Tribhuvan University, Institute of Science and Technology
Central Department of Computer Science and Information Technology
Model Question Paper, B.Sc. Computer Science and Information Technology

Subject: Chemistry, Full Marks: 50 Time: 30
Put correct answer on the answer sheet given. Attempt all question

1. The alkane that cannot be formed by Wurtz reaction is:
   a. methane b. ethane c.butane d. hexane
2. The product of the reaction: $CH_3-CH= CH_2+HBr \rightarrow$ is:
   a. $CH_3-CH_2-CH2Br$ b. $BrCH_2-CH_2Br$ c. $CH_3CHB_r- CH_3$ d. $CH_2=C=CH_2$
3. which of the following solutions is Toll en's Reagent?
   a. ammonical cuprous chloride b. ammonical cuprous nitrate
   c. ammonical sodium chloride d. ammonical silver nitrate
4. Aniline reacts with diazonium salt to fore:
   a. diazonium benzene b. hydrazonium benzene
   c. azobenzene c. azoxybenzene
5. Which of the following is known as tear gas?
   a. CCl_3COCH_3 b.CH_3COCl c. $COCL_3$ d. CH_3CL
6. Which of the following compounds are used as refrigerant?
   a. CH_3COCH_3 b.CCL_4 c. CF_4 d. CCl_2F_2
7. The compound B formed in the following sequence of reaction:
   $CH_3CH_2CH_2OH \xrightarrow{PCL_5} A \xrightarrow{Alc.KOH} B$
   a. acidic b. propane c. propene d.propanol
8. Phenol (C_6H_2OH) is:
   a. acidic b. basic c. neither acidic nor basic d. both acidic and basic
9. Hardness of water may be caused by:
   a. calcium carbonate b. calcium phosphate c. calcium hydride d. none of above
10. Chile Salt – Peter's formula is:
   a. $NaNO_3$ b. $NaSO_4$ c. $CuSO_45H_2o$ d.KNO_3
11. An ingredient of banking power is:
   a. sodium bicarbonate b. sodium carbonate c. sodium sulphate d. borax
12. Cinnabar is one ore of the metal:
   a. mercury b. gold c. zinc d. silver
13. Which is the most basic of the following oxides?
   a. Na_2O b. BaO c. As_2O d. Al_2O_3
14. Which mixture stands for aqua-regia?
   a. $3HCl + HNO_2$ b.. $HCL + 3HNO3$ c. $H_3PO_4 + H_2S0_4$ d. $HCL + CH_3COOH$
15. Sea weed are important source of:
   a. iron b. chlorine c. iodine d. bromine
16. Copper pyrites are concentrated by:
   a. gravity separation b.electro-magnetic method
   c.chemical means d. froth floatation process
17. What will be the mass of 6.03 * 1023 molecules of carbon monoxide?
   a. 17.01 b. 16.00 c. 28.01 d. 56.20 g
18. Energy of an electron of an atom is specified by:
   a. Principal quantum number b. spin quantum number
   c. magnetic quantum number d. azimuthal quantum number
19. How many moles of water are present in 180g of water?
   a. 1 b. 10 c. 18 d. 100
20. Which of the following transition in a hydrogen atom absorbs the photon of highest? frequency?
   a. n= 1 to n = 2 b. n = 2 to n = 5 c. n = 2 to n = 21 d. n = 5 to n = 2
21. The number of unpaired electrons in d orbitals of a atom having atomic number 29 at ground state is:
   a. O b. 1 c. 5 d. 10
22. Which of the following ions have the greatest radius?
   a. H b. F c.Br d.. I
23. Which sequence following the order of decreasing tendency to form anions?
   a. F, N, O b. N, O, F c. F, O, N d. N, F, O
24. The reversible reaction: $N_2+3H_2 \rightleftharpoons 2NH_3+Heat$; in the forward direction is favored by:
   a. low temperature and high pressure b. high temperature and low pressure
   c. low temperature and low pressure d. high temperature and high pressure
25. In the reaction: $Cr_2O_7^{--} + 14H^+ + 6I \rightarrow 2Cr^3 + 3H_2O + 3I_2$, which element is reduced?
   a. chromium b. hydrogen c. oxygen d. iodine