

NOTE: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink. Cutting or filling two or more circles will result in zero mark in that question.

Q1. 12

1. Density of water is maximum at temperature.

- (A) 0°C (B) 4°C (C) 100°C (D) 125°C

2. Which gas protects the earth's surface from ultraviolet radiations?

- (A) CO_2 (B) CO (C) N_2 (D) O_3

3. The most important oligosaccharide is:

- (A) sucrose (B) glucose (C) fructose (D) maltose

4. Pitch is black residue of:

- (A) coke (B) coal tar (C) coal (D) coal gas

5. The conjugate acid of HPO_4^{2-} is:

- (A) PO_4^{3-} (B) $\text{H}_2\text{PO}_4^{2-}$ (C) H_4PO_4 (D) H_3PO_4

6. For the given reaction the unit of K_c is: $\text{H}_2 + \text{I}_2 \rightleftharpoons 2\text{HI}$

- (A) $\text{mol}^{-2}\text{dm}^6$ (B) mol dm^3 (C) mol dm^{-3} (D) none of these

7. When NaHCO_3 is heated it forms:

- (A) CO_2 (B) $\text{Ca}(\text{OH})_2$ (C) CaCO_3 (D) CaO

8. A disease that causes bone and tooth damage is:

- (A) fluorosis (B) hepatitis (C) cholera (D) jaundice

9. Pentahydroxy ketone is called:

- (A) glucose (B) starch (C) sucrose (D) fructose

10. Oxidation of alkenes produce:

- (A) glyoxal (B) glycol (C) oxalic acid (D) formic acid

11. The acid present in sour milk is:

- (A) lactic acid (B) formic acid (C) tartaric acid (D) uric acid

12. A reverse reaction is one that:

- (A) which proceeds from left to right (B) in which reactants react to form products
(C) which slows down gradually (D) which speeds up gradually

Roll No.(in Figures): (in Words):

Maximum Marks: 48

SUBJECTIVE TYPE

Time Allowed :1.45 Hours

(PART - I)

Q2. Write short answers to any FIVE (5) questions. 5×2=10

- (i) Write down two characteristics of reversible reaction.
- (ii) Why at equilibrium state reaction does not stop?
- (iii) What is meant by the extent of a reaction?
- (iv) What is relationship between active mass and rate of reaction?
- (v) Write down two physical properties of acids.
- (vi) Why BF_3 behaves as Lewis acid.
- (vii) Write two uses of sulphuric acid.
- (viii) How will you justify that salts are neutral compounds?

Q3. Write short answers to any FIVE (5) questions. 5×2=10

- (i) What is destructive distillation?
- (ii) Define functional group.
- (iii) Write down the importance of natural gas.
- (iv) Define open chain hydrocarbons. Give one example.
- (v) Write two uses of ethane.
- (vi) Write two uses of carbohydrates.
- (vii) What are essential amino acids?
- (viii) What is the difference between ghee and oil?

Q4. Write short answers to any FIVE (5) questions. 5×2=10

- (i) Write the names of four natural systems of our planet earth.
- (ii) What are primary pollutants? Give two examples.
- (iii) Write two effects of global warming.
- (iv) How temporary hardness is removed by boiling? Also write chemical equation.
- (v) What is meant by fluorosis?
- (vi) What is gravity separation? How is it carried out?
- (vii) How ammonia is prepared by "Haber's process"?
- (viii) Describe two uses of petroleum ether.

(PART - II)

Note: Attempt any TWO questions. 2×9=18

- Q5. (a) Write down five macroscopic properties of dynamic equilibrium.** 5
- (b) Write a note on precipitation of hydroxides.** 4
- Q6. (a) What types of reactions are given by alkanes? Explain with reference to halogenations of alkanes.** 5
- (b) Write four uses of carbohydrates.** 4
- Q7. (a) Give five advantages of Solvay's process.** 5
- (b) Define hard water, write its three disadvantages.** 4

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Q1.

