Total No. of printed pages = 6

END SEMESTER EXAMINATION – 2019

Semester : 2nd (New)

Subject Code : Sc-203

CHEMISTRY - II

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Instructions :

1. *All* the questions of PART – A are compulsory.
2. Answer any *five* questions from PART – B.

PART – A

Marks – 25

1. Fill in the blanks : 1×10=10

   (a) Earth is protected from UV radiation by _____.

   (b) A mineral used in the extraction of metal is called _____.

   (c) Water gas is a mixture of _____.

[Turn over

(d) The substance used to reduce the early initial setting of cement is _____.

(e) Grease is a _____ lubricant.

(f) Galvanisation is a process of coating iron sheets with a thin layer of _____.

(g) Bakelite is an example of _____ resin.

(h) The organic gas used in welding is _____.

(i) Full form of T.O.C is _____.

(j) Bauxite is an ore of _____.

2. Write true or false : 1×10=10

(a) Flux combine with gangue to form slag.

(b) Glass is a mixture of metallic acetates.

(c) The viscocity of a lubricant is measured by a barometer.

(d) Monomer unit in Teflon is tetrachloro-ethylene.

(e) Alkanes are also called paraffin.

(f) C.N.G is a polluted fuel.

(g) Corrosion reaction is an example of oxidation reaction.

(h) Roasting is applicable to carbonate ore.

(i) TEL is an antiknock compound.

(j) Tolune is a heterocyclic compound.

3. Choose the correct answer : 1×5=5

(a) Which of the following is a liquid form of aerosol ?

(i) Fume (ii) Dust

(iii) Mist (iv) Smoke

(b) Brass is a

(i) Metal (ii) Non-metal

(iii) Metalloid (iv) Alloy

(c) For heavy cutting, the effective lubricants are

(i) Coconut oil (ii) Cutting oil

(iii) Kerosene oil (iv) Diesel oil

(d) Vulcanization of rubber is carried out by adding

(i) phosphorus (ii) carbon

(iii) sulphur (iv) nitrogen

(e) An isomer of Ethanol is

(i) Methanol (ii) Dimethyl ether

(iii) Acetone (iv) Diethyl ether.

PART – B

Marks – 45

4. (a) What is Greenhouse effect ? 2

(b) What is primary and secondary pollutants ? Explain with examples. 3

(c) Compare open-hearth process and Bessemer process for manufacturing steel. 4

5. (a) Give the % composition and uses of Brass and Duralumin. 3

(b) What is knocking and octane number ? Explain. 3

(c) Differentiate between high temperature and low temperature carbonization of coal. 3

6. (a) Write the average chemical composition of glass. 2

(b) What is Portland cement ? How it is manufactured by the wet process ? 1+3=4

(c) What is lubricating emulsion ? Write the charecteristics of a good lubricant. 1+2=3

7. (a) Define polymerisation. Differentiate between Addition and Condensation polymerisation with example. 2+3=5

(b) What is corrosion ? Give the mechanism of rusting of iron by electrochemical theory. 1+3=4

8. (a) Give the structural formula of the following compounds : 3

(i) propane1,2,3 triol

(ii) 2,2,5 trimethyl heptane

(iii) Ethanoic acid

(iv) Acid rain.

(b) Write the functional group of Ether and Aldehyde. 2

(c) How Methane is prepared in the laboratory ? Discuss its properties and uses. 2+2=4

9. Discuss the following (any *three*) : 3×3=9

(i) Isomerism in organic compounds

(ii) Refining of petroleum

(iii) Thermite welding

(iv) Acid rain.