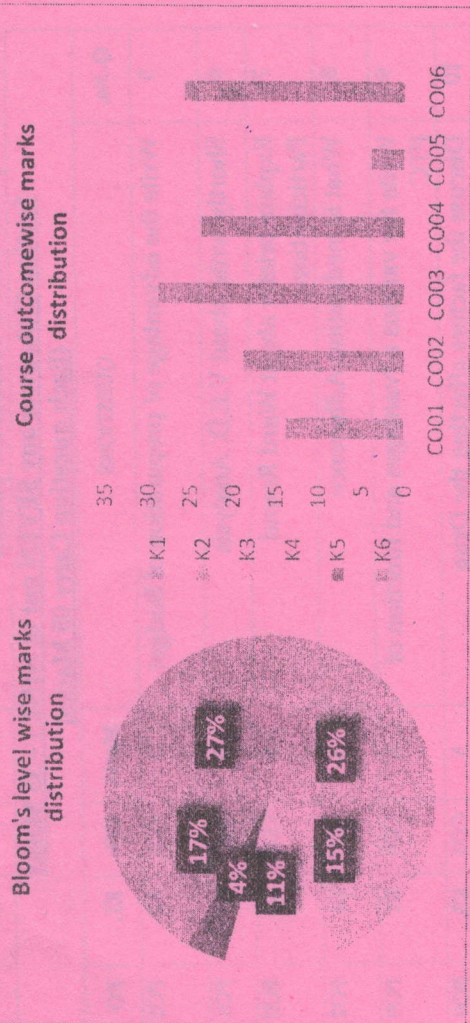
13	What are the factors to be considered during therapeutic drug monitoring and what is the Indian scenario.	5	CO4 CO6	KL, K3	PO1 0
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Program	Bachelor of Pharmacy	
Subject Name	Pharmacy Practice	
	Semester	VII
	Year	Nov/Dec 2024
Time: 3 Hour Max. Marks : 75	<ul style="list-style-type: none"> Start writing from 2nd page onwards; don't Write on the 1st Page Backside Answer all Questions of Section A (Compulsory) Answer Any Two out of Three of Section B Answer Any Seven out of Nine of Section C Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will come under Unfair Means and will Result in the Cancellation of the Papers. 	
Knowledge Level (KL)	K1: Remembering K2: Understanding	K3: Applying K4: Analysing K5: Evaluating K6: Creating

CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

CO1	Acquire knowledge of the organization and functions of hospital, hospital pharmacy and community pharmacy
CO2	Acquire knowledge of drug distribution system, different committee and program in hospital.
CO3	Understand the drug and therapy related problems with the concept of Rational drug therapy to provide patient-centred care to diverse patients using the best available evidence and monitor drug therapy.
CO4	Understand the preparation and implementation of budget and concepts of clinical pharmacy
CO5	Acquire knowledge of drug store management and inventory control
CO6	Understand the interpretation of clinical laboratory data and utilisation of information services.

GRAPHICAL REPRESENTATION



Section A (Each question Carry 01 Mark from Q1-i to xx) - 20 Marks

Q. N 1	QUESTIONS	Marks	COs	KL	PO
i	Which one is responsible for the treatment of the morphine poisoning? a) Penicillamine b) Nalaxon c) EDTA d) Vitamin -K	1	CO2	K2	PO2
ii	Which Antibiotics is used to treat the Parkinson's disease? a) Amantadine b) Aceclofenac c) Diclofenac d) Barbiturates	1	CO4	K4	PO2
iii	Propranolol is a----- a) Anaesthetics b) Cox inhibitor c) Proton pump inhibitor d) None of these	1	CO1	K4	PO2
iv	Surgical dressing are sterilized by ----- a) Moist heat sterilization b) Drying c) Dry heat sterilization d) Autoclave	1	CO2	K4	PO2
v	TDM frequently monitored for a) Antidepressant b) Anticonvulsant c) Antibiotics d) All	1	CO1	K2	PO2
vi	What is the area designed for the preparation of sterile products called? a) Clean room b) Formulary c) In-patient pharmacy d) None of these	1	CO2	K1	PO9
vii	The process of quickly obtaining an out-of-stock medication in an urgent situation is	1	CO3	K1, K2	PO9

