

U.G. 1st Semester Examination – 2020
(BLENDED MODE)
CHEMISTRY
[PROGRAMME COURSE]
Course Code: CHEMGE-1
(Inorganic & Organic Chemistry)
[Practical]

Full Marks: 20

Time: 2 Hours

The figure in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Group-A (Inorganic chemistry)

1. Answer any one from the following: 10×1 = 10

- a. What do you mean by primary and secondary standard solution? Between $K_2Cr_2O_7$ and $KMnO_4$ which is primary and secondary standard solution and why? Write down the name and structure of an acid- base & a redox indicator.

2 + 2 + 4 + 2

- b. Write down the chemical formula of Mohr salt. What weight of anhydrous Na_2CO_3 required to prepare 250 ml ($\frac{N}{10}$) solution? Show by calculation. How would you prepare 2000 ml 2 (N) H_2SO_4 from concentrated H_2SO_4 ? Write down the principle for Estimation of carbonate and bicarbonate present together in a mixture.

1 + 2 + 2 + 5

Group-A (Organic chemistry)

2. Answer any one from the following: 10×1 = 10

- a. What is diazo-coupling reactions? How can you identify aniline by chemical test? What is Brady's reagent? Between acetone and benzaldehyde which one reacts faster with Brady's reagent? How can you identify -OH functional group present in an organic compound? Explain with proper example.

2 + 2 + 1 + 2 + 3

- b. What is Lassaigne's test. Give proper equation for this test. How can you distinguish between aldehyde and ketone by a chemical test? How can you detect -NO₂ group where NH₂ group is present simultaneously in an organic compound? Explain with proper equation of esterification test.

1 + 2 + 2 + 2 + 3