

[Time:2 ½ Hrs ]

[ Marks:60 ]

Please check whether you have got the right question paper.

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

- Q. 1** (A) Attempt **ANY TWO** of the following: **(08)**  
i) Write a note on sources of impurities in pharmaceutical raw materials.  
ii) What is FDA? Describe its main functions.  
iii) Define Drug. Explain the classification of drugs based on their mode of action.  
iv) Write a note on solid dosage forms.
- (B) Attempt **ANY ONE** of the following: **(04)**  
i) Give the advantages and disadvantages of topical drug dosage forms.  
ii) Explain the terms: Spurious drugs, Misbranded drugs.
- Q. 2** (A) Attempt **ANY TWO** of the following: **(08)**  
i) Describe the different techniques of Proximate analysis.  
ii) Explain the use of spectrophotometer for the analysis of drugs.  
iii) What are limit tests? Describe the limit test for chlorides.  
iv) Explain the significance of bioavailability studies for drugs.
- (B) Attempt **ANY ONE** of the following: **(04)**  
i) Write a note on chromatographical assays of drugs.  
ii) Write a note on novel drug delivery systems.
- Q. 3** (A) Attempt **ANY TWO** of the following: **(08)**  
i) What is Analytical Toxicology? Give its importance.  
ii) Justify the statement "Analytical Chemistry is an Important part of Forensics".  
iii) Define Hallucinogens. Give examples and test for identification of anyone of them  
iv) Drug abuse can be detected by testing urine or blood of the suspect-Explain the statement.

- (B) Attempt **ANY ONE** of the following: (04)
- Describe the test for determination of Benzodiazepines.
  - Write a note on DNA profiling.

- Q. 4** (A) Attempt **ANY TWO** of the following:
- Write a note on evaluation of cosmetics.
  - What are deodorants and antiperspirants? Give the main differences between them.
  - Give the method for analysis of fatty acids in face powder.
  - Explain the process for determination of lakes and fillers in lipstick.

- (B) Attempt **ANY ONE** of the following: (04)
- What is the role of sodium perborate in hair tonic? Describe a method for analysis of sodium perborate
  - Write a note on ash analysis of creams and lotions.

- Q. 5** Attempt **ANY FOUR** of the following: (12)
- Describe the advantages of standardisation of finished product in pharmaceutical industry
  - Give the functions of: emulsifier and flavoring agents in formulation.
  - Write a note on stability studies
  - What is impurity profile of drug? Give its importance.
  - Describe a method for detection of insecticides and pesticides in post mortem samples.
  - How are blood stains detected on a crime scene?
  - Describe the estimation of boric acid from deodorants.
  - Explain the process for estimation of pyrogallol in hair tonic.

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