

NAT I Medical Chemistry

Sr	Questions	Answers Choice
1	The rate of reaction between A and B increases by a factor of 100 when the concentration with respect to A is increased 10 folds the order of reaction w.r.t A is	A. 10 B. 1 C. 4 D. 2
2	Which of the following statement regarding catalyst is not true?	A. A catalyst remains unchanged in composition and quantity at the end of the reaction B. A catalyst can initiate a reaction C. A catalyst dose not alter the equilibrium in a reversible reaction D. Catalysts are sometimes very specific in respect of reaction
3	In which molecule carbon atom is sp^2 hybridized	A. CH_4 B. C_2H_4 C. C_2H_2 D. None of the above
4	Which of the following reagent cannot be used for preparing alkyl chloride from alcohol?	A. HCl + anhyd. $ZnCl_2$ B. $NaCl$ C. PCl_5 D. $SOCl_2$
5	An exothermic reaction is one in which the reacting substances	A. Have more energy than the products B. Have less energy than the products C. Have the same energy as the products D. Are at a higher temperature than the products
6	Which of the following is different from the other three oxides?	A. MgO B. SnO C. ZnO D. Cr_2O_3
7	Which of the following has least mass?	A. 2 gram atom of nitrogen B. 3×10^{23} atoms of C C. 1 mole of S D. 7.0 g of Ag.
8	Gooch crucible used to filter the solution of	A. H_2SO_4 B. HCl C. $KMnO_4$ D. Both B & C
9	Sulphure dioxide affects	A. Cell wall B. Plasmodesmata C. All membrane systems D. Nucleus
10	The freezing point of 1 molal $NaCl$ solution assuming $NaCl$ to be 100% dissociated in water is	A. $-1.86^\circ C$ B. $-3.72^\circ C$ C. $+1.86^\circ C$ D. $+3.72^\circ C$
11	At 500 K the equilibrium constant for reaction $cis-C_2H_2Cl_2 \rightleftharpoons trans-C_2H_2Cl_2$ is 0.6. At the same temperature the equilibrium constant for the reaction $trans-C_2H_2Cl_2 \rightleftharpoons cis-C_2H_2Cl_2$ will be	A. 0.60 B. 1.67 C. 0.66 D. 2.6
12	Benzene is obtained by fractional distillation of	A. Heavy oil B. Anthracene oil C. Middle oil D. Light oil
13	In Friedal-Craft's alkylation besides $AlCl_3$ the other reactants are	A. $C_6H_6 + NH_3$ B. $C_6H_6 + CH_4$ C. $C_6H_6 + H_2O$ D. $C_6H_6 + H_2$

CH₃Cl

D. C₆H₆ + CH₃COCl

14 Which of the following alkali metal hydroxides is the strongest base?

- A. LiOH
- B. NaOH
- C. KOH
- D. CaOH

15 Which species represents the electrophile in aromatic nitration?

- A. NO⁻₂
- B. +<div>NO₂</div>
- C. NO₂
- D. NO⁻₃

16 Magnesium keeps on burning in

- A. N₂
- B. CO₂
- C. N₂O
- D. N₂ as well as CO₂

17 Gooch crucible is used for the filtration of precipitates having

- A. High solubility
- B. High concentration
- C. High ignition temperature
- D. Low temperature

18 Natural fertilizer provides potassium in the form of K₂O (potash)

- A. 1.5 kg
- B. 3 kg
- C. 4.5 kg
- D. 6.5 kg

19 Salol is prepared from

- A. Salicylic acid and phenol
- B. Salicylic acid and methyl alcohol
- C. Both
- D. None

20 Which of the following geometry is associated with the compound in which the central atom assumes sp³d hybridization?

- A. Planar
- B. Pyramidal
- C. Angular
- D. Trigonal bipyramidal