

PPSC Lecturer Chemistry MCQs

1) When an electron is brought from infinite distance close to the nucleus of the atom, the energy of Electron-nucleus system?

- (a) Increases to a smaller negative value
- (b) decreases to a greater negative value
- (c) decreases to a smaller positive value
- (d) increases to a greater positive value

2) The probability of finding the electron in the nucleus is:

- (a) 100% due to forces of attraction
- (b) finite for all orbitals
- (c) Zero for all orbitals
- (d) Zero for some orbitals and finite for others

3) When Zn metal is kept in CuSO_4 solution, copper is precipitated and ZnSO_4 is formed because:

- (a) Atomic number of Zinc is smaller than copper
- (b) Atomic number of Zinc is larger than copper
- (c) Standard reduction potential of Zinc is more than that of copper
- (d) Standard reduction potential of Zinc is less than that of copper

4) Electrolytes when dissolved in water, dissociate into their constituent ions, the degree of dissociation of an electrolyte increases with the:

- (a) Presence of a substance yielding common ion
- (b) Decreasing temperature
- (c) Decreasing concentration of electrolyte
- (d) Increasing concentration of electrolyte

5) There is a large positive entropy change for an exothermic reaction. It means that the reaction will be:

- (a) possible at high temperatures only
- (b) impossible at all temperatures
- (c) possible at low temperatures only
- (d) possible at all temperatures

6) Which of the following statement is false?

- (a) the temperature of the system will fall if an exothermic reaction is isolated from its surroundings
- (b) Energy is absorbed when one compound is converted into another with higher heat content
- (c) the temperature of the system is likely to fall if heat is absorbed during the course of a reaction
- (d) None of these

7) $\text{pH} + \text{pOH}$ of a solution is:

- (a) 7

- (b) Zero
- (c) 14
- (d) -14

8) The compound that is not Lewis acid:

- (a) BF_3
- (b) BaCl_2
- (c) SnCl_4
- (d) AlCl_3

9) Ore of Aluminium:

- (a) Calamine
- (b) Dolomite
- (c) Bauxite
- (d) Limestone

10) Oxidation number of S in sulphuric acid:

- (a) Four
- (b) Six
- (c) Two
- (d) Eight

11) d-block elements form coordination compounds because of:

- (a) Small Cationic size
- (b) Large ionic Charge
- (c) Unfilled d-orbitals
- (d) Filled d-orbitals

12) Brass is an alloy of:

- (a) Cu and Zn
- (b) Cu, Ni, Zn
- (c) Cu and Ni
- (d) Cu, Al, Zn

13) Urea is a high quality nitrogenous fertilizer with:

- (a) 76% nitrogen
- (b) 46% nitrogen
- (c) 66% nitrogen
- (d) 26% nitrogen

14) Diamond is:

- (a) Good conductor of electricity
- (b) Bad conductor of electricity
- (c) Bad conductor on heating
- (d) Good conductor on heating

15) Carbon monoxide is poisonous gas because it:

- (a) replaces oxygen from lungs
- (b) Forms carboxy haemoglobin
- (c) Forms carbon dioxide with oxygen
- (d) has a sweet smell

16. Rust is:

- (a) $\text{FeO} + \text{Fe(OH)}_2$
- (b) $\text{Fe}_2\text{O}_3 + \text{Fe(OH)}_2$
- (c) Fe_2O_3
- (d) $\text{Fe}_2\text{O}_3 + \text{Fe(OH)}_3$

17) Calcium Carbide reacts with water to give:

- (a) Methane
- (b) Ethylene
- (c) Acetylene
- (d) Ethane

18. Which of the following substituent deactivates benzene ring and is o, p-directing?

- (a) NH_2
- (b) Cl
- (c) OCH_3
- (d) OH

19) Which of the following is most readily nitrated?

- (a) Toluene
- (b) Benzaldehyde
- (c) Nitrobenzene
- (d) Benzoic Acid

20) Ketones can be prepared by reaction of Grignard reagent with:

- (a) Acid Amides
- (b) Acid Chloride
- (c) Carboxylic Acid
- (d) Epoxides

21) Which of the following statements about the order of reaction is true?

- (a) The order of a reaction can only be determined by experiment.
- (b) A second order reaction is also bimolecular
- (c) The order of reaction must be a positive integer
- (d) The order of reaction increases with increasing temperature.

22 Polysaccharides yield many monosaccharides on:

- (a) Hydration
- (b) Oxidation
- (c) Reduction
- (d) Hydrolysis

23) Which of the following is not aromatic?

- (a) Benzene
- (b) cyclooctatetraene
- (c) Pyridine
- (d) Phenol

24) Which of the following is most basic?

- (a) H₂O
- (b) NH₃
- (c) CH₃NH₂
- (d) CH₃OH

25) Which of the following has lowest pH?

