


**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. Acid is a substance that gives Hydrogen ion in aqueous solution.  
(A) Davy (B) Bronsted lowry (C) Arrhenius (D) Lewis
2. Benzene  ring is an example of:  
(A) Alicyclic compound (B) Aromatic compound  
(C) Heterocyclic compound (D) Straight chain
3. One of these is used as catalyst in Hydrogenation process:  
(A) Ni (B) Fe (C) N (D) P
4. Amino acids which cannot be synthesized by our body:  
(A) Non Essential (B) Proteins (C) Essential (D) Amino acids
5. Is not a fat soluble vitamin?  
(A) Vitamin A (B) Vitamin D (C) Vitamin E (D) Vitamin B
6. Life gas for plants is:  
(A) CO (B) CO<sub>2</sub> (C) CH<sub>4</sub> (D) O<sub>2</sub>
7. A layer of salts of Mg and Ca in Boilers and turbines is called:  
(A) Scale (B) Gangue (C) Sand (D) Pollution
8. The following disease is a cause of inflammation of liver.  
(A) Jaundice (B) Typhoid (C) Hepatitis (D) Cholera
9. Used for the reduction of NO<sub>x</sub> pollutant in automobile systems:  
(A) Sodium Carbonate (B) Urea  
(C) Ammonium Carbonate (D) Calcium Carbonate
10.  $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \xrightarrow{\Delta} 2\text{H}_2\text{O}(\text{l})$  this reaction is an example of:  
(A) Reversible (B) Forward (C) Reverse (D) Irreversible
11. Usually meant by active mass:  
(A) Molar concentration (B) Reaction Quotient (C) Reaction rate (D) K<sub>c</sub> Expression
12. The base used for the treatment of bee's sting is:  
(A) NaOH (B) Mg(OH)<sub>2</sub> (C) KOH (D) NH<sub>4</sub>OH

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 two characteristics of reverse reaction:
- (ii) What is meant by small value of  $K_C$  in chemical reaction?
- (iii) Define Dynamic chemical equilibrium.
- (iv) What is meant by active mass? Write its unit.
- (v) Write two uses of sodium carbonate.
- (vi) Write any two chemical properties of bases.
- (vii) Write two examples of each conjugate acid and conjugate bases.
- (viii) How stomach acidity can be reduced?

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

- (i) Write down the name of different types of coal.
- (ii) Define functional group with the help of an example.
- (iii) Define isomerism.
- (iv) Why are the alkenes called Olefins?
- (v) How are alkyl halides reduced?
- (vi) What are vitamins?
- (vii) Name two fatty acids with their formulae.
- (viii) What do you mean by genetic code of life?

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

- (i) Give two effects of Ozone depletion.
- (ii) Name two primary pollutants.
- (iii) Write down two harmful effects of CO.
- (iv) Write down causes of hardness of water.
- (v) Water is a polar molecule. Why?
- (vi) Name two fractions of Residual oil.
- (vii) Name two ores of copper. Write their formulas.
- (viii) Write two uses of petroleum ether.

**(PART - II)**

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

**Q5. (a) What is the importance of equilibrium constant?** 5

**(b) Write one example of each of the following.** 4

- (i) Acidic salt      (ii) Double salt      (iii) Mixed salt      (iv) Complex salt

**Q6. (a) Give five physical properties of Alkanes.** 5

**(b) State sources and uses of Lipids (Any four)** 4

**Q7. (a) Write down the advantages of Solvay Process.** 5

**(b) Write a note on Polar nature of water.** 4

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01.

12

- Which one of the following is a disaccharide?  
(A) glucose (B) fructose (C) starch (D) sucrose
- Molecular formula of stearic acid:  
(A)  $C_{15}H_{31}COOH$  (B)  $C_{16}H_{33}COOH$  (C)  $C_{17}H_{35}COOH$  (D)  $C_{18}H_{37}COOH$
- Just above the earth's surface is:  
(A) mesosphere (B) troposphere (C) thermosphere (D) stratosphere
- Specific heat capacity of water is:  
(A)  $4.2 J g^{-1} K^{-1}$  (B)  $4.2 KJg^{-1} K^{-1}$  (C)  $2.4 KJg^{-1}K^{-1}$  (D)  $2.4 Jg^{-1}K^{-1}$
- Which one of the following diseases causes liver inflammation?  
(A) Typhoid (B) Jaundice (C) Hepatitis (D) Cholera
- Which one of the following is used as laboratory solvent?  
(A) Kerosene oil (B) Diesel oil (C) Fuel oil (D) Petroleum ether
- The colour of iodine gas is:  
(A) red (B) green (C) blue (D) purple
- In equilibrium state  $K_c$  is equal to:  
(A)  $\frac{K_f}{K_r}$  (B)  $\frac{K_r}{K_f}$  (C)  $\frac{R_f}{R_r}$  (D)  $\frac{R_r}{K_f}$
- Which one of the following is a Lewis base?  
(A)  $BF_3$  (B)  $NH_3$  (C)  $H^+$  (D)  $AlCl_3$
- Which acid is used to cure sting of wasps?  
(A) Uric acid (B) malic acid (C) acetic acid (D) lactic acid
- In laboratory urea was prepared by:  
(A) Wholer (B) Rutherford (C) Berzellius (D) Dalton
- The end product of Oxidation of acetylene is:  
(A) glycol (B) Oxalic acid (C) glyoxal (D) ethane glycol



# Dera Ghazi Khan Board 2019 (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

- Environmental systems depend upon equilibrium phenomenon. Give one example.
- Define static equilibrium and give an example.
- Write equilibrium constant expression for following reaction.  $\text{CO} + 3\text{H}_2 \rightleftharpoons \text{CH}_4 + \text{H}_2\text{O}$
- Complete following reaction.  $2\text{H}_2 + \text{O}_2 \xrightarrow{\text{P}} ?$
- Define conjugate acid and conjugate base.
- $\text{NH}_3$  and  $\text{R} - \text{NH}_2$  acts as Lewis base. Explain.
- Write two uses of magnesium hydroxide.
- Define indicators and give one example.

Q3. Write short answers to any FIVE (5) questions.

5×2=10

- Define molecular formula and give example.
- Why organic compounds are not good conductors of electricity?
- How the presence of double or triple bond can be tested?
- What are aromatic compounds? Give an example.
- Write the formula of oxalic acid.
- What is the reason of rancidity in butter?
- What is the function of DNA?
- Write names of water soluble and fat soluble vitamins.

Q4. Write short answers to any FIVE (5) questions.

5×2=10

- Write two bad effects of sulphur dioxide ( $\text{SO}_2$ ).
- What is Ozone layer? Where does it exist in atmosphere?
- What is incineration process?
- Write one method for removal of permanent hardness in water.
- State water pollution.
- What is meant by Roasting process?
- Write Haber's process for manufacturing of ammonia.
- What are natural fertilizers?

### (PART - II)

Note: Attempt any TWO questions.

2×9=18

- Write down five macroscopic characteristics of dynamic equilibrium. 5
  - Write four important characteristics properties of salts. 4
- Write five sources of Alkanes. 5
  - What are vitamins? Give importance of vitamin 4
- Write a note on fractional distillation of petroleum. 5
  - What are four effects of water pollution? 4