GOVERNMENT COLLEGE (A), RAJAHMUNDRY
I B.Sc. ANALYTICAL CHEMISTRY
SEMESTER-II
MODEL PAPER (From 2023-234)
Course - 3: GENERAL AND INORGANIC CHEMISTRY

Time: $2^1/_2$ hrs. **Maximum Marks: 50**

PART- A

Answer ALL the questions. Each carries SEVEN marks **5 x 7 = 35 M**

1. What are silicones? Write the classification, preparation and applications of Silicones.

(OR)

2. Explain the preparation and structure of Borazole.

3. Explain the classification of oxides based on oxygen content.

(OR)

4. Explain the preparation and structures of AX_5 and AX_7 type Inter halogen compounds.

5. Explain the following characteristic properties of d-block elements.
   i. Ability to exhibit variable oxidation states
   ii. Ability to form complex compounds.

(OR)

6. Write short notes on the following.
   i. Catalytic properties
   ii. Magnetic properties.

7. What is Lanthanide contraction? Explainthe consequences of Lanthanide contraction .

(OR)

8. Explain the separation of Lanthanides by ion exchange method.

9. Write the preparation and synthetic applications of Grignard reagents.

(OR)

10. Explain the preparation and synthetic applications of R-Li.

PART- B

Answer any FIVE of the following questions. Each carries THREE marks 5 x 3 = 15 M

11. Explain the structure of $P_3N_3Cl_6$.

12. Explain the preparation and the structure of Diborane

13 .Write a short note on pseudo halogens.

14. Describe the classification of oxides based on chemical behavior.

15. Explain the abnormal electronic configurations of Cr and Cu.

16. Write a short note on Latimer diagrams.

17. Write the differences between Lanthanides and Actinides.

18. Explain the classification of Organo metallic compounds.