	called _____ a) Emergency drug procurement b) Bulk compounding c) Code cart d) Final filter					
viii	Anesthesia division directed by a) Physician b) Pharmacist c) Nurse d) None of these	1	CO1	K1, K2	PO2	
ix	In case of serious cardiovascular disease which unit is necessary a) ICU b) X-RAY c) Urology d) Radiology	1	CO3	K1	PO2	
x	Who is responsible for operating room a) Volunteer b) Patient c) Nursing officer d) None of these	1	CO3	K1	PO1 0	
xi	Advance preparation of large quantities of unit-dose oral solutions/suspensions or small volume parenterals for future use is called a) Batching b) Formulating c) Bulk compounding log d) None of these	1	CO4	K2	PO9	
xii	Benzodiazepines used to treat a) Anxiety b) Panic disorder c) Seizure d) All of the above	1	CO4	K2	PO2	
xiii	The amount of a drug product that should be kept on the pharmacy shelf is called a) Standing order b) Parenterals c) PAN Order d) None of These	1	CO2	K1, K4	PO2	
xiv	How many numbers of persons are present in PTC a) 1 b) 2 c) 3 d) 4	1	CO4	K1, K3	PO2	
xv	Quality management can be controlled by a) Physician b) Pharmacist c) Health worker d) All	1	CO1	K1	PO2	
xvi	Which is a Primary health care system a) PHC b) Nursing home c) CHC d) None of these	1	CO6	K3	PO9	
xvii	NS known as a) Normal saline b) New synthetics c) Both A&B d) None of these	1	CO5	K5	PO1	
xviii	The branch of in-patient pharmacy responsible for preparing, dispensing, and monitoring medications for specific patient areas is called a) Pharmacy satellite b) Central pharmacy	1	CO5	K5, K1	PO9	

	c) Both A&B d) Out-patient pharmacy					
xix	Which of the following is a type of hospital? a) Maternity hospital b) Surgical hospital c) Medicine hospital d) All of the above	1	CO3	K2, K1	PO1	
xx	Which of the following is the part of Hospital Formulary? a) Information on Hospital policy b) Drug products listing c) Special Information d) All of the Above	1	CO5	K2, K1	PO2	
Section B (Answer any TWO out of THREE) – 20 Marks (Each question Carry 10 Marks)						
Q. No.	QUESTIONS	Marks	COs	KL	PO	
2	What are the types of adverse drug reaction? Briefly describe the withdrawal symptoms of different drugs	10	CO2	K1, K2	PO9	
3	What is Inventory, Discuss various techniques for inventory control.	10	CO3	K1,	PO9	
4	What is patient counselling, Describe the role of pharmacist to counsel the patient	10	CO4	K2, K6	PO1 0	
Section C (Answer any SEVEN out of NINE) – 35 Marks (Each question Carry 05 Marks)						
Q. No.	QUESTIONS	Marks	COs	KL	PO	
5	Write the advantage of preparation of Budget	5	CO1	K2	PO2	
6	Shortly write about V.E.D. Analysis	5	CO1	K1	PO1	
7	Explain briefly about Ward Round Participation	5	CO2	K3	PO2	
8	What is medication Adherence	5	CO3	K1	PO2	
9	Write the various advantages and function of PTC	5	CO3	K1	PO9	
10	Discuss the factors affecting the Drug Monitoring	5	CO3	K3, K6	PO9	
11	Write briefly about Functional aspects of Hospital Pharmacist	5	CO6	K1	PO9	
12	Write short notes on drugs dispensing to ambulatory patients.	5	CO4 CO6	K6, K2, K3, K4	PO1 0	