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3:40 - 4:00

## Ramananda College

Internal Assessment Examination of SEM-II (GE) 2022

Course code: UG/CHEM/203/GE-2

Time: 30 min

Full Marks: 10

(Chemistry)

Answer any two of the following questions:

- 1) Derive the kinetic theory of gas equation,  $PV = \frac{1}{3}mnc^2$ . 5
- 2) (a) Arrange most probable, average and r.m.s molecular speed in increasing order. (b) Draw and explain briefly the Andrew's curve of carbon dioxide. 2 + 3 = 5
- 3) (a) Compare the structure of ammonia and water by VSEPR theory. (b) Why  $H_2O$  is liquid but  $H_2S$ ? 3 + 2 = 5
- 4) (a) Draw the MO diagram of  $O_2$  and calculate the bond order. (b) Write the general electronic configuration and stable oxidation state of group 16 elements. 3 + 2 = 5