12

- Sphere, just above the earth's surface is:**
(A) mesosphere (B) stratosphere (C) thermosphere (D) troposphere
- Which one of the following vitamins is water soluble?**
(A) vitamin A (B) vitamin C (C) vitamin D (D) vitamin E
- Which one of the following gas is used to destroy harmful bacteria in water?**
(A) bromine (B) chlorine (C) fluorine (D) iodine
- Pentahydroxy aldehyde is called:**
(A) glucose (B) fructose (C) starch (D) sucrose
- Temporary hardness is because of:**
(A) $\text{Ca}(\text{HCO}_3)_2$ (B) CaCO_3 (C) MgCO_3 (D) MgSO_4
- Matte is a mixture of:**
(A) FeS and CuS (B) Cu_2O and FeO (C) Cu_2S and FeS (D) CuS and FeO
- Which one of these is a saturated hydrocarbon?**
(A) C_2H_4 (B) C_3H_6 (C) C_4H_8 (D) C_5H_{12}
- The water of crystallization is responsible for the:**
(A) melting points of crystals (B) boiling points of crystals
(C) shapes of crystals (D) transition points of crystals
- When the magnitude of Kc is very small it indicates:**
(A) equilibrium will never establish
(B) all the reactants will be converted into products
(C) reaction will go to completion (D) the amount of products is negligible
- In the beginning the rate of reverse reaction is:**
(A) moderate (B) negligible (C) slow (D) very fast
- Which one of the following is a Lewis base?**
(A) AlCl_3 (B) BF_3 (C) H^+ (D) NH_3
- Coal gas is a mixture of:**
(A) CO and CH_4 (B) CO, CH_4 and CO_2 (C) CO, CH_4 and H_2 (D) CO, H_2 and CO_2

Gujranwala Board 2018 (Second Group)

Roll No.(in Figures): (in Words):

Maximum Marks: 48

SUBJECTIVE TYPE

Time Allowed :1.45 Hours

(PART - I)

Q2. Write short answers to any FIVE (5) questions. 5×2=10

- (i) Differentiate between forward and reverse reaction.
- (ii) What is static equilibrium? Give an example.
- (iii) Write equilibrium constant expression for the following reaction: $\text{PCl}_{3(g)} + \text{Cl}_{2(g)} \rightleftharpoons \text{PCl}_{5(g)}$
- (iv) How direction of reaction can be predicted?
- (v) Write two uses of sodium silicate (Na_2SiO_3).
- (vi) What is meant by "pH scale"?
- (vii) Differentiate between a conjugate acid and a conjugate base.
- (viii) Write the names of any two natural food preservatives.

Q3. Write short answers to any FIVE (5) questions. 5×2=10

- (i) What is difference between aromatic and alicyclic compounds?
- (ii) Why organic compounds are poor conductors of electricity?
- (iii) What is coke?
- (iv) Define open chain hydrocarbons with an example.
- (v) Write two uses of acetylene.
- (vi) What is difference between essential and non-essential amino acids?
- (vii) Write two sources of carbohydrates.
- (viii) Describe two uses of vitamin D.

Q4. Write short answers to any FIVE (5) questions. 5×2=10

- (i) Write the composition of dry air.
- (ii) Why does acid rain damage buildings?
- (iii) Write the names of all the four atmospheric regions.
- (iv) Why sea water is unfit for drinking purpose?
- (v) How water hardness is removed by boiling?
- (vi) Define metallurgy.
- (vii) What is meant by "anode mud"?
- (viii) Write two uses of petroleum gas.

(PART - II)

Note: Attempt any TWO questions. 2×9=18

- Q5. (a) Define law of mass action and derive equilibrium constant expression for a general reaction. 5
(b) Write four physical properties of bases. 4
- Q6. (a) Define hydrocarbons. Give two methods of preparation of alkenes. 5
(b) What are fat soluble vitamins? Describe the importance of vitamins. 4
- Q7. (a) Explain the process of smelting with reference to copper. 5
(b) Write down any four water born infectious diseases. 4