 2nd half 2017 Sem VIII pl cubics V 7/12/17

Q.P. Code :04876

[Time: 3 Hours] [Marks:70]

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.
2. Draw neat labeled diagram wherever necessary.

Q.1	a)	State release rate equation for elementary osmotically controlled drug release system.	02
	b)	Name the biological indicator, one each, which is recommended for validation of steam sterilization and dry heat sterilization	02
	c)	Explain briefly 2 important advantages of process validation	02
	d)	Write briefly on quality control standards of 'identity'	02
	e)	Explain the terms 'coacervation' and 'phase separation' in context of microencapsulation	02
	f)	Name two polymers which can be used to provide 'pH based' colon targeted systems.	01
	g)	Explain importance of vendor audit with reference to raw material control.	02
	h)	What are A, B and C in ABC concept in inventory management.	02
Q.2	a)	What are microcapsules? Discuss various applications of microencapsulation.	04
		OR	
		With the help of a diagram, discuss spray drying in microencapsulation.	
	b)	Draw a neat labeled scheme for manufacturing of oral liquids.	04
	c)	With reference to schedule M, discuss dust collection and cross contamination in manufacturing facility.	03
Q.3	a)	With the help of a neat labeled diagram, describe components of a typical transdermal drug delivery system.	04
	b)	Explain the term 'F_o'. what is importance and application of F_o?	04
	c)	Describe different parts of a good document.	03
Q.4	a)	Discuss importance and salient features of IPQC test. List IPQC tests for tablets.	04
	b)	Give brief description of the following systems i) Liposomes ii) Microemulsion ii) Pellets iii) Microspheres	04
		OR	
	b)	Discuss buccal adhesive systems in drug delivery	
	c)	Discuss briefly site selection, requirements for non-sterile products manufacturing facility.	03

P.T.O

Q.5	a)	Discuss briefly factors affecting mucoadhesion.	04
	b)	Write one specimen document/protocol for microbiological environmental control of Room no 10 to be used in preparation of oral paracetamol suspension.	04
	c)	With suitable examples of coating materials, describe steps in microencapsulation of a volatile liquid.	03
Q.6	a)	State the limitations of elementary osmotic pump. Draw a labeled diagram for push pull osmotic system and explain its working.	04
	b)	Prepare SOP for calibration of dissolution testing apparatus IP type I.	04
		OR	
		Discuss scale up considerations for powder-powder mixing step in direct compression of tablets.	
	c)	Discuss 'time' based approach in colon specific drug delivery.	03

5028R/ F.Y. B.Pharm (Sem VIII) CBSGS – Biopharmaceutics & Pharmacokinetics
II nd half 2017 11/12/17

Q.P. Code :04397

[Time: 3 Hours] **[Marks:70]**

Please check whether you have got the right question paper.

N.B:
1. **All** questions are **compulsory**.
2. **Figures** to the **right** indicate **full marks**.
3. **Use of scientific calculator is permitted.**

Q.1 Answer the following:

a) Define bioequivalence. 02
b) Give advantages of Transdermal route of drug administration. 02
c) What is the relation of apparent volume of distribution and clearance? 01
d) Give two characteristics of microsomal enzyme system. 02
e) Why is entero-hepatic circulation important in the conservation of vitamin B_{12}? 02
f) What are the challenges in formulating BCS Class II drugs? 02
g) What are the disadvantages of physiological modeling. 02
h) Why is the IV route used to calculate absolute bioavailability. 02

Q.2
a. Explain the various types of active transport mechanisms. 04
b. As per Noye's Whitney equation, state the factors which affect the dissolution of drugs. 04
c. Discuss drug-drug interactions affecting absorption of drugs from GIT. 03

Q.3
a) How does the lubricant and disintegrant affect absorption? 03
b) What are the physico-chemical factors affecting drug distribution? 04
c) What are the causes of non-linearity in drug absorption and drug excretion? 04

OR

Discuss rate of excretion method for determination of K_e. 04

Q.4
a. Write a short note on phase I oxidation reactions. 04
b. How does first pass metabolism of a drug affect systemic availability? 03
c. How do distribution and binding characteristics of drug affect renal clearance? 04

Q.5
a. Discuss how the particle size and effective surface area of a drug influences the dissolution rate? 04
b. Explain a dissolution apparatus which maintains sink conditions. 03
c. How do you measure bioavailability by urinary excretion method? 04

OR

Discuss advantages and disadvantages of the various methods of bioequivalence experimental study design. 04

Q.6
a. Describe various pharmacokinetic parameters after I.V bolus dosing. 04

OR

How do you determine absorption rate constant using method of residuals? 04

TURN OVER

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Q.6 b. After an intravenous bolus injection of 50 mg of a drug following one compartment kinetics. The plasma concentration time profile is represented by –

$C = 42e^{-0.04t}$

Calculate

a) Elimination half-life and AUC. 01
b) Volume of distribution and clearance. 01
c) Plasma concentration after 5 hours. 01
d) Amount eliminated after 7 hours. 02
e) Time required for elimination of 60% of the dose. 02

fourth Year B pharmacy, Sem VIII CBSGS Clinical Pharma
15/12/17

Q.P. Code :00985

[Time: Two Hours] [Marks:35]

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.
2. Figures to right side indicate full marks.