- (a) CH₃COOH
- (b) CF₃COOH
- (c) ClCH₂COOH
- (d) Cl₃C COOH

26) The equilibrium of two readily interconvertible isomers is called:

- (a) Stereoisomerism
- (b) Metamerism
- (c) Tautomerism
- (d) Polymorphism

27) Which of the following compounds exhibit geometrical isomerism?

- (a) 1-Pentene
- (b) 2-Pentene
- (c) 2-methyl -2-Pentene
- (d) 2-methyl -2-Butene

28) Which of the following gives a tertiary alcohol when treated with Grignard reagent:

- (a) HCHO
- (b) CH₃CHO
- (c) C₃H₅CHO
- (d) CH₃COCH₃

29) Which of the following tests is not used to identify aldehydes?

- (a) Tollen's test
- (b) Benedict solution test
- (c) Fehling solution test
- (d) Ammonia test

30) Which is incorrect about alkaloids?

- (a) Naturally Occuring
- (b) Possess a hetrocyclic ring
- (c) Exhibit biological action
- (d) acidic in nature

31) Which of the followings will not give iodoform test:

- (a) Acetone
- (b) Ethylalcohol
- (c) Benzaldehyde
- (d) Acetaldehyde

32) The reaction of aniline with bromine water gives:

- (a) o-bromoaniline
- (b) p-bromoaniline
- (c) 2,4-dibromoaniline
- (d) 2,4,6-tribromoaniline

33) The reaction of tripalmitin, with sodium hydroxide is called:

- (a) Hydrolysis
- (b) Saponification
- (c) Esterification
- (d) Combustion

34) Which one is not Petrochemical?

- (a) Napthalene
- (b) Mineral Oil
- (c) Wax (d) Table Salt

35) Chemical adsorption:

- (a) is exothermic
- (b) is irreversible
- (c) takes place at high temp.
- (d) All of these

36) The most commonly used absorbent for chromatographic separation of organic compound is:

- (a) Activated charcoal
- (b) Fuller's Earth
- (c) Alumina
- (d) Silica gel

37) Grignard reagent is:

- (a) Organo Zinc halide
- (b) Organo cadmium bromide
- (c) n-Butyl Lithium
- (d) Organo Magnesium halide

38) Which one of the following is not a petrochemical.

- (a) Cumene
- (b) Paraffin
- (c) Aluminum Chloride
- (d) Epoxy resin

- 39) The term syndiotactic is related to which one of the following?
(a) Synthetic detergents
(b) Table Salt
(c) Paraffin
(d) Polypropylene
- 40) Which one of the following is used as an Antibiotic?
(a) Patulin
(b) Insulin
(c) Soserine
(d) Trypsin
- 41) Heroin is diacetate of:
(a) Papaverine
(b) Morphine
(c) Codeine
(d) Thebaine
- 42) A reaction that practically is given by all organic compounds.
(a) Elimination
(b) Friedel-Craft ecylation
(c) Combustion
(d) Rearrangement
- 43) Which functional group is present in polyester shirt?
(a) Lactam
(b) Acid Chloride
(c) Ether
(d) Ester
- 44) Which statement is true for Halogen (Halo-group)?
(a) Activating and O, p-directing
(b) Activating and m-directing
(c) Deactivating and O, p-directing
(d) None of these.
- 44) Which one of the following can be synthesized from Aryl Diazonium Salt?
(a) Furfural
(b) Carbylamine
(c) Biphenyl
(d) THF
- 45) The Methyl group in Methyl Magnesium Iodide can act as:
(a) CH₃Radical
(b) CH₃Carbonium ion
(c) CH₃Carbanion
(d) Can react with a base

- 46) Nylon is a copolymer of:
(a) Urea and Formaldehyde
(b) Phenol and Formaldehyde
(c) Hexamethylenediamine and adipic acid
(d) Vinyl Chloride and Vinylalcohol
- 47) Which of the following would react with one mole of Grignard's reagent to yield a ketone?
(a) R_2RCON
(b) $RCONH$
(c) $RCONH_2$
(d) $RCOOH$
- 48) Glyceraldehyde has one of the following properties:
(a) One asymmetric carbon atom
(b) Two asymmetric carbon atoms
(c) A meso compound
(d) Four asymmetric carbon atoms
- 49) The antifreeze compound ethylene glycol has the formula:
(a) C_2H_5OH
(b) CH_3OH
(c) $C_2H_4(OH)_2$
(d) $C_3H_5(OH)_3$
- 50) Distillation is the best method for separating the two substances in which of the following:
(a) Water and salt dissolved
(b) water and a substance which does not dissolve in it
(c) Two liquids that have different boiling points
(d) Two solids that have different melting points.