

CHEMISTRY QUESTION PAPER

- 1. Picric acid and benzoic acid can be distinguished by the aqueous solution of _____.**
(a) NaHCO_3 (b) Na_2CO_3 (c) NaOH (d) FeCl_3
- 2. Air pollution is caused by _____.**
(a) industries (b) automobiles (c) pollen grains (d) All of these
- 3. Soaps are obtained by _____.**
(a) saponification of oils or fats
(b) alkaline hydrolysis of glycerol
(c) acidic hydrolysis of esters of fatty acids and glycerol
(d) All of these
- 4. Ascorbic acid is the chemical name of _____.**
(a) vitamin D (b) vitamin A (c) vitamin C (d) vitamin B₆
- 5. The process involving heating of rubber with sulphur is called _____.**
(a) galvanization (b) vulcanization (c) bessemerization (d) sulphonation
- 6. Ethyl alcohol on oxidation with $\text{K}_2\text{Cr}_2\text{O}_7$ gives _____.**
(a) acetic acid (b) acetaldehyde (c) formaldehyde (d) formic acid
- 7. Lucas test is performed for _____.**
(a) amines (b) alcohols (c) ethers (d) alkyl halides
- 8. Ethene is obtained from ethyl bromide by _____.**
(a) Nucleophilic substitution
(b) hydrolysis
(c) simple heating
(d) dehydrohalogenation
- 9. Which of the following is an example of elimination reaction?**
(a) Chlorination of methane
(b) Dehydration of ethanol
(c) Nitration of benzene
(d) Hydroxylation of ethylene
- 10. Which of the following is an aromatic hydrocarbon?**
(a) cyclo pentene (b) cyclo hexane (c) naphthalene (d) 1,3-butadiene

11. According to Werner's theory the secondary valencies of a central metal atom correspond to its_____.
- (a) oxidation state
(b) coordination number
(c) sum of the two
(d) none of these
12. Most common oxidation states shown by cerium are_____.
- (a) +2,+4 (b) +3,+4 (c) +3,+5 (d) +2,+3
13. Quartz is the crystalline variety of
- (a) Si (b) SiO₂ (c) Na₂SiO₃ (d) SiC
14. Heavy water is used in atomic reactor as_____.
- (a) coolant
(b) moderator
(c) both coolant and moderator
(d) neither coolant nor moderator
15. The main function of roasting is_____.
- (a) reduction (b) oxidation (c) concentration (d) separation
16. The shortest c-c bond distance is found in_____.
- (a) Diamond (b) Ethane (c) Benzene (d) Acetyline
17. Which is of the following has the largest radius?
- (a) K⁺ (b) Cl⁻ (c) O²⁻ (d) Cr³⁺
18. The principal and azimuthal quantum number of electrons in 4f orbitals are_____.
- (a) 4,2 (b) 4,4 (c) 4,3 (d) 3,4
19. Which of the following indicates the charge on colloidal particles?
- (a) Brownian movement (b) electrophoresis (c) electrolysis (d) tyndall effect
20. Effect of temperature on reaction rate is given by_____.
- (a) Clausius-Clapeyron equation
(b) Gibbs-Helmholtz equation
(c) Arrhenius equation
(d) Kirchoffs equation
21. Which of the following has highest value of standard reduction potential
- (a) F₂ (b) Cl₂ (c) Br₂ (d) I₂

22. BF_3 is _____.
(a) Lewis acid (b) Lewis base (c) Bronsted acid (d) Arrhenius acid
23. For the manufacture of ammonia by the reaction
 $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3 + 21.9\text{kcal}$ the favourable condition are _____.
(a) low temperature, low pressure and catalyst
(b) low temperature, high pressure and catalyst
(c) high temperature, low pressure and catalyst
(d) high temperature, high pressure and catalyst
24. ΔH neutralization is always _____.
(a) positive (b) negative (c) zero (d) can be positive or negative
25. The molar solution of sulphuric acid is equal to _____.
(a) N solution (b) 2 N solution (c) N/2 solution (d) 3 N solution

Answers

1. (d) 2. (d) 3. (a) 4. (c) 5. (b) 6. (a) 7. (b) 8. (d) 9. (b) 10. (c) 11. (b) 12. (b)
13. (b) 14. (c) 15. (b) 16. (d) 17. (c) 18. (c) 19. (b) 20. (c) 21. (a) 22. (a) 23. (b)
24. (b) 25. (b)