

BAHAWALPUR BOARD
GRADE 10
CHEMISTRY
2018 GROUP 1

Section-A (MCQs)

i) For a reaction between PCl_3 and Cl_2 to form PCl_5 the units of K_c are:
(Mark 1)

- A. mol dm^3
- B. $\text{mol}^{-1} \text{dm}^3$
- C. $\text{mol}^{-1} \text{dm}^{-1}$
- D. mol dm^{-3}

Answer:

- B. $\text{mol}^{-1} \text{dm}^3$

ii) Law of mass action was presented in: (Mark 1)

- A. 1865
- B. 1867
- C. 1869
- D. 1871

Answer:

- C. 1869

iii) Acetic acid is used for: (Mark 1)

- A. Flavoring food
- B. Making explosives

- C. Etching designs
- D. Cleaning metals

Answer:

- A. Flavoring food

iv) Functional group -COOH is found in: (Mark 1)

- A. Carboxylic acids
- B. Aldehydes
- C. Alcohols
- D. Esters

Answer:

- A. Carboxylic acids

v) Which one of the following is Lewis base: (Mark 1)

- A. BF_3
- B. NH_3
- C. H^+
- D. AlCl_3

Answer:

- B. NH_3

vi) Substitution reaction is the characteristic of: (Mark 1)

- A. Alkanes
- B. Alkenes
- C. Alkynes

D. Aldehydes

Answer:

A. Alkanes

vii) Which one of the following is triglycerides: (Mark 1)

A. Proteins

B. Carbohydrates

C. Vitamins

D. Lipids

Answer:

D. Lipids

viii) Who discovered vitamin B1 (Thiamin): (Mark 1)

A. Hopkins

B. Funk

C. Bohar

D. Watson

Answer:

B. Funk

ix) Normally rain water is weakly acidic because of: (Mark 1)

A. CO₂ gas

B. SO₃ gas

C. SO₂ gas

D. NO₂ gas

Answer:

A. CO₂ gas

x) Permanent hardness is removed by adding: (Mark 1)

A. Na²⁺- zeolite

B. Soda lime

C. Lime water

D. Quick lime

Answer:

A. Na²⁺- zeolite

xi) Specific heat capacity of water is: (Mark 1)

A. 4.2KJg⁻¹K⁻¹

B. 4.2 Jg⁻¹K⁻¹

C. 2.4 KJg⁻¹K⁻¹

D. 2.4 Jg⁻¹K⁻¹

Answer:

B. 4.2 Jg⁻¹K⁻¹

xii) Formula of urea is: (Mark 1)

A. NH₂COONH₄

B. NH₂COONH₂

C. NH₂CONH₄

D. NH₂CONH₂

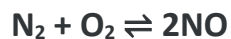
Answer:

D. NH₂CONH₂

Q.2 i) Define Chemical Equilibrium State:

(Marks 2)

Q.2 ii) Write the equilibrium constant expression for the given reaction: (Marks 2)



Q.2 iii) Give two characteristics of a reversible reaction: (Marks 2)

Q.2 iv) What is the relationship between active mass and rate of reaction? (Marks 2)

Q.2 v) What is the difference between Arrhenius base and Bronsted Lowry base?(Marks 2)

Q.2 vi) Name the acids present in vinegar and apple. (Marks 2)

Q.2 vii) Give two characteristics of salts? (Marks 2)

Q.2 viii) Write the names of two double salts? (Marks 2)

Q.3 i) Define structural formula with one example. (Marks 2)

Q.3 ii) How organic compounds are used as a fuel? (Marks 2)

Q.3 iii) What is meant by homologous series? (Marks 2)

Q.3 iv) Define saturated hydrocarbon with one example: (Marks 2)

Q.3 v) Why alkanes are known as paraffins? (Marks 2)

Q.3 vi) Define amino acids? Write its general formula? (Marks 2)

Q.3 vii) What is meant by essential amino acids? (Marks 2)

Q.3 viii) What is RNA? Write its function. (Marks 2)

Q.4 i) Explain Atmosphere. (Marks 2)

Q.4 ii) Write the names and formulae of two primary pollutants. (Marks 2)

Q.4 iii) Why the normal rain water is weakly acidic? (Marks 2)

Q.4 iv) Describe the causes of hardness in water? (Marks 2)

Q.4 v) Write the names of two methods used for removal of permanent hardness. (Marks 2)

Q.4 vi) What is Gangue? (Marks 2)

Q.4 vii) Explain Forth Flotation process? (Marks 2)

Q.4 viii) What is the principle of fractional distillation. (Marks 2)

Q.5 a) Define reversible reaction. Write four characteristics of reverse reaction. (Marks 5)

Q.5 b) Write uses of any four bases? (Marks 4)

Q.6 a) Write five physical properties of alkanes? (Marks 5)

Q.6 b) Write four usage of carbohydrates for our body? (Marks 4)

Q.7 a) Write down five advantages of Solvay's process? (Marks 4)

Q.7 b) Write down four properties of water? (Marks 4)

