10th Grade Multan Board
CHEMISTRY
2018
Group A
MCQ SECTION

i) For the reaction, $2A + B \rightleftharpoons 3C$ (Mark 1)
the expression for the equilibrium constant is:
A. $[2A][B]/[3C]$
B. $[A]^2[B]/[C]^3$
C. $[3C]/[[2A][B]$
D. $[C]^3/[A]^2[B]$
Answer:
D. $[C]^3/[A]^2[B]$

ii) In an irreversible reaction dynamic equilibrium: (Mark 1)
A. Never established
B. Establishes before the completion of reaction
C. Establishes after the completion of reaction
D. Establishes readily
Answer:
A. Never established

iii) _____ acid is found in sour milk. (Mark 1)
A. Citric
B. Formic
C. Lactic
D. Uric
Answer:
C. Lactic

iv) Dilute acids react with carbonates to produce the given products except: (Mark 1)
A. Salt
B. Water
C. Carbon dioxide
D. Hydrogen
Answer:
D. Hydrogen

v) Main component of Natural Gas is: (Mark 1)

A. Methane
B. Propane
C. Butane
D. Propene
Answer:
A. Methane

vi) _____ is a saturated hydrocarbon.   (Mark 1)
A. C_2H_4
B. C_3H_6
C. C_4H_8
D. C_5H_{12}
Answer:
D. C_5H_{12}

vii) About 50% of the dry weight of cell is made up of: (Mark 1)
A. Carbohydrates
B. Lipids
C. Proteins
D. Vitamins
Answer:
C. Proteins

viii) Photosynthesis process produces: (Mark 1)
A. Starch
B. Cellulose
C. Sucrose
D. Glucose
Answer:
D. Glucose

ix) _____ is a secondary pollutant.   (Mark 1)
A. SO_2
B. CO_2
C. CH_4
D. HCl
Answer:
D. HCl

x) At 4°C the maximum density of water is: (Mark 1)
A. $1 gcm^{-3}$
B. $2 gcm^{-3}$
C. $3 gcm^{-3}$
D. $4 gcm^{-3}$
Answer:
A. $1 gcm^{-3}$

xi) Temporary hardness of water can be removed by adding: (Mark 1)
A. Limestone
B. Slaked lime
C. Quick lime
D. Washing soda

Answer:
B. Slaked lime

xii) Boiling range of Gasoline or petrol is: (Mark 1)

A. 80 to 170^{0}C
B. 170 to 250°C
C. 250 to 350°C
D. 350 to 400°C

Answer:
A. 80 to 170^{0}C

SHORT QUESTION SECTION

Section-B Q.2

Q.2 i) What is the difference between reactants and products? Give example. (Marks 2)

Q.2 ii) Define chemical equilibrium state. (Marks 2)

Q.2 iii) What represents the large value of K_c for a reaction.

Q.2 iv) Write two characteristics of irreversible reactions. (Marks 2)

Q.2 v) State Arrhenius concept of Acids and Bases. (Marks 2)

Q.2 vi) Define Neutralization. (Marks 2)

Q.2 vii) Name two acids used in the manufacturing of fertilizers.

Q.2 viii) Define pH. What is the pH of pure water? (Marks 2)

Section-B Q.3

Q.3 i) Define Heterocyclic compounds with one example. (Marks 2)

Q.3 ii) Write two uses of Organic Compounds. (Marks 2)

Q.3 iii) Define Functional group with one example. (Marks 2)

Q.3 iv) Give two uses of Methane and Ethane. (Marks 2)

Q.3 v) Differentiate between Saturated and unsaturated hydrocarbons.
(Marks 2)

Q.3 vi) Write the difference between Ghee and Oil? (Marks 2)

Q.3 vii) Are the plants source of oils? Explain. (Marks 2)

Q.3 viii) Write formula of Stearic acid and Palmitic acid. (Marks 2)

Section-B Q.4

Q.4 i) How Ozone layer is formed in Stratosphere? (Marks 2)

Q.4 ii) How CO_2 is responsible for heating up atmosphere? (Marks 2)

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

Q.4 iv) What is capillary action? (Marks 2)

Q.4 v) How addition of Na_2CO_3 removes permanent hardness of water?

   (Marks 2)

Q.4 vi) Write the names of raw materials needed for manufacturing urea.   **(Marks 2)**

Q.4 vii) What is meant by Anode mud?   **(Marks 2)**

Q.4 viii) How is CO_2 prepared in the Solvay's process?   **(Marks 2)**

LONG QUESTION SECTION

Q.5 a) State the law of Mass Action. How chemical equilibrium constant is helpful in prediction of extent of reaction? (Marks 5)

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

Q.6 a) Write down five physical properties of Alkenes. (Marks 5)

Q.6 b) Write down four uses of Carbohydrates. (Marks 4)

Q.7 a) Define Urea. Describe three stages of its manufacturing

Q.7 b) Define Hard water and also write its three advantages.

