

ABHINAV COLLEGE OF ARTS, COMMERCE AND SCIENCE, BHAYANDAR EAST
DEPARTMENT OF CHEMISTRY
PRACTICE QUESTION PAPER-PHYSICAL CHEMISTRY-SUMMER SESSION 2020

- 1) When the cell is electrolytic and not galvanic, the reaction at the cathode is _____.
a) reduction b) oxidation c) oxo-reduction d) precipitation
- 2) The overvoltage _____ as temperature increases.
a) increases b) decreases c) same d) neutral
- 3) In galvanic cell, electrical energy is produced due to _____ reaction.
a) reduction b) oxidation c) non-spontaneous d) spontaneous
- 4) Ionic strength can be represented as $I =$ _____.
a) $1/2 (\sum m_i z_i^2)$ b) $1/2 (\sum m_i z_i)$ c) $1/2 (\sum m_i z_i^3)$ d) $1/2 (\sum m_i z_i^4)$
- 5) No liquid junction potential will develop if both the ions of the electrolyte move with ____ speed.
a) high b) low c) same d) different
- 6) For an ideal solution, activity coefficient equals to _____.
a) 1 b) <1 c) >1 d) 0
- 7) _____ are more chemically inert.
a) thermoplasts b) thermosets c) elastomers d) polymer
- 8) Polydispersity index is _____ than one.
a) greater b) lower c) same d) multiple
- 9) Specific viscosity (n_{sp}) is given by the equation _____.
a) $n_r - 2$ b) n_r c) $n_r - 3$ d) $n_r - 1$
- 10) Reduced viscosity (n_r) is given by the equation _____.
a) n_{sp}/C b) n_{sp} c) n_{sp}/M d) n_{sp}/Z
- 11) Light emitting polymers are _____ polymers.
a) non-conducting b) insulator c) conducting d) semiconducting
- 12) _____ is a term that refers to toughening of a polymer material.
a) caring b) curing c) hardening d) softening
- 13) The phenomenon of emission of electrons from a metal surface is _____ effect.
a) photoelectric b) raman c) scattering d) absorbing
- 14) The small packets of energy are called _____.
a) total energy b) photons c) kinetic energy d) wave
- 15) For the quantum number $n=4$, the number of nodes are _____.
a) 1 b) 2 c) 3 d) 4
- 16) The contact grid is made up of a good _____.
a) non-conductor b) insulator c) conductor d) semiconductor
- 17) The bond energy of the H-H bond is _____ kJ / mol.
a) 431 b) 100 c) 331 d) 631
- 18) The combustion of hydrogen results in the formation of _____.
a) oxygen and water b) oxygen and steam c) steam and water d) oxygen
- 19) The NMR gives with nuclei having _____ nuclear spin.
a) 0 b) 1 c) 4 d) 2
- 20) The mutual exchange of spin gives rise to _____.
a) spin-lattice relaxation b) spin-spin relaxation c) spin-orbital relaxation d) relaxation
- 21) _____ the electron density around a proton, lower is the shielding.
a) lower b) higher c) similar d) multiple
- 22) The area of an absorption peak is proportional to the number of _____ nuclei.
a) non-equivalent b) equivalent c) alternate d) multiple
- 23) TMS (tetramethylsilane) is _____ with almost all organic substances.
a) insoluble b) soluble c) immiscible d) miscible
- 24) The substance with _____ electrons, gives ESR spectra.
a) unpaired b) paired c) spin d) orbital
- 25) _____ splitting seen in the ESR spectrum.
a) electron b) hyperfine c) proton d) electron

