



0092180

K19U 2460

Reg. No. :

Name :



III Semester B.Sc. Degree (CBCSS-Reg./Sup./Imp.)

Examination, November - 2019

(2014 Admn. Onwards)

COMPLEMENTARY COURSE IN CHEMISTRY

3C03 CHE(BS) : CHEMISTRY (FOR BIOLOGICAL SCIENCES)

Time : 3 Hours

Max. Marks : 32

SECTION-A

Answer **All** questions. Each question carries **1** mark. (5×1=5)

1. What is meant by isolated systems?
2. Define the term conformation.
3. Name the functional group in
 - a) Carboxylic acid
 - b) Amide
4. What is meant by chirality ?
5. What are chelating ligands?

SECTION-B

Answer any **Four** questions. Each question carries **2** marks. (4×2=8)

6. Name the following
 - a) $Zn_2[Fe(CN)_6]$
 - b) $[Cr(NH_3)_6]Cl_3$
7. Predict the products $CH_3 - CH = CH_2 + HBr \rightarrow$
8. What is meant by heterolysis? Give one example.
9. What are free radicals? Give any two reaction in which they are formed.
10. What are isochoric and isobaric processes?

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11. The boiling point of diethyl ether is 35°C . Its heat of vaporization at its boiling point is 27.2 KJ/mole . Calculate entropy of vaporization.

SECTION-C

Answer any **Three** questions. Each question carries **3** marks. $(3 \times 3 = 9)$

12. Write down Gibbs Helmholtz equation. What are the criterion for spontaneity?
13. Discuss Werners theory of coordination.
14. Discuss the optical isomerism of tartaric acid.
15. Explain peroxide effect with a suitable example.
16. Give an account of formaldehyde based plastics.

SECTION-D

Answer any **Two** questions. Each question carries **5** marks. $(2 \times 5 = 10)$

17. Discuss the factors affecting stability of complexes.
18. Explain with mechanism the various electrophilic substitution reactions of benzene.
19. a) Derive a relation between C_p and C_v .
b) State and explain second law of thermodynamics.
20. Write notes on
a) co polymers
b) biodegradable polymers.

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