Q. P. Code: 36191

[Time: 3 hours] **[Marks 80]**

NB: 1. All questions are compulsory
2. Figures to the right indicate full marks.

1 a.	Classify dispersed systems and comment on their thermodynamic stability.	3
b.	Draw a schematic of route of penetration of drug through skin.	2
c.	Define suppositories. Describe the advantages and limitations of suppositories as a dosage form.	3
d.	Explain the need for various blood products.	2
e.	Enlist the quality control tests for sutures. Explain any one in detail.	3
f.	Discuss pharmaceutical applications of emulsions.	2
2a.	Name the equipment used in large scale manufacturing of emulsions and elaborate on homogenizers.	4
	OR	
	Elaborate on quality control tests for suspensions	
b.	Describe the features of ideal suppository base and enlist different suppository bases.	4
c.	Enlist various non-absorbable sutures and discuss polymeric non-absorbable sutures in detail.	3
3a.	Differentiate between flocculated and deflocculated systems. Explain why these systems differ with respect to their sedimentation behavior.	4
b.	Write a note on albumin preparations **OR** fractionation of plasma.	4
c.	Describe the liquefaction time test for suppositories.	3
4a.	What are the different bases used in preparation of ointments? Explain any 2 bases in detail.	4
b.	Explain any one method used for selection of emulsifying agent.	4
c.	What are the ideal properties of plasma substitutes?	3
	OR	
	Write a note on dextran as a plasma substitute.	
5a.	Elaborate on any one of the methods used for preparation of suspensions.	4
b.	Explain in detail large scale manufacturing of semisolids.	3
c.	Discuss the problems of low viscosity of melted suppository and volume contraction of suppositories.	4
	OR	
	Give an account of packaging of suppositories.	
6a.	Explain in brief the steps involved in manufacturing of catgut.	3
b.	Discuss the instability symptoms in emulsions.	4
	OR	
	Elaborate on formulation additives in emulsions.	
c.	Discuss methods to evaluate skin penetration.	4

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