

U.G. 2nd Semester Examination – 2020
(BLENDED MODE)
CHEMISTRY
[PROGRAMME COURSE]
Course Code: CHEMGP-2
(Physical & Inorganic 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 (Physical chemistry)

1. Answer any **one** from the following: 10×1 = 20
- a)** Define surface tension. Write down the C.G.S. and S.I. units of surface tension. What is the effect of temperature on surface tension? Write down the principle for determination of surface tension of an unknown liquid by drop-weight method.
2 + 2 +2 + 4
- b)** Define viscosity co-efficient. How does viscosity vary with temperature for a liquid and gas? Write down the principle for determination of viscosity co-efficient of a liquid using an Ostwald's viscometer. Give an example of a pseudo unimolecular reaction.
2 + 3 +4 + 1

Group-B (Inorganic chemistry)

2. Answer any **one** from the following: 10×1 = 20
- a)** Define semi-micro analysis. What are the advantages of this analysis? Which acid is used for flame test for basic radicals and why? What is Borax bead? Give proper equation for identification of copper ion by Borax bead test. Write down two basic radicals which are identified by Fusion test.
1 + 2 +3 + 3 + 1
- b)** Write down the wet test for identification chloride ion, sulphate ion and nitrate ion, nickel ion, and ammonium ion with proper equation. 2 × 5