MPA 202 T

Total No. of Questions : 14] [Total No.of Pages : 02

M. PHARMACY (Regular) DEGREE EXAMINATIONS, DECEMBER-2022

Second Semester

PHARMACEUTICAL ANALYSIS

MODERN BIO-ANALYTICAL TECHNIQUES

Time : **Three Hours** Maximum : 75 Marks

SECTION - A

Answer any FIVE Questions. 5x5 = 25 M

1. Discuss the principle involved in Solid-phase extraction.
2. Briefly explain the Cell viability assay.
3. Write the biopharmaceutical classification system and enlist the biopharmaceutical factors affecting drug bioavailability.
4. Describe the application of LC-MS in Proteomics.
5. Write a brief note on Biosimilar drug products.
6. Outline basic equipments used in cell culture lab.
7. Give an account on Microsomal assays.

SECTION - B

Answer any FIVE Questions. 5x10 = 50 M

8. Describe USFDA guidelines of Bioanalytical method validation.
9. Write a note on effect of protein binding and tissue binding interactions.
10. Give an account on
    a) Cell culture media.
    b) Cryopreservation.

[P.T.O.]

11. Discuss the in-vitro assay of Drug metabolites.

12. Define Bioavailability and discuss the methods for assessing bioavailability.

13. Discuss the importance and applications of Toxicokinetic studies.

14. Write a note on

    a) Invitro dissolution and

    b) Drug release testing.

Total No. of Questions : 14]

MPA 101 T

[Total No.of Pages : 01

M. PHARMACY DEGREE EXAMINATIONS, JULY - 2022

First Semester

PHARMACEUTICAL ANALYSIS

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Time : **Three Hours**

Maximum : **75** Marks

SECTION - A

Answer any FIVE Questions. **5x5 = 25 M**

1. Write a note on the principle involved in Flame emission and atomic absorption spectroscopy.
2. Outline the principle and instrumentation of spectrofluorimetry.
3. Briefly outline the principle of FT-NMR and ^{13}C NMR.
4. Write a short note on Qudrupole and Time of Flight.
5. Mention the principle and applications of High Performance Thin Layer Chromatography.
6. Write a brief note on capillary electrophoresis.
7. Outline the principle and pharmaceutical applications of DTA.

SECTION - B

Answer any FIVE Questions. **5x10 = 50 M**

8. Discuss the factors affecting vibrational frequencies and write the applications of IR Spectroscopy.
9. Define chemical shift. Discuss the factors influencing chemical shift.
10. Explain the general rules of Mass fragmentation with examples.
11. Write a detailed note on Ultra High Performance Liquid Chromatography.
12. Describe X-ray powder technique and Rotating crystal technique.
13. Discuss the principle and instrumentation of DSC.
14. Explain
    a) Working of potentiometry.
    b) Solvent effect in UV Spectroscopy.

Total No. of Questions : 14]

MPH/MIP/MPC/MPA/MQA/MPL/MPG/MPB 101 T

[Total No.of Pages : 02

M. PHARMACY (SUPPLE) DEGREE EXAMINATIONS, JANUARY-2022

First Semester

PHARMACEUTICS, INDUSTRIAL PHARMACY, PHARMACEUTICAL CHEMISTRY, PHARMACEUTICAL ANALYSIS, PHARMACEUTICAL QUALITY ASSURANCE, PHARMACOLOGY, PHARMACOGNOSY, PHARMACEUTICAL BIOTECHNOLOGY

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

Time : **Three Hours**

Maximum : **75** Marks

SECTION - A

Answer any FIVE Questions. **5x5 = 25 M**

1. Write the factors affecting Fluorescence.
2. Explain Beer - Lambert's Law.
3. Outline the principles of PT - NMR and 13c NMR.
4. Write the applications of Mass Spectroscopy.
5. Give a brief account on Gel electrophoresis.
6. Explain any two types of detectors used in Gas Chromatography.
7. Write the principle and pharmaceutical applications of DTA.

SECTION - B

Answer any FIVE Questions. **5x10 = 50 M**

8. Discuss the different modes of Molecular vibrations and factors affecting vibrational frequencies in IR Spectroscopy.
9. Write a note on
   a) Relaxation process in NMR.
   b) Spin Spin Coupling and Coupling constant.
10. Explain the fragmentation rules in Mass Spectroscopy.

[P.T.O.]

11. Discuss the Principle and Instrumentation of High Performance Liquid Chromatography (HPLC).

12. Explain Bragg's law and discuss the applications of X-ray diffraction.

13. Write a note on

    a) Modulated DSC and Hyper DSC.

    b) Principle and pharmaceutical applications of TGA.

14. Discuss the principle and applications of

    a) Ultra High Performance Liquid Chromatography.

    b) Flane emission spectroscopy.