# BOARD OF INTERMEDIATE EDUCATION (AP)

## HALF YEARLY EXAMINATIONS - 2021

## JUNIOR INTER CHEMISTRY

### MODEL PAPER - 2 (English Version)

**Time: 3 Hours** **Max.Marks: 60**

### SECTION - A

**Note: i) Very short answer type questions.** **10 × 2 = 20**

**ii) Answer All questions.**

**iii) Each questions carries 2 marks.**

**1.** How many no.of moles of glucose present in 540 g of glucose?

**2.** Calculate the mass percent of the different elements present in sodium sulphate ($Na_2SO_4$).

**3.** How many significant figures are present in the following?

a) 0.0025 b) 126.000 c) 208 d) 2.0034

**4.** State Boyle's Law.

**5.** Why the gas constant (R) is called universal gas constant?

**6.** What is Octet rule?

**7.** Define dipole moment.

**8.** IE of Oxygen is less than Nitrogen Explain.

**9.** Write the outer shell electronic configuration of inner transition elements.

**10.** Write the difference between orbit and orbital.

### SECTION - B

**Note: i) Short answer type questions.** **6 × 4 = 24**

**ii) Answer any Six questions.**

**iii) Each questions carries 4 marks.**

**11.** Write the postulates of kinetic theory of gases.

**12.** State Graham's law and Dalton's law of partial pressures.

**13.** Explain photo electric effect.

**14.** Write the characteristic properties of transition elements.

**15.** Define molarity. Calculate the moles of NaOH in the solution prepared by dissolving 4g of NaOH in 250 mL of water.

**16.** Balance the following redox reaction by ion - electron method in basic medium.

$MnO_4^- + I^- \longrightarrow MnO_2 + I_2$

**17.** What is a hydrogen bond? Write about different types of hydrogen bonds.

**18.** Explain the hybridisation involves in $SF_6$ molecule.

**SECTION - C**

**Note: i) Long answer type questions.** **2 × 8 = 16**

**ii) Answer any Two questions.**

**iii) Each questions carries 8 marks.**

**19.** Write an essay on s, p, d and f blocks.

**20.** Give an account of VSEPR theory and its applications.

**21.** a) What are the postulates of Bhor's model of H - atom?

b) Write the differences between emission and absorption spectrum.

**Writer: P. Trinadha Raja**