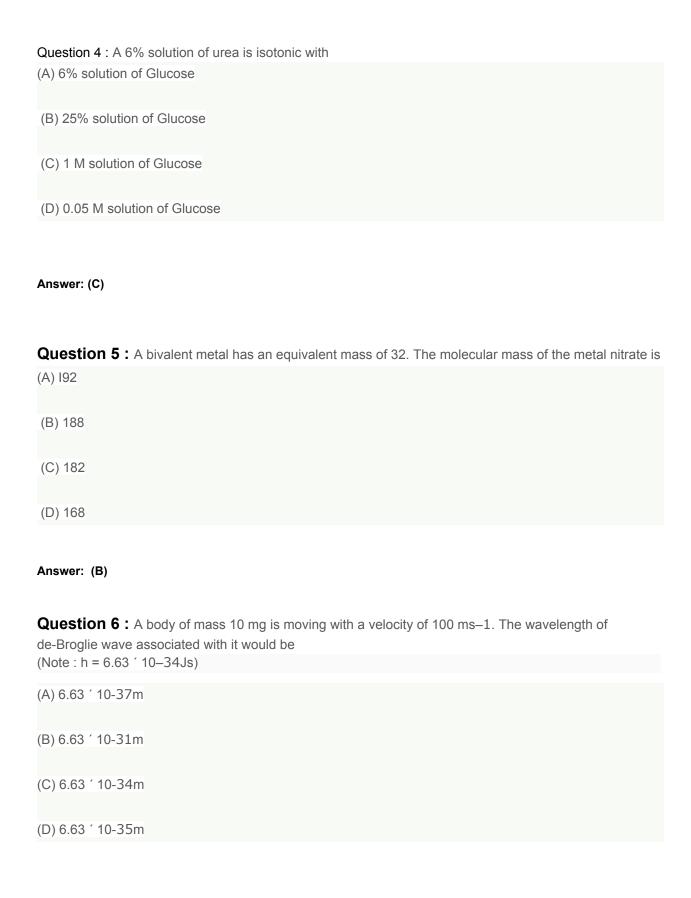
Chemistry Model Question Paper - 2

Question 1: 50 cm3 of 0.2 N HCL is titrated against 0.1 N NaOH solution. The titration is discontinued after adding 50 cm3 of NaOH. The remaining titration is completed by adding 0.5 N KOH. The volume of KOH required for completing the titration is
(A) 10 cm3
(B) 12 cm3
(C) 10.5 cm3
(D) 25 cm3
Answer: (A)
Question 2: 80 g of oxygen contains as many atoms as in
(A) 80 g of hydrogen
(B) 1 g of hydrogen
(C) 10 g of hydrogen
(D) 5 g of hydrogen
Answer: (D)
Question 3: 9.65 C of electric current is passed through fused anhydrous magnesium chloride. The magnesium metal thus obtained is completely converted into a Grignard reagent. The number of moles of the Grignard reagent obtained is
(A) 1 ´ 10-4
(B) 5 ´ 10-4
(C) 1 ′ 10-5
(D) 5 ´ 10-5
Answer: (D)



Answer: (B)
Question 7: A body of mass x kg is moving with a velocity of 100 ms -1 . Its de Broglie wavelength is $6.62 \cdot 10-35$ m. Hence x is (h = $6.62 \cdot 10-34$ Js)
(A) 0.15 kg
(B) 0.2 kg
(C) 0.1 kg
(D) 0.25 kg
Answer: (C)
Question 8: A buffer solution is prepared in which the concentration of NH3 is 0.30 M and the
concentration of $^{NH\frac{+}{4}}$ is 0.20 M. If the equilibrium constant, Kb for NH3 equals 1.8 × 10–5, what is the pH of this solution?
(A) 8.73
(B) 9.08
(C) 9.43
(D) 11.72
Answer: (C)
Question 9: A buffer solution contains 0.1 mole of sodium acetate dissolved in 1000 cm3 of 0.1 M acetic acid. To the above buffer solution, 0.1 mole of sodium acetate is further added and dissolved.
The pH of the resulting buffer is equal to

(A) pKa

(B) pKa - Log2
(C) pKa + L0g2
(D) pKa + 2
Answer: (C)
Question 10: A complex compound in which the oxidation number of a metal is zero is
(A) K4 [Fe (CN)6]
(B) K3 [Fe (CN)6]
(C) [Ni (CO)4]
(D) [PI (NH3)4]Cl2
Answer: (C)
Question 11: Which of the following is used to prepare Cl2 gas at room temperature from concentrated HCl?
(A) MnO2
(B) H2S
(C) KMnO4
(D) Cr2O3
Answer: (C)

Question 12: Which of the following is not an ore of magnesium?

(A) Carnallite
(B) Dolomite
(C) Calamine
(D) Sea water
Answer: (C)
Question 13: Which of the following has the highest bond order?
(A) N2
(B) O2
(C) He2
(D) H2
Answer: (A)
Question 14: Which of the following gives an aldehyde on dry distillation?
(A) Calcium acetate + calcium benzoate
(B) Calcium formate + calcium acetate
(C) Calcium benzoate
(D) Calcium acetate
Answer: (B)

Question 15: Which of the following does not give benzoic acid on hydrolysis?

(A) phenyl cyanide			
(B) benzoyl chloride			
(C) benzyl chloride			
(D) methyl benzoate			

Answer: (C)