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Group B

MCQ SECTION

i) The quantity of water fit for drinking on earth is: (Mark 1)

A. 0.2%

B. 0.4%

C. 0.6%

D. 0.8%

Answer:

A. 0.2%

ii) Temporary hardness of water is because of: (Mark 1)

A. $Ca(HCO_3)_2$

B. $CaCO_3$

C. $MgCO_3$

D. $MgSO_4$

Answer:

A. $Ca(HCO_3)_2$

iii) Matte is a mixture of: (Mark 1)

A. FeS and CuS

B. Cu_2O and FeO

C. Cu_2S and FeS

D. CuS and FeO

Answer:

C. Cu_2S and FeS

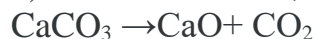iv) Guldberg and Waage put forward law of mass action to:

(Mark 1)

A. In 1859

B. In 1869

C. In 1879

D. In 1889

Answer:

B. In 1869

v) In the Lime Kiln, the reaction goes to completion due to:

$CaCO_3 \rightarrow CaO + CO_2$ (Mark 1)

A. Of high temperature
B. CaO is more stable than $CaCO_3$
C. CO_2 escapes continuously
D. CaO is not dissociated
Answer:
C. CO_2 escapes continuously

vi) _____ is used for flavouring food.   (Mark 1)
A. Acetic acid
B. Benzoic acid
C. Hydrochloric acid
D. Nitric acid
Answer:
A. Acetic acid

vii) If a liquid has a pH of 7 then it must: (Mark 1)
A. Be colourless and odourless
B. Be neutral
C. Be a solution containing water
D. Freeze at $0°C$ and boil at $100°C$
Answer:
B. Be neutral

viii) Coal having 90% carbon contents is called.   (Mark 1)
A. Peat
B. Lignite
C. Anthracite
D. Bituminous
Answer:
C. Anthracite

ix) The reduction of Alkyl Halides takes place in the presence of.

   (Mark 1)
A. Zn/HCl
B. Na/HCl
C. Mg/HCl
D. Cu/HCl
Answer:
A. Zn/HCl

x) _____ catalyst is used for the hydrogenation of vegetable oil:

   (Mark 1)
A. Al
B. Cu
C. Ni
D. Pb
Answer:
C. Ni

xi) _____ is a Disaccharide. (Mark 1)

A. Glucose
B. Fructose
C. Sucrose
D. Starch

Answer:
C. Sucrose

xii) Just above the Earth's surface is: (Mark 1)

A. Mesosphere
B. Stratosphere
C. Thermosphere
D. Troposphere

Answer:
D. Troposphere

SHORT QUESTION SECTION

Section-B Q.2

Q.2 i) Define Active mass and give its units. (Marks 2)
Q.2 ii) What is meant by dynamic equilibrium state? (Marks 2)
Q.2 iii) In which direction reaction will proceeds if $Q_c < K_c$? (Marks 2)
Q.2 iv) When equilibrium constant has no units? (Marks 2)
Q.2 v) Write the names of two minerals acids ? (Marks 2)
Q.2 vi) Write two uses of Calcium Hydroxide? (Marks 2)
Q.2 vii) How are the salts named? (Marks 2)
Q.2 viii) Define double salts and give an example. (Marks 2)

Section-B Q.3

Q.3 i) Define Heterocyclic compounds? (Marks 2)
Q.3 ii) What is coal gas? Give one use of coal gas? (Marks 2)
Q.3 iii) What are two basic conditions for an element to exhibit catenation? (Marks 2)
Q.3 iv) Write two physical properties of Alkynes. (Marks 2)
Q.3 v) Define Substitution reaction? (Marks 2)
Q.3 vi) Define Amino acids and write their general formula. (Marks 2)
Q.3 vii) Write two characteristics of monosaccharides. (Marks 2)
Q.3 viii) Differentiate between essential amino acids and non essential amino acids. (Marks 2)

Section-B Q.4

Q.4 i) What is troposphere? Give its two characteristics. (Marks 2)
Q.4 ii) Define Pollutants? (Marks 2)

Q.4 iii) What is Global warming? (Marks 2)

Q.4 iv) Describe two disadvantages of detergents. (Marks 2)

Q.4 v) What is Leaching process? (Marks 2)

Q.4 vi) What are Ores? (Marks 2)

Q.4 vii) Write two uses of fuel oil. (Marks 2)

Q.4 viii) Define Gangue. (Marks 2)

LONG QUESTION SECTION

Q.5 a) Write down five macroscopic characteristics of Dynamic Equilibrium. (Marks 5)

Q.5 b) Explain the Lewis concept of Acids and Bases. (Marks 4)

Q.6 a) Write any five sources of Alkanes. (Marks 5)

Q.6 b) Write any four uses of Enzymes on commercial level. (Marks 4)

Q.7 a) How urea is manufactured? Explain with flow sheet diagram. (Marks 5)

Q.7 b) Explain following diseases: (Marks 4)
i) Cholera
ii) Hepatitis
iii) Jaundice
iv) Typhoid