

# Gurudas College

CU B.Sc. Practical Examination, 2021

Subject-CEMA, SEM-VI

Paper- CC-6-13-P

Time: 1.5 hrs

Full Marks: 30

Answer any ten questions

10 x 3 = 30

1. Write the colours of the bead both in oxidizing and reducing flames and concerned reactions for  $\text{Cu}^{2+}$  ion in borax-bead test.
2. Write the method and reactions for identifying  $\text{Cl}^-$  ion by chromyl chloride test.
3. How will you identify  $\text{Mn}^{2+}$  in presence of  $\text{Cr}^{3+}$  by oxidative fusion test?
4. Write the method and concerned reactions for the determination of  $\text{SO}_4^{2-}$  and  $\text{PO}_4^{3-}$  in a sample.
5. How will you separate  $\text{NO}_3^-$  and  $\text{NO}_2^-$  in a mixture of both?
6. How will you differentiate  $\text{Fe}^{2+}$  and  $\text{Fe}^{3+}$  by chemical test?
7. What do you mean by micro, semi-micro and macro analysis of inorganic chemical salts? In undergraduate laboratories which method is being encouraged to follow now-a-days and why?
8. On dry test tube heating, you found a gas evolved with smell of burnt sulphur which turned acidified  $\text{K}_2\text{Cr}_2\text{O}_7$  paper green. Which radical may be present? Write the relevant reactions.
9. Why in the detection of  $\text{F}^-$ , the water drops become turbid when held over the issuing gas? Explain showing the reactions.
10. Write the name and composition of the pink coloured compound formed when  $\text{S}^{2-}$  is detected using sodium nitroprusside.
11. Write the relevant reactions for the detection of borate radical. How can you ensure the presence of  $\text{H}_3\text{BO}_3$ ?
12. What is the confirmatory test for the detection of nickel? Give the reactions involved and show the structure of the product.
13. How can you confirm the presence of  $\text{Al}^{3+}$  by suitable spot test? Describe the test.
14. What happens when  $\text{MnSO}_4$  in nitric acid medium is treated with  $\text{PbO}_2$ ? Write the reactions.