



Reg. No. :

Name :



K19U 2217

V Semester B.Sc Degree (CBCSS- Reg./Sup./Imp.) Examination,

November-2019

(2014 Admn. Onwards)

CORE COURSE IN CHEMISTRY

5B 07 CHE : INORGANIC CHEMISTRY-I

Time : 3 hrs

Max. Marks : 40

SECTION - A

Answer **all** questions. Each question carries **one** mark. (4×1=4)

1. What is meant by inert pair effect?
2. What are pseudohalogens?
3. What are silicones?
4. List any four oxoacids of halogens.

SECTION - B

Answer any **seven** questions. Each question carries **two** marks.(7×2=14)

5. What are the different types of inter halogen compound's? Give example for each.
6. How is Ti boride prepared?
7. Give the hybridisation and geometry of X_6OF_4
8. Account for the higher tendency of transition metals to form complexes.
9. Comment on the basic nature and thermal stability of hydroxides of alkalimetals.
10. Give the reactions of diborane with NH_3 .
11. Give the chemical formula of zeolite. Explain its use.
12. How is boric acid prepared? What happens when it is heated?
13. Give the structure of BCl_3 and $AlCl_3$.
14. What are refractory carbides? Give examples.

P.T.O.

**SECTION - C**

Answer any **four** questions. Each question carries **three** marks. (4×3=12)

15. How will you calculate the electronegativity using Paulings and Mullikens method?
16. Explain the characters of Solutions alkalimetals in liquid ammonia.
17. Describe the general characters of transition metals.
18. Give the preparation and structure of any three sulphides of phosphorous.
19. Show that ferrocene is more aromatic than benzene.
20. What are carbides? How are they classified?

SECTION - D

Answer any **two** questions. Each question carries **five** marks. (2×5=10)

21. Discuss the general properties of transition metals.
22. Give an account of phosphorous based polymers.
23. a) What are crown ethers and cryptates?
b) Discuss the classification and preparation of different types of hybridides.
24. Give the preparation and structures of
a) FeCO_5 b) Fe_2CO_9 c) NiCO_4 d) MnCO_5