

Analytical Chemistry IV

Q.P. Code : 39089

[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:

- i) Discuss the classification of drugs based on their pharmacological action.
- ii) Explain 'Monograph' with respect to a pharmaceutical product.
- iii) How are impurities introduced in drugs during storage?
- iv) Describe the methods used to test the quality of finished product in pharmaceutical industry.

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

04

OR

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

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

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- i) Explain the use of IR spectroscopy in the analysis of drugs.
- ii) Discuss the tube dilution method used for analysis of vitamins.
- iii) Describe the limit tests carried out to identify the commonly found acid radical impurities.
- iv) Discuss in detail the plate diffusion method used for testing the antimicrobial activity of pharmaceutical products.

B) Explain the importance of stability studies of pharmaceutical preparations. What is meant by long term and short term stability studies?

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OR

B) Define the term 'bioavailability' of a drug. How is it determined?

04

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

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- i) Discuss the role of Analytical Chemistry in forensic science.
- ii) Explain how the presence of semen and blood is detected from samples in forensic laboratories.
- iii) What are CNS depressants? Explain giving examples.
- iv) How are metabolites of drugs determined in urine samples of addicts?

B) Explain the method for determination of pesticides in post mortem samples?

04

OR

B) Describe the method used for determination of cyanide in stomach wash.

04

TURN OVER

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

- i) What are cosmetics? How is propylene glycol content in cosmetics determined?
- ii) Give the methods for estimation of chlorides and sulphates in deodorants.
- iii) Discuss the method used for the estimation of fatty acids in face powder.
- iv) What are the constituents of lipsticks? How is the ash value of lipsticks determined?

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B) How is glycerol estimated from vanishing creams?

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OR

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

04

Q.5 Attempt ANY FOUR of the following:

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- i) Explain the difference between 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) Describe the different methods used for disintegration studies of pharmaceutical products.
- v) What are narcotics? Describe the detection and estimation of heroin.
- vi) How is amphetamine estimated?
- vii) Distinguish between deodorants and antiperspirants.
- viii) Give a method for the determination of water content in cosmetics.