

CHEMISTRY

Paper – I

Time Allowed : **Three Hours**

Maximum Marks : **200**

Question Paper Specific Instructions

Please read each of the following instructions carefully before attempting questions :

*There are **EIGHT** questions in all, out of which **FIVE** are to be attempted.*

*Questions no. 1 and 5 are **compulsory**. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two Sections A and B.*

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

*Answers must be written in **ENGLISH** only.*

Unless otherwise mentioned, symbols and notations have their usual standard meanings.

Assume suitable data, if necessary and indicate the same clearly.

Neat sketches may be drawn, wherever required.

$$h = 6.626 \times 10^{-34} \text{ Js}$$

$$R = 8.314 \text{ JK}^{-1} \text{ mol}^{-1}$$

$$c = 3 \times 10^8 \text{ ms}^{-1}$$

$$N_A = 6.023 \times 10^{23} \text{ mol}^{-1}$$

$$m_e = 9.1 \times 10^{-23} \text{ kg}$$

$$k_B = 1.38 \times 10^{-23} \text{ JK}^{-1}$$

$$\pi = 3.14$$

$$F = 96500 \text{ C mol}^{-1}$$

$$1 \text{ atm} = 101325 \text{ Pa}$$