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Section-A (MCQs)

i) The Nitrogen present in Urea is used by Plants to Synthesize: (Mark 1)

- A. Sugar
- B. Proteins
- C. Fats
- D. DNA

Answer:

B. Proteins

ii) A disease that causes bones and teeth damage is: (Mark 1)

- A. Cholera
- B. Fluorosis
- C. Hepatitis
- D. Jaundice

Answer:

B. Fluorosis

iii) Which one is responsible for rising up water from the roots of Plants to Leaves:
(Mark 1)

- A. Capillary Action
- B. Heat Capacity

- C. Photosynthesis
- D. Surface Tension

Answer:

- A. Capillary Action

iv) Which Gas Protects the surface from Ultraviolet Radiations (Mark 1)

- A. CO₂
- B. CO
- C. N₂
- D. O₃

Answer:

- D. O₃

v) Thousands of the Amino Acids Polymerize to form: (Mark 1)

- A. Carbohydrates
- B. Proteins
- C. Lipids
- D. Vitamins

Answer:

- B. Proteins

vi) Chemical formula of Fructose is : (Mark 1)

- A. C₁₂H₂₂O₁₁
- B. C₆H₁₂O₆
- C. C₄H₁₀
- D. C₅H₁₀

Answer:

B. $C_6H_{12}O_6$

vii) The end product of Oxidation of Acetylene is: (Mark 1)

- A. Oxalic Acid
- B. Glycol
- C. Glyoxal
- D. Potassium Hydroxide

Answer:

A. Oxalic Acid

viii) Pitch is the black residue of : (Mark 1)

- A. Coke
- B. Coal Tar
- C. Coal
- D. Coal gas

Answer:

B. Coal Tar

ix) Which one of the following species is not Amphoteric: (Mark 1)

- A. H_2O
- B. NH_3
- C. HCO_3^-
- D. SO_4^{2-}

Answer:

D. SO_4^{2-}

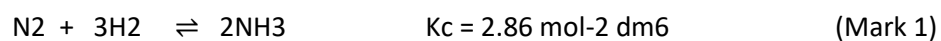
x) Which base is used to Neutralize Acidity in the Stomach: (Mark 1)

- A. Ca(OH)₂
- B. NaOH
- C. Mg(OH)₂
- D. KOH

Answer:

C. Mg(OH)₂

xi) Nitrogen and Hydrogen react to make Ammonia. What will be present in the equilibrium mixture:



- A. Only NH₃
- B. H₂, N₂, and NH₃
- C. N₂ and H₂
- D. Only H₂

Answer:

B. H₂, N₂, and NH₃

xii) Who put forward the Law of Mass Action: (Mark 1)

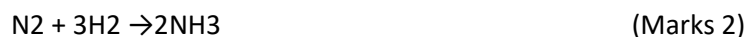
- A. Dalton
- B. Guldberg
- C. Rutherford
- D. Moselay

Answer:

B. Guldberg

Q.2 i) Define chemical equilibrium state? (Marks 2)

Q.2 ii) Write the equilibrium constant expression for the given reaction:



Q.2 iii) What is meant by active mass? (Marks 2)

Q.2 iv) Define law of mass action? (Marks 2)

Q.2 v) Define acids and base according to the Arrhenius concept. (Marks 2)

Q.2 vi) Write any two uses of sodium silicate. (Marks 2)

Q.2 vii) Name two mineral acids? (Marks 2)

Q.2 viii) What are acidic salts? Also give one example? (Marks 2)

Q.3 i) What are aromatic compounds? Why they are called aromatic? (Marks 2)

Q.3 ii) Write the general formula of alkanes and give one example. (Marks 2)

Q.3 iii) Define coal. (Marks 2)

Q.3 iv) Which are two types of hydrocarbons? (Marks 2)

Q.3 v) Write down two uses of methane? (Marks 2)

Q.3 vi) Write the names of two monosaccharides which have hexoses molecules. (Marks 2)

Q.3 vii) What are the essential aminoacids? (Marks 2)

Q.3 viii) What is the function of RNA? (Marks 2)

Q.4 i) How acid rain is formed? (Marks 2)

Q.4 ii) Write two serious effects of ozone depletion. (Marks 2)

Q.4 iii) What is the difference between primary and secondary pollutants? (Marks 2)

Q.4 iv) Why are non-polar compounds insoluble in water? (Marks 2)

Q.4 v) Write any two properties of water? (Marks 2)

Q.4 vi) What is meant by smelting? (Marks 2)

Q.4 vii) Write the names of raw material used in Solvay's process. (Marks 2)

Q.4 viii) Write two uses of kerosene oil. (Marks 2)

Q.5 a) Define reversible reaction and explain it with the help of graph. (Marks 5)

Q.5 b) Write down four important characteristics of salts. (Marks 4)

Q.6 a) Write five uses of acetylenes. (Marks 5)

Q.6 b) Define vitamins and describe their importance. (Marks 4)

Q.7 a) Explain bessemerization and specific example of copper. (Marks 5)

Q.7 b) Explain four important water-borne diseases? How they can be prevented. (Marks 4)