			2022-23 EXM/P/09/00
Year and Program: Final Year B. Pharmacy 22-23	**SchoolofPharmaceutical Sciences**	**Department:Pharmacy**	
Course Code: BP704T	**Course Title: Novel Drug Delivery System**	**Semester – VII**	
Date: 08/01/2024 **Day:** Monday **Time:** 10.30am to 1.30PM	**Examination: END SEM**	**Max Marks:75**	

INSTRUCTIONS: 1) Figures to the right indicate full marks.
2) Draw neat labeled diagrams wherever necessary.

		Marks	Bloom's Level	CLO
Q.1	**Multiple Choice Questions (MCQ)(20X1)**	**20**		
a)	Hydrogen bonding capacity is related to which type of factor affecting mucoadhesion A) Physiological B) Polymer C) Environment D) Physicochemical	01	1	1
b)	What type of process does the liposomes undergoes? A) Oxidation B) Acetylation C) Reduction D) Isomerization	01	1	1
c)	Niosomes are prepared from which of the following A) Phospholipids B) Lecithin C) Spingolipid D) Surfactants	01	1	1
d)	Which of the following is the example of Physical theory of mucoadhesion A) Wetting B) Electronic C) Adsorption D) Adhesion	01	1	2

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e) What are the characteristics of matrix diffusion controlled release system? 01 1 2

A) Release the drug along the entire length of GIT
B) Drug disperse in an insoluble matrix of rigid hydrophobic material
C) Employ waxes to control the rate dissolution
D) Release only at specific site

f) A Polymer used for colonic systems is 01 1 2

A. Carboxymethyl cellulose
B. Cellulose acetate phthalate
C. Gelatin
D. Acacia

g) Which of the following is a thermosetting polymer? 01 1 2

A) Polystyrene
B) Polyolefins
C) Nylons
D) Phenolic resins

h) Which of the following is not a disadvantage of conventional dosage form? 01 1 2

A) Poor patient compliance
B) Change in concentration may lead to under or over medication
C) Attainment of steady state condition difficult.
D) have high cost

i) What are the characteristics of the reservoir or membrane devices? 01 1 2

A) The drug has a large therapeutic index
B) Drug permeation rate is high
C) Control drug release by partitioning the drug from the oil
D) Administration of emulsions

j) What is the characteristic of dissolution controlled release systems? 01 1 2

A) Release the drug along the entire length of GIT
B) Prolonged their residence in the GIT and release

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C) Release only at a specific drug
D) Very slow dissolution rate

k) Which among the following polymers have lowest solubility? A) Polyethylene B) Polystyrene C) Nylon 6 D) Epoxy resin	01	1	2
l) Which of the following drugs cannot be given as transdermal DDS A) Drugs with very short half life B) Drugs with narrow therapeutic indices C) Easy removal & termination D) Drugs against peptic ulcer	01	1	2
m) What is extrusion? A) pushing the heated material through an orifice B) producing a hole by a punch C) making cup shaped parts from the sheet D) process of mixing the ingredient	01	1	3
n) Which polymers occur naturally? A) Starch and Nylon B) Starch and Cellulose C) Proteins and Nylon D) Proteins and PVC	01	1	3
o) Peel adhesion is tested by measuring the force required to pull a single coated tape, applied to a substrate at a .....° angle A. 180 B. 360 C. 45 D. 90	01	1	3

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p)	An example of polymer incorporated into dendrimers is A. Propylene glycol B. Polyethyleneimine C. polyurethane D. Styrene copolymers	01	1	3
q)	Example of hydrophobic polymer used in nanoparticles is A) Gelatin B) Alginate C) Acrylate D) Lectin	01	1	3
r)	Which of the following is not a component of buccal patch? A) Polymer B) Active substance C) Flavoring agent D) Counter irritant	01	1	4
s)	The absorption of the ophthalmic drug does not depend on which of the following? A) Physicochemical properties of the permeating molecule B) Drainage of tears C) Output of tears D) Size of the eyeball	01	1	5
t)	Ocular iontophoresis is a process which does not involve A) Electrical potential driving charged ions into eyes B) Delivers high concentration to specific sight C) Good bioavailability D) Disadvantage of epithelial on conjunctival edema	01	1	5

Q.2	**Long Answers (Answer2out of3)**	**20**	**Bloom's Level**	**CLO**
a)	Explain the mechanism of bio-adhesion. Give advantages and disadvantages of mucosal drug delivery system.	10	2	1
b)	Discuss various methods to overcome intra-ocular barriers.	10	2	2

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c)	Explain in details various methods of microencapsulation.	10	2	2

Q3	ShortAnswers(Answer7out of9)	35	Bloom's Level	CLO
a)	Write methods of preparing nanoparticles	05	2	3
b)	Describe osmotically regulated implants as a new drug delivery system	05	2	3
c)	Explain various factors affecting permeation in transdermal drug delivery system.	05	2	3
d)	What are biodegradable and non-biodegradable polymers?	05	2	3
e)	Write in brief about the microencapsulated drug delivery systems	05	2	4
f)	Write a short note on nebulizer	05	2	4
g)	Discuss applications of gastroadhesive drug delivery system	05	2	4
h)	Write the challenges in delivering drugs to the eye	05	2	5
i)	Write the types, advantages, and disadvantages of ocuserts	05	2	5

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