



B.Sc. V Semester (CBCS) Degree Examination, May/June - 2019

CHEMISTRY - VI

Paper - 5.2

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates:

- 1) Section - A contains questions from Inorganic, Organic and Physical chemistry.
- 2) Section - B contains questions from Inorganic, Section - C contains questions from Organic Section - D contains questions from Physical chemistry.
- 3) Answer all the FOUR sections A, B, C and D.

SECTION - A

Answer any **TEN** of the following.

(10×1=10)

1. Define standard deviation.
2. Define Radioactive equilibrium.
3. What is artificial radioactivity?
4. Define absolute error.
5. What is Iodine number?
6. What is mutarotation?
7. Give any use of Teflon.
8. Define chromophore.
9. Define Ionic conductance.
10. How does specific conductance varies with dilution.
11. Define degree of polymerisation.
12. Define number average molecular weight.

SECTION - B

Answer any **TWO** of the following.

(2×10=20)

13. a) Define accuracy, absolute error and median. (6)
- b) Explain systematic and random errors. (4)

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14. a) Give the classification of solvents with suitable examples. (6)
b) Write any two chemical reactions in liquid ammonia. (4)
15. a) Describe nuclear shell model. (6)
b) Explain nuclear stability on the basis of N/P ratio. (4)

SECTION - C

Answer any TWO of the following :

(2×10=20)

16. a) Explain any three synthetic applications of ethyl acetoacetate. (6)
b) Describe Killiani - fischer synthesis of aldoses. (4)
17. a) Explain the method of determination of iodine number of oils and fats. (6)
b) Give the classification of dyes based on structure. (4)
18. a) Describe the manufacture of soap by hydrolysis process. (6)
b) Write the synthesis and uses of nylon. (4)

SECTION - D

Answer any TWO of the following :

(2×10=20)

19. a) Explain the determination of transport number by Hittorf method for non-attackable electrodes. (6)
b) Explain Debye-Huckel-Onsager equation for strong electrolytes. (4)
20. a) Explain the method of determination of molecular weight of polymers by viscosity method. (6)
b) State Kohlrausch law & give two applications. (4)
21. a) Describe conductometric titration of (6)
i) Strong acid & strong base
ii) Weak acid & strong base
b) Explain number average and mass average molecular weights. (4)