Total No. of Questions : 8] P.D 3.2

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III/VI PHARM-D DEGREE EXAMINATIONS, JULY - 2022

Third Year

PHARMACEUTICAL ANALYSIS

Time : **Three Hours** Maximum : **70** Marks

Answer any FIVE Questions. **5x14 = 70 M**

All Questions carry equal marks

1. Write a brief note on
   a) ISO9000.
   b) Validation and calibration of analytical instruments.
2. a) Describe the factors affecting column efficiency, frontal and elution analysis and applications of column chromatography.
   b) Briefly outline the principle, instrumentation and pharmaceutical applications of HPTLC.
3. a) Write a note on different types of currents in Polarography and add an account on Ilkovic's equation and Polarographic wave.
   b) Give an account on electrodes used in Potentiometry and briefly outline Karl Fischer titration.
4. a) Write a note on effect of solvent on absorption spectra and discuss applications of UV Spectroscopy.
   b) Explain various sources and detectors used in IR Spectroscopy.
5. Describe the princple and applications of
   a) NMR Spectroscopy.
   b) Mass Spectroscopy.

P.T.O.

6. Write a note on

   a) Diffraction patterns and applications of X-Ray Diffraction.

   b) Optical rotator dispersion and circular dichroism in Polarimetry.

7. a) Briefly outline the instrumentation and applications of DTA.

   b) Give a brief outline on importance of Statistical Quality Control and Regulatory Control in pharmaceutical quality assurance.

8. Write a note on

   a) Derivatisation techniques and applications of Gas Chromatography.

   b) Principle and applications of paper electrophorosis.

Total No. of Questions :08]

P.D.3.2.

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III/VI Pharma.D (Regular) DEGREE EXAMINATIONS, APRIL-2019

Third Year

PHARMA-D

PHARMACEUTICAL ANALYSIS

Time: Three Hours **Maximum marks:70**

Answer any FIVE questions.

All questions carry equal marks. **5X14=70M**

1. Write in detail on
   a) Control of Quality Variation
   b) ICH Guidelines
2. Write short notes on
   a) Column chromatography
   b) Paper chromatography
3. With a neat sketch explain the instrumentation, working principle and applications of
   a) HPTLC
   b) Conductometry
4. Write in detail on principle, instrumentation, sample handling methods and applications of Gas chromatography.
5. Write short notes on
   a) Detectors used in UV spectroscopy
   b) Applications of fluorimetry
6. With a neat sketch explain the principle, instrumentation and applications of Atomic absorption spectroscopy.
7. Write principle and applications of
   a) NMR b) XRD
8. Write in brief on
   a) Beer-Lambert's law
   b) Fluorescent indicators
   c) Characteristic ions in Mass spectrum

Total No. of Questions :08]

P.D 3.2

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III/VI PHARMA-D (Regular) DEGREE EXAMINATIONS, April-2018

Third Year

PHARMA-D

PHARMACEUTICAL ANALYSIS

Time: Three Hours **Maximum marks:70**

Answer Any FIVE Questions

All Questions carry equal marks **5X14=70M**

1. Write short notes on

   a) Calibration b) Statistical quality control c) Significance of ICH guidelines

2. What is total quality management? Write in detail on principles involved in TQM. Add a note on documentation.

3. Write short notes on

   a) Paper chromatography b) Gel filtration

4. a) Enumerate various columns used in GC

   b) Write a note on ion exchange chromatography.

5. Write in detail on instrumentation, principle and pharmaceutical applications of polarography.

6. Write in detail on

   a) X-ray difraction b) Atomic absorption spectroscopy

7. Write short notes on

   a) Fluorimetric analysis b) Applications of XRD and NMR

8. Explain the principle, procedure, instrumentation and applications of DTA.

Total No. of Questions :08]

P.D 3.2

[Total No. of Pages : 01

III/VI PHARMA.D (Regular) DEGREE EXAMINATIONS, JULY- 2017

THIRD YEAR

Paper V- PHARMACEUTICAL ANALYSIS

Time: Three Hours

Maximum marks:70

Answer any FIVE questions.

All questions carry equal marks. **5X14=70M**

1. Write short notes on
   a) GLP b) ISO9000 c) TQM
2. Define validation? Write in brief on the significance of instrument validation in pharmaceutical industry. Write in detail on methods used for validation of analytical instruments.
3. Write short notes on
   a) TLC b) Electrophoresis
4. a) Enumerate various stationary phases used in column chromatography. Add a note on significance of reverse phase chromatography.
   b) Discuss the factors affecting column efficiency.
5. Write in detail on instrumentation, principle and pharmaceutical applications of potentiometric analysis.
6. Write in detail on
   a) Beer-Lambert's law b) DSC
7. Write short notes on
   a) Flame phorometry b) Mass fragmentation
8. Explain the energy transistions in IR spectroscopy. With a neat block diagram explain the instrumentation. Add a note on applications of IR spectroscopy in pharmaceutical analysis.

Total No. of Questions :08] **P.D 3.2**

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III/VI Pharm.D (Regular) DEGREE EXAMINATIONS, JULY/AUG-2016

Paper II- PHARMACEUTICAL ANALYSIS

Time: Three Hours **Maximum marks:70**

Answer any FIVE questions.

All questions carry equal marks.

1. a) Define calibration and validation
   b) Give a note on ICH guidelines.
   c) What are the sources of quality variation in pharmaceutical industry.
2. Write principle, instrumentation and applications of HPLC.
3. Write the advantages of
   a) Total quality management
   b) HPTLC over TLC
   c) Amperometry
4. Explain the principles of the following with diagrams.
   a) NMR spectroscopy
   b) Mass spectroscopy
   c) IR spectroscopy
5. Write the applications of
   a) Potentiometry
   b) Amperometry
   c) Polarography
   d) Conductometry
6. Give a note on
   a) Factors affecting column efficiency
   b) Derivatisation in GC
   c) Differentiate Electrophoresis Gel chromatography

P.T.O

7. Write the instrumentation of

a) UV spectroscopy

b) IR spectroscopy

c) Gas chromatography

d) HPTLC

8. Write a brief note on

a) Rf value

b) Theoritical plates

c) Karl Fischer titration

d) Ilkovic equation

e) Auxochromes

f) Bathochromic & Hypsochromic shift

g) Hypo and hyper chromic shift