Total No. of Questions: 3 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Pharmacy
End Sem Examination Dec 2024
PY3CO32 Novel Drug Delivery Systems

Programme: B. Pharm. Branch/Specialisation: Pharmacy

Duration: 3 Hrs. **Maximum Marks: 75**

Note: All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	PO	CO	PSO
Q.1	i.	Give any two suitable properties of drug candidate to be formulated as controlled drug delivery system.	**2**	2	1,2	1	
	ii.	Name any two polymers used in the formulation of controlled drug delivery system.	**2**	2	1,2	1	
	iii.	Define the term Microencapsulation and name any two methods involved in microencapsulation.	**2**	2	1,2	2	
	iv.	Write examples of any two permeation enhancers used in formulation of mucosal drug delivery system.	**2**	2	1,2	2	
	v.	What are the basic components of transdermal drug delivery system?	**2**	3	1,2	3	
	vi.	Write any four advantages of gastroretentive drug delivery systems.	**2**	3	1,2	3	
	vii.	Write full form of HAT and HGPRT medium used for preparation of monoclonal antibodies.	**2**	3	1,2	4	
	viii.	Enlist any two methods of preparation of liposomes as drug delivery system.	**2**	3	1,2	4	
	ix.	What do you understand by intraocular barriers?	**2**	4	1,2	5	
	x.	What is the mechanism of action of copper bearing intra-uterine devices?	**2**	4	1,2	5	
Q.2		Attempt any two:					
	i.	Explain controlled drug delivery system in detail and write approaches used in the formulation of the controlled drug delivery system.	**10**	2	1,2	1	

	ii.	Write a descriptive note on microencapsulation including advantages, disadvantages methods of microencapsulation and its applications.	**10**	2	1,2	2	
	iii.	(a) Write a note on polymer and its classification, properties, advantages and applications of polymers in formulation of controlled release drug delivery systems.	**5**	2	1,2	1	
		(b) What is the of bioadhesion? Discuss the concept of implants.	**5**	2	1,2	2	
Q.3		Attempt any seven: Two questions from each section is compulsory.					
		Section - A					
	i.	Write down the factors affecting permeation with respect to transdermal dermal drug delivery system.	**5**	3	1,2	3	
	ii.	Elaborate floating drug delivery system for gastro retention of drugs in detail.	**5**	3	1,2	3	
	iii.	Explain the formulation of NPDDS.	**5**	3	1,2	3	
		Section - B					
	iv.	What are liposomes? Write the characterization and applications of liposomes in detail.	**5**	3	1,2	4	
	v.	What is the concept behind targeted drug delivery? Explain the preparation of niosomes.	**5**	3	1,2	4	
	vi.	What are nanoparticles? Write the advantages and method of preparation.	**5**	3	1,2	4	
		Section - C					
	vii.	What are intraocular barriers? How are they can be overcomed?	**5**	4	1,2	5	
	viii.	Describe any five types of ocular formulations and write any two marketed ocular formulations.	**5**	4	1,2	5	
	ix.	Discuss the about the intra-uterine devices? Give their advantages and disadvantages.	**5**	4	1,2	5	

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Marking Scheme
PY3CO32 (T) Novel Drug Delivery Systems (T)

Q.1	i)	Two properties , each 1 mark	**2**
	ii)	Two polymers , each 1 mark	**2**
	iii)	Definition -1 mark, name of method 1 mark	**2**
	iv)	Examples – 2 marks	**2**
	v)	Basic components – 2 marks	**2**
	vi)	four advantages – 0.5 each	**2**
	vii)	Full form 2 marks each 1 mark	**2**
	viii)	Two methods – each 1mark	**2**
	ix)	Justification 2 marks	**2**
	x)	Justification 2 marks	**2**

Q.2 Attempt any two:

i.	Explanation – 5 marks , approaches – 5 marks	**10**
ii.	Explanation – 5marks , advantages, disadvantages – 2 marks methods – 2 marks , applications – 1 mark	**10**
iii.	a) Note – description + classification 5 marks	**5**
	b) Explanation – 3 marks , explanation – 2 marks	**5**

Q.3 Attempt any seven: Two questions from each section is compulsory.

Section - A

i.	Factors – at least 5 each 1 mark with explanation	**5**
ii.	Detailed note – 5 marks	**5**
iii.	Five dosage forms – each 1 mark	**5**

Section - B

iv.	Explanation – 3 marks , Advantages and disadvantages – 2 marks	**5**
v.	Concept- 3 marks, method -2 marks	**5**
vi.	Explanation – 3 marks , Advantages and method of preparation – 2 marks	**5**

Section - C

vii.	Barriers detail – 3 marks , overcoming reasons – 2 marks	**5**
viii.	5 types , each 1 mark	**5**
ix.	Explanation – 3marks , advantages, disadvantages – 2 marks	**5**

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