

Time: 2 ½ Hours

Total Marks: 60

- N.B.** 1) All questions are compulsory.
2) Figures to the right indicate maximum marks.

Q. 1 A) Attempt any **two** of the following:

(8)

- Discuss the classification of drugs based on their pharmacological action.
- Explain the role of FDA in pharmaceutical industries.
- How are impurities introduced in raw material?
- Describe the methods used to test the quality of finished product in pharma industry

B) Write a note on dosage forms of orally administered drugs.

(4)

OR

B) Explain the importance of quality control in pharmaceutical industries

(4)

Q. 2 A) Attempt any **two** of the following:

(8)

- Explain the use of IR spectroscopy in the analysis of drugs.
- Discuss the tube dilution method used for analysis of vitamins.
- What are limit tests? Give limit test for arsenic.
- Explain the importance of stability studies of pharmaceutical preparations. What is meant by long term and short term stability studies?

B) How is in vitro dissolution test carried out for a tablet?

(4)

OR

B) Define the term 'bioavailability' of a drug. Give its significance.

(4)

Q.3A) Attempt any **two** of the following:

(8)

- "Analytical chemistry is an important tool to identify drug abuse." Justify the statement.
- Explain how the presence of blood is detected from samples in forensic laboratories.
- Describe the method used for determination of pesticides in stomach wash.
- How are metabolites of drugs determined in urine samples of addicts?

B) Explain the method for determination of mercury in post mortem samples.

(4)

OR

B) What are CNS depressants? Explain giving examples

(4)

Q.4 A) Attempt any **two** of the following:

(8)

- What are cosmetics? What properties should they possess?
- Give the methods for estimation of chlorides and sulphates in deodorants.
- Discuss the method used for the estimation of barium in face powder.
- What are the constituents of lipsticks? How are the lakes and fillers determined?

B) How is glycerol estimated from vanishing creams?

(4)

OR

B) List the components of hair tonic. Describe a method for determination of pyrogallol in hair tonic.

(4)

Q.5 Attempt any **four** of the following:

(12)

- (i) Explain the terms adulterated drug and spurious drug.
 - (ii) What are the different types of excipients present in tablets? Give suitable examples.
 - (iii) How is HPLC applied in analysis of pharmaceutical formulations?
 - (iv) Explain the role of polymers in pharmaceuticals.
 - (v) What are narcotics? Describe the detection and estimation of cocaine.
 - (vi) How is amphetamine estimated?
 - (vii) Distinguish between deodorants and antiperspirants.
 - (viii) Give a method for the determination of non-volatile matter in lotions.
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