Q. 1 Answer the following 07

i. Define term Hospital pharmacist
ii. Enlist any two situations in clinical practice where patient compliance is extremely important.
iii. In patients on treatment of warfarin and phenyl butazone if bleeding complications occur, explain the mechanism of adverse drug reaction occurred.
iv. Explain mechanism of drug interaction if oral contraceptive action fails in female patient on prolonged treatment of broad Spectrum antibiotics.
v. Why rectal route of administration is preferred for diazepam in infants suffering from febrile seizures.
vi. Why therapeutic drug monitoring is required in patients on treatment of Digitalis
vii. Define case report form.

Q. 2 A. Answer the following **(Any One)** 04

i. Discuss responsibilities of clinical pharmacist in hospitals.
ii. Explain various communication skills required for effective patient counseling.

B. Answer the following 03

i. Write a note on methods of assessment of patient compliance.

Q. 3 A. Answer the following **(Any One)** 04

i. Compare and contrast between Type A and Type B adverse drug reactions
ii. Discuss role of pharmacist in prevention of adverse drug reactions

B. Answer the following 03

i. Write a note on various criteria's for valid therapeutic drug monitoring.

Q. 4 A. Answer the following **(Any One)** 04

i. Explain with suitable examples drug interactions due to drugs having opposing pharmacological actions and drug interactions due to drugs having similar pharmacological octions.
ii. Explain with examples various beneficial drug interactions.

B. Answer the Following 03

i. Explain effect of renal and hepatic failure on drug therapy in geriatric patients.

Q. 5 A. Answer the Following **(Any One)** 04

i. Explain Various criteria's involved in design of clinical trial.
ii. Write a note on preclinical drug development

B. Define the following 03

i)sponsor ii) Good Clinical Practice iii) Adverse event

Q.P. Code : 00127

[Time: 3 Hours]	[Marks:70]

Please check whether you have got the right question paper.

N.B:
1. All questions are compulsory.
2. Write all sub questions together.
3. Draw structure and diagram wherever necessary.

Q.1.		Answer the following.	15 Marks
	a)	Give sources of any two volatile oil containing drug used in perfumery.	
	b)	Write source of a drug containing ether volatile oil.	
	c)	Draw structure of any one phenolic volatile oil constituent.	
	d)	Give source of a bufadienolide containing drug.	
	e)	Give source of a drug containing Hecogenin.	
	f)	Mention source of a cardenolide drug belonging to Apocynaceae family.	
	g)	Write source of any one oleo gum resin containing drug.	
	h)	Give confirmatory chemical test for colophony.	
	i)	Write biopotential of Soy-isoflavones.	
	j)	Give source of Rutin containing drug.	
	k)	Draw the structure of Crocin.	
	l)	Write traditional uses of Tulsi.	
	m)	Write constituents of Aloe-Vera for skin care effect.	
	n)	Give any two examples of marketed ayurvedic taila.	
	o)	Write statement of schedule "Y" as per D & C act.	
Q.2.	a)	Give pharmacognostical account of Clove **OR** Fennel.	4 Marks
	b)	Write source, constituents and uses of Quassia & Picrorrhiza.	4 Marks
	c)	Write a note on Tea with an emphasis on its cosmetic uses.	3 Marks
Q.3.	a)	Define cardenolide? Explain in detail chemistry of *Digitalis purpurea* and *Digitalis lanata*.	4 Marks
	b)	Write source, constituents and uses of Artemisia & Guggul.	4 Marks
	c)	Write a note on two Herbal excipients used as binding agents.	3 Marks
Q.4.	a)	Write sources of citral and its biosynthetic pathway.	4 Marks
	b)	Write a note on Asava & Arishta formulation, with examples of marketed preparation.	4 Marks
	c)	Enumerate the Quality Control and safety parameters for Herbal drugs as per WHO guidelines.	3 Marks
Q.5.	a)	Give a complete account of Dioscorea.	4 Marks
	b)	Write source, constituents, chemical test and uses of Orange peel **OR** Liquorice.	4 Marks
	c)	Write a note on schedule T.	3 Marks
Q.6.	a)	What are pathological resins? Give an account of Benzoin **OR** Asafoetida.	4 Marks
	b)	Write a note on various methods of extraction of volatile oil. Give benefits of terpeneless volatile oil.	4 Marks
	c)	Write a note on Cannabis.	3 Marks