SLR-E – 1

Seat No.	

M.Pharmacy (Semester – I) Examination, 2017
PHARMACEUTICS
Advanced Pharmaceutical Analysis (CGPA/CBCS)

Day and Date : Thursday, 4-5-2017 Total Marks : 70
Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three**. **(3×10=30)**

1) What is ELISA ? Explain with its types. Give its application.

2) What is a thermal analytical technique ? Give its types and applications.

3) Derive simultaneous equation for sample containing two UV absorbing drugs each of which absorb at the λ_{max} of the other.

4) Write note on X-ray diffraction and reference standard.

B. Answer **all**. **(2×20=40)**

5) Discuss the behavior of functional groups towards infrared radiations (absorption bands).

6) Explain chromatography with its types. Discuss the applications of chromatography. What is electrophoresis ?

SLR-E – 2

Seat No.	

M. Pharmacy (Semester – I) Examination, 2017
PHARMACEUTICS (CBCS/CGPA)
Advanced Pharmaceutics – I

Day and Date : Saturday, 6-5-2017 Total Marks : 70
Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three** : **(3×10=30)**

1) Enumerate the reasons for granulation. Discuss the importance of "lubricants" and "compressional forces" in tablet compression.

2) Discuss the uses of polymers in pharmaceutical formulation. Add a note on characterization of polymers.

3) Explain the various methods by which solid dispersions can be prepared.

4) Enumerate the reasons for preparing cyclodextrin complexes. How does it differ from hydrotropic solubilisation ? Add a note on co-solvency.

B. Answer the following : **(2×20=40)**

1) Explain the various theories of dissolution. How do you perform the dissolution testing of controlled Release tablets ?

2) Highlight the importance of stability studies in dosage form design. Explain the methods of improving shelf-life of pharmaceutical formulations.

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SLR-E – 4

Seat No.	

M.Pharmacy (Semester – I) Examination, 2017
PHARMACEUTICS
Advances in Drug Delivery (CGPA/CBCS)
(Elective)

Day and Date : Tuesday, 9-5-2017 Total Marks : 70
Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three**. **(3×10=30)**

1) Discuss the proteins and peptides drugs stability and regulatory perspective.

2) Classify the polymers. Discuss the various applications of polymers in controlled drug delivery system.

3) Discuss about permeation enhancers used in transdermal drug delivery system.

4) Write note on copper Intrauterine Drug Delivery System (IUD).

B. Answer the following : **(2×20=40)**

5) Discuss technologies for developing colone specific drug delivery system and evaluation thereof.

6) Describe in details methods for developing liposomal drug delivery system.

SLR-E – 12

Seat No.	

M. Pharmacy (Semester – II) Examination, 2017
ADVANCED PHARMACEUTICS – II
Pharmaceutics
(CGPA/CBCS)

Day and Date : Friday, 5-5-2017 Total Marks : 70
Time : 10.30 a.m. to 1.30 p.m.

I. Answer **any three** : **(3×10=30)**

1) Explain in detail osmotic pump with neat diagram.

2) What are different factors affecting ocular absorption of drug ? Give an account on ocular inserts.

3) Describe about permeation enhancers and evaluation of TDDS.

4) Write a note on:

A) Diseases of colon and drug absorption through colon.

B) Capsular system of pulsatile drug delivery.

II. Answer following : **(2×20=40)**

1) Explain in detail liposomes and neosomes.

2) Describe in detail buccal and nasal mucosal drug delivery system.

SLR-E – 13

Seat No.	

M.Pharmacy (Semester – II) Examination, 2017
Pharmaceutics
ADVANCED PHARMACEUTICS – III (CGPA/CBCS)

Day and Date : Monday, 8-5-2017 Total Marks : 70
Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three**. **(3×10=30)**

1) Discuss in detail on apparent volume of distribution and its significance.

2) Explain the importance of statistical consideration in data analysis of bioequivalence and Bioavailability studies.

3) Describe the concepts of renal and hepatic clearances with examples.

4) Explain the applications of Pharmacokinetics in new drug development and designing of dosage form.

B. Answer **all**. **(2×20=40)**

5) Discuss in detail the absorption of drugs through transdermal, nasal, buccal and sublingual routes.

6) What is first pass effect ? Explain the different factors affecting drug metabolism, Phase I and Phase II reactions.

