

TELANGANA UNIVERSITY
S.S.R. DEGREE COLLEGE, NIZAMABAD (C.C:5029)
IV SEMESTER INTERNAL ASSESSMENT II EXAMINATIONS
CHEMISTRY QUESTION BANK

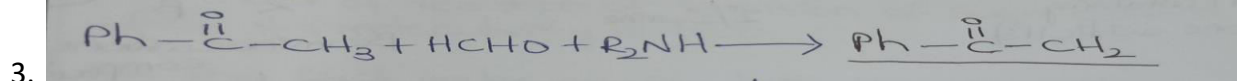
I. Multiple choice questions.

1. The specific rate constant of a first order reaction depends on the [d]
a. Concentration of the reactant b. Concentration of the product
c. Time d. Temperature
2. A zero-order reaction is one [a,b]
a. Whose rate is not affected by concentration?
b. In which concentration of the reactants does not change with time
c. In which reactants do not react
d. In which one of the reactants is in large excess
3. What will be amount of $^{128}_{53}I$ ($t_{1/2} = 25$ minutes) left after 50 minutes [c]
a. one-half b. one-third c. one-fourth d. one-eight
4. The temperature coefficient of the most of reactions lies between [b]
a. 1 and 3 b. 2 and 3 c. 1 and 4 d. 2 and 4
5. In which of the rate order reaction is independent of the initial concentration [b]
a. zero order b. first order c. second order d. None of the above
6. Hydrolysis of methyl follows order of reaction [c]
a. zero order b. first order c. second order d. None of the above
7. Units of zero order reaction [b]
a. Time^{-1} b. $\text{Mole liter}^{-1}\text{sec}^{-1}$ c. $\text{Liter mole}^{-1}\text{time}^{-1}$ d. None of the above
8. The increasing reaction rate with the increasing temperature is explained by [a]
a. Collision theory b. Transition state theory c. Activation energy d. None of the above
9. Synthesis of starch by plants is an example of [c]
a. Photosensitization b. Photography c. Photosynthesis d. None of these
10. The light emitted by a glow worm is an example of [c]
a. Fluorescence b. Phosphorescence c. chemiluminescence d. None of these
11. Which of the following theory can explain the metallic properties. [d]
a. Valence bond theory b. Molecular orbital theory c. Free electron theory d. All the above
12. The addition of 15th group elements to pure Si (or) Ge produce [b]
a. Super conductors b. n-type semiconductors c. P-type semi conductors d. Insulators
13. Which of the following compound is crotonic acid [b]
a. $\text{HOOC} - \text{CH}_2 - \text{COOH}$ b. $\text{H}_3\text{C} - \text{CH} = \text{CH} - \text{COOH}$ c. $\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{COOH}$ d. Synthesis of esters
14. Knoevengeal condensation reaction is a [c]
a. Electrophilic addition reaction b. Electrophilic substitution
c. Nucleophilic addition reaction d. Nucleophilic substitution
15. Difference between crystalloid and colloid is of [a]
a. Particle size b. Chemical composition c. Ionic characters d. Solubility

16. The size of the colloidal particle is in between [c]
 a. $10^{-7} - 10^{-9}$ cm b. $10^{-9} - 10^{-11}$ cm c. $10^{-15} - 10^{-7}$ cm d. $10^{-2} - 10^{-3}$ cm
17. Water loving colloids are called a [a]
 a. Hydrophilic b. Hydrophobic c. Lyophobic d. Irreversible
18. The number of phases present in colloidal solution [a]
 a. 2 b. 4 c. 3 d. 1
19. Tyndall effect in colloidal solution is due to [b]
 a. Absorption of light b. Scattering of light
 c. Reflection of light d. Presence of electrically charged particles
20. Micelles are used in [a]
 a. Detergents b. Magnetic separation c. Petroleum recovery d. All of these

II. Fill in the blanks

- Bond theory is also called as Molecular orbital theory
- Free electron theory does not explain the specific heats of meta.



- Curd is Gel type of colloid
- Peptization denotes breaking and dispersion into colloidal state
- Smoke is an example of smoke dispersed in air
- Ag⁺ ion can cause coagulation of proteins
- Gold number is given by Zsigmondy
- Milk is an emulsion in which milk fat is dispersed in water
- The emulsifying agent in milk is casein
- Decomposition of hydrogen peroxide [$2 \text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$] is a first order reaction
- The order of reaction of inversion of sugar cane is one while its molecularity is two
- For the first order reaction half-time is independent on the initial concentration.
- The life period of radioactive substance is x hour. The fraction remaining after 2nd hour is $\frac{1}{4}$
- A reaction is said to be of zero order its rate is entirely independent of the concentration of the Reactants
- Time reaction is said to be of 10 times its rate is entirely independent of the concentration of the reactants.
- Quantum yield is = No. of reacting atoms in a given time/No. of quanta in the same time
- The law of photochemical equivalence is valid only for primary process of very photochemical reaction.
- Quantum yield in $\text{H}_2 + \text{Cl}_2$ reaction $10^{-6} \phi$
- Second law of photochemistry is known as Stark einstein's law of toptochemical equivalent

III. Short Answers.

- Give the limitations of free electron theory?
- Write the Mannich reaction?
- Write the Michel addition reaction?
- Write the synthetic applications of malonic ester?
- What is gold number?
- What is chemical kinetics?
- Find the order of a reaction form the following rate law $r = k[\text{A}]^2[\text{B}]$
- Identify the order of sapanification of ester?
- In which reactions the absorption of light takes place in primary process only?
- State Grothus draper law?