

Q.P. Code : 39090

[Time: 2½ Hours]

[Marks: 60]

Please check whether you have got the right question paper.

- N.B: 1. All questions are compulsory.
2. Use of log tables/non-programmable calculator is permitted

Q.1 A) Attempt ANY TWO of the following:

08

- Discuss the classification of drugs based on their therapeutic action.
- What is a pharmaceutical formulation? Discuss in detail any two types of pharmaceutical formulation.
- List the sources of impurities in pharmaceutical products.
- Explain the methods used to control the quality of pharmaceutical preparations.

B) Outline the different routes of drug administration and explain any one route in detail. 04

OR

B) What are the various dosage forms of drugs? Explain with reference to liquid and semi solid forms. 04

Q.2 A) Attempt ANY TWO of the following :

08

- Explain the use of HPLC for reaction monitoring of a drug.
- What is proximate analysis? Explain the various parameters of proximate analysis.
- Define limit tests. Discuss the limit test for Arsenic.
- What is meant by impurity profiling? Discuss the various analytical techniques used to carry out impurity profiling of a drug.

B) Discuss the pharmacokinetic parameters which are used to determine the bioavailability of a drug. Explain the need to determine the bioavailability of a drug. 04

OR

B) Describe the different methods for disintegration studies of pharmaceutical products. 04

Q.3 A) Attempt ANY TWO of the following :

08

- What are narcotics? Explain the method used for determination of narcotics in body fluids.
- Describe the test used to detect the presence of blood stains in forensic samples.
- How are metabolites of drugs determined in blood samples of addicts?
- What are CNS depressants? How are barbiturates isolated, identified and estimated in forensic samples?

B) Discuss how LSD and cannabis are analysed from blood samples. 04

OR

B) How are pesticides identified and detected in post mortem samples. 04

TURN OVER

Q.4 A) Attempt ANY TWO of the following :

08

- i) What are cosmetics? Give the various functions of cosmetics.
 - ii) Distinguish between deodorants and antiperspirants.
 - iii) What are the components of face powder? How is Calcium and Titanium estimated from face powder?
 - iv) How will you determine the acetone soluble components in lipsticks?
- B) Explain the process for estimation of non-volatile matter in creams and lotions using IR spectroscopy.**

04

OR

B) Describe the estimation of dithioglycolic acid from cold permanent wavers.

04

Q.5 Attempt ANY FOUR of the following :

12

- i) Explain the importance of Research and Development department in pharmaceutical industries.
- ii) Explain the different types of excipients present in syrups, giving suitable examples.
- iii) State and explain the different factors causing the deterioration of drugs.
- iv) How is U V spectroscopy useful for analysis of drugs?
- v) Explain the importance of Analytical Chemistry in the field of forensic science.
- vi) How is amphetamine estimated?
- vii) Outline the method of evaluation of additives in cosmetics.
- viii) Explain the method of estimation of glycerol in vanishing cream.