SLR-E – 14

Seat No.	

M.Pharmacy (Semester – II) Examination, 2017
Pharmaceutics (CGPA/CBCS)
Elective : STERILE PRODUCT FORMULATION AND TECHNOLOGY

Day and Date : Friday, 12-5-2017 Total Marks : 70

Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three** : **(3×10=30)**

1) What is preformulation study in drug delivery system ? Explain in detail process of preformulation study for parenteral products.

2) Explain in detail importance of temperature and humidity control parameters in manufacturing of parenterals with examples.

3) Explain physicochemical properties of materials required for formulation of parenterals.

4) Explain in detail formulation and characterization of niosomes.

B. Answer the following : **(2×20=40)**

5) Discuss in detail preparation of various ophthalmic products.

6) Explain in detail formulation and evaluation of parenteral suspensions.

SLR-E – 15

Seat No.	

M.Pharmacy (Semester – II) (CGPA/CBCS) Examination, 2017
Pharmaceutics
COSMETICOLOGY (Elective)

Day and Date : Friday, 12-5-2017 Total Marks : 70

Time : 10.30 a.m. to 1.30 p.m.

I. Answer **any three** : **(3×10=30)**

1) Explain about regulatory requirements for cosmetics.

2) Describe in detail natural hair colorants and shampoo herbal cosmetics.

3) Describe in detail clinical safety protocol ocular irritation and skin sensitization.

4) Write an account on evaluation of moisturizers and sunscreen cosmetics.

II. Answer following : **(2×20=40)**

1) Explain in detail physicochemical and psychometric evaluation of cosmetics.

2) Discuss in detail manufacturing aspects for powders and compacts.

SLR-E – 16

Seat No.	

M.Pharmacy (Semester – II) Examination, 2017
QUALITY ASSURANCE
Quality Assurance Techniques – II
(CGPA/CBCS)

Day and Date : Friday, 5-5-2017 Total Marks : 70
Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three** : **(3×10=30)**

1) Name different parameters required to test during analytical method validation. Write a note on validation of effective cleaning.

2) What do you mean by trend analysis ? How it is useful in vendor validation ?

3) What qualities are tested in the training program of pharmaceutical industry ? Write a note on training.

4) What are the steps involved in the validation of software ? Explain.

B. Answer **all** : **(2×20=40)**

5) What are different types of qualifications in equipment validation ? Explain with suitable example.

6) Why validation in the pharmaceutical processes is essential ? Explain the validation of granulation process.

SLR-E – 17

Seat No.	

M. Pharmacy (Semester – II) Examination, 2017
QUALITY ASSURANCE
Quality Assurance Techniques – III (CGPA/CBCS)

Day and Date : Monday, 8-5-2017 Total Marks : 70
Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three**. **(3×10=30)**

1) Discuss the verification of qualification of dissolution apparatus.

2) What is validation of Analytical method ? Name typical analytical characteristics used in method validation.

3) Define : Active Ingredient, In-process Material, Biostatics and goal of CPCSEA.

4) What is biostatics ? Explain the graphical presentation of data with example. What is the regression analysis ?

B. Answer **all**. **(2×20=40)**

5) What are cGMPs ? Define drug product, strength and batch. Give guidelines for sampling and testing of in-process material and drug products in establishing appropriate process control. Discuss process validation.

6) What is OECD ? What are its 3R-principles ? Discuss the content of protocol for and conduct of non clinical laboratory study (FDA/GLP).

SLR-E – 18

Seat No.	

M.Pharmacy (Semester – II) Examination, 2017
QUALITY ASSURANCE (CGPA/CBCS)
Quality Control

Day and Date : Friday, 12-5-2017 Total Marks : 70

Time : 10.30 a.m. to 1.30 p.m.

A. Answer **any three** : **(3×10=30)**

1) What is Pharmaceutical equivalence and therapeutic equivalence ? Add a brief note on need of bioequivalence studies.

2) Explain with example target product profile, critical quality attributes and design space.

3) What is the importance of stability testing ? Explain in brief design for stability testing.

4) What is ANOVA ? Explain in detail the different techniques and its significance in pharmacy.

B. Answer **all** : **(2×20=40)**

5) Write in brief about the quality control for packaging materials.

6) Write short notes on :

   a) Compare and contrast QA and QC.

   b) Purity and content uniformity.
