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BINA CHOWDHURY CENTRAL LIBRARY

(GIMT & GIPS)

Azara, Hatkhowapara,

Guwahati -781017

PY 132709 E 1

Roll No. of candidate

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2019

B.Pharm. 7th Semester End-Term Examination

ADVANCED PHARMACEUTICAL ANALYSIS

(Old Regulation)

Full Marks – 100

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer Question No. 1 and any six from the rest.

SECTION A

I. (MCQ Objective questions) (1 × 10 = 10)

1. (i) Separation of FPLC column is based on which
of the following?

- (a) Size exclusion chromatography
- (b) Ion exchange chromatography
- (c) Affinity chromatography
- (d) All of the above

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- (ii) Sodium dodecyl sulphate (SDS) is used to _____
- (a) Denature the protein and provide negative charge
 - (b) Monitor the progress of Gel electrophoresis
 - (c) Catalyzes the acrylamide polymerization
 - (d) None of the above
- (iii) Internal pore volume is also known as _____
- (a) Stationary phase volume
 - (b) Mobile phase volume
 - (c) Total volume
 - (d) None of the above
- (iv) Commonly used mobile phase for super critical fluid chromatography is _____
- (a) Silica Gel
 - (b) Carbon dioxide
 - (c) Sodium dodecyl sulphate (SDS)
 - (d) None of the above
- (v) Gel Electrophoresis comes under _____
- (a) Moving Boundary electrophoresis
 - (b) Zone electrophoresis
 - (c) All of the Above
 - (d) None of the above

(vi) Which of the following material is used as a closure for Injection containers?

- (a) Wooden cork
- (b) Rubber
- (c) Paper and boards
- (d) Metal

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(vii) 'OECD' stands for which of the following abbreviations?

- (a) Organization for Ecosystem co-operation and development
- (b) Organization for Economic collaboration and development
- (c) Organization for Economic Co-operation and Development
- (d) None of the above

(viii) In process materials shall be tested for which of the following?

- (a) Only Quality
- (b) Both Quality and purity but not strength
- (c) All Quality, purity and strength
- (d) None of the above

- (ix) Which of the following is NOT applied for IPQC test of Solid Dosage form?
- (a) Appearance test
 - (b) Dissolution test
 - (c) Drug content Uniformity test
 - (d) Rheology test
- (x) In GLP. Gang-printed labelling is a sheet of labelling that contains
- (a) Only one item of labelling
 - (b) More than one item of labelling
 - (c) No item for labelling
 - (d) None of above

SECTION B

(Descriptive question)

- II. Answer the following (any six) (6 × 15 = 90)
2. (a) Describe in detail the principle, instrumentation and application of super critical fluid chromatography? (2 + 4 + 3 = 9)
- (b) Write a note on Kjeldahl method of nitrogen estimation with a suitable diagram. (6)
3. (a) Explain the principle instrumentation and application of Differential Scanning Calorimetry (DSC) (2 + 4 + 3 = 9)
- (b) Explain the use of differential thermal analysis in quality control. (6)

4. (a) Define Electrophoresis. Outline the factor on which rate of migration of a molecule depends on. Discuss the application of Gel electrophoresis. (1 + 2 + 5 = 8)
- (b) Write the principle and applications of Diazotisation titrations (7)
5. (a) Write a note on oxygen. flask combustion gasometry. (7)
- (b) Explain the principle, instrumentation and application of size exclusion chromatography. (2 + 3 + 3 = 8)
6. (a) Define In process Quality Control (IPQC) and give the elements of IPQC. Describe in detail the IPQC problems and remedies for Tablets and Capsules. (1 + 2 + 3 + 3 = 9)
- (b) Write a note on sampling plans and operating characteristics curves in IPQC. (3 + 3 = 6)
7. (a) Write the concepts and elements of GLP. Describe in detail the laboratory hygiene and safety of GLP. (2 + 3 + 5 = 10)
- (b) Define Standard operating procedure (SOP). Write a brief note on the importance and application of SOP in GLP. (1 + 4)

8. Write a short note on any *three* of the following :
(3 × 5 = 15)

- (a) In process quality control (IPQC) test
 - (b) Packaging and Labelling control in GLP
 - (c) Ion exchange chromatography
 - (d) Advance chromatographic techniques.
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