



Name :
Roll No. :
Invigilator's Signature :

CS/B.PHARM/SEP.SUPPLE/SEM-7/PT-706/2012

2012

**PHARMACEUTICS
(PHARMACEUTICAL TECHNOLOGY)**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

**GROUP - A
(Multiple Choice Type Questions)**

1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

- i) Grinding of materials is associated with which of the following drawback(s) ?
- a) Change in polymorphic form
 - b) Development of electrostatic forces
 - c) Lowering of dissolution rate
 - d) All of these.
- ii) Which form of chloramphenicol has highest solubility ?
- a) A form
 - b) B form
 - c) both A and B forms
 - d) C form.

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[Turn over



- iii) In case of controlled drug delivery system
- a) release rate is rate limiting step
 - b) absorption is rate limiting step
 - c) both (a) and (b)
 - d) none of these.
- iv) Carr's index value of 5-15% indicates which type of flow ?
- a) Excellent
 - b) Good
 - c) Poor
 - d) Extremely poor.
- v) ALZET osmotic pump provides
- a) First-order release rate
 - b) Zero-order release rate
 - c) Pseudo-first order release rate
 - d) Pseudo-zero order release rate.
- vi) Which schedule contains GMP ?
- a) Schedule *E*
 - b) Schedule *M*
 - c) Schedule *H*
 - d) Schedule *C*.
- vii) Riboflavin degrades by the pathway of
- a) Hydrolysis
 - b) Racemization
 - c) Reduction
 - d) Oxidation.
- viii) Example of monotropic polymorph is
- a) glyceryl stearate
 - b) sulphur
 - c) both glyceryl stearate and sulphur
 - d) none of these.
- ix) Antioxidant to be used in oily pharmaceutical preparation is
- a) ascorbic acid
 - b) BHT
 - c) sodium sulphite
 - d) Thioglycerol.



- x) An example of polymer used for enteric coating of tablet is
- hydroxypropyl cellulose
 - hydroxypropyl methyl cellulose
 - hydroxyethyl cellulose
 - hydroxypropyl methyl cellulose phthalate.
- xi) Example of the Deliquescent material is
- NaCl
 - anhydrous calcium chloride
 - KCl
 - calcium chloride.
- xii) Validation conducted by using historical data called
- prospective validation
 - concurrent validation
 - retrospective validation
 - revalidation.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

- Write down the different methods for drug entrapment in erythrocytes.
- Describe briefly the design of Reservoir devices (laminated matrix devices) as controlled release dosage form.
- Write a note on polymorphism with suitable example.
- What are the mandatory documents required in a manufacturing area ? Describe in brief about each document. $1 + 4$
- What is oxidation ? How can oxidation be prevented ?



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Describe the various applications of prodrug approach. (Hint : therapeutic, pharmacokinetic application) Illustrate your answer with suitable examples.
8. What is stability of dosage form ? How is solid state stability studied ? Discuss hydrolysis as a major drug degradation pathway. $2 + 5 + 8$
9. How is an instrument validated ? Describe each step of validation in detail. $3 + 12$
10. Describe the procedure of quality audit in a pharmaceutical industry.
11.
 - a) What is preformulation ?
 - b) What are the goals of preformulation ?
 - c) Discuss the effect of hygroscopicity, bulk density, particle size, surface area and solubility of drug substance to formulate a dosage form.
 - d) Describe any one method for detection of physical property. $1 + 2 + 10 + 2$

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