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Total No. of Section : 03

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Code No. : 04/302(B)

Fourth Semester Examination, May - 2018

M.Sc. CHEMISTRY

Paper - III

ANALYTICAL CHEMISTRY

Time : 3 Hrs.

Max.Marks : 80

Note :Section 'A', consists of 10 very short answer type questions, all of which are compulsory and should be attempted first. Section 'B' consists of four short answer type questions with internal options. Section 'C' consists of four long answer type questions with internal choice.

Section-'A'

Answer the following very short-answer-type questions in one or two sentences. (2x10=20)

- Q-1. Define the term mean with suitable example.
- Q-2. What is RSD?
- Q-3. Write a method for cleaning glassware.
- Q-4. What is the composition of blood?
- Q-5. Define the term Narcotic drug with its effect on Human body.
- Q-6. What are the common food adulterants?
- Q-7. Define flash point.
- Q-8. Give example of the chlorinated pesticides.
- Q-9. What is water gas?
- Q-10. Give examples of tracer techniques.

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Section-'B'

Answer the following short-answer-type questions with word limit 200-250. (5×4=20)

Q-1. Explain the absolute error and relative error.

OR

Replicate water samples are analysed for water hardness with the following results :

102.4, 102.6, 103.1, 102.3, PPM of CaCO_3 . Calculate the standard deviation of the value.

Q-2. Write the method of clinical analysis of blood urea nitrogen.

OR

Write short notes on screening of drugs.

Q-3. Give a procedure to analyse Ca and Na in food sample.

OR

Give a brief account of contamination of food stuffs.

Q-4. Explain the ultimate analysis of solid fuels.

OR

Explain neutron activation analysis.

Section-'C'

Answer the following long-answer-type questions with word limit 400-450. (10×4=40)

Q-1. Describe a method for calibration of Burette and Pipette.

OR

Describe determinate and indeterminate errors with suitable examples. How random error in analysis can be minimized.

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Q-2. Describe method of determining albumin, globulins in blood serum.

OR

Describe the Narcotics and dangerous drugs with effect on human health. Differentiate between drugs and narcotics.

Q-3. Describe the thin layer chromatography for identification of pesticides in food products.

OR

List the name of common microorganism which generally contaminate the food stuffs. Describe the diseases caused by the each microorganism.

Q-4. How do you determine the calorific value of producer gas and water gas.

OR

Describe the counting techniques with special reference of GM counter and proportional counter.

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