RGPV DIPLOMA CHEMISTRY QUESTION PAPER S 2013

1. Choose the correct answer : 2 each

a. When one ampere current is passed through a conductor the quantity of current is expressed in :

(A) Faraday (B) Coulomb (C) e.m.f. (D) Ohm

b. Which of the following compound passes ionic bond :

(A) 02 (B) CC14 (C) CHC13 (D)MgCl2

c. The pH of a solution is 6. If shows it is a :

(A). strong base (B) weak base (C) strong acid (D) weak acid

d. The formula of a glass is $K_20.Ca0.6Si0_2$. It is :

(A) soft glass (B) soda lime glass(C) hard glass (D) optical glass

e. Which one is a fiber :

(A) rubber (B) PVC (C) bakelite (D) nylon

2. (i) Explain the discovery of neutron.

(ii) Write the postulates of Bohr theory.

(iii) $_{92} U^{238}$ - Th + 2He4 . Write the atomic list and atomic number of Th. 6

3. (i) Explain Berkeley and Hartley method of determining osmotic pressure. 10

(ii) Write the benefits of this method. 4

(iii) Write factors affecting osmotic pressure. 4

4. (i) Write only names of methods to determine hardness of water along with name of indicators for each method. 6

Write the types of hardness of water. 6

Write only reactions of soda lime method. 6

5. Write Arrhenius theory of ionisation. Write the names of factors affecting ionisation. 18

6. (i) Write only names of constituting compounds in cement. 6

(ii) Write chemical composition of Portland cement. 6

(iii) Write the types of refractories. 6

7. (i) Define polymer, high polymer and polymerisation. 6

(ii) Differentiate between addition polymerisation and condensation polymerisation. 6

(iii) Write short notes on any one : 6

(a) PVC (b) poly amide (c) nylon 6 : 6.

8. Write short notes on any two : 9 each

(i) properties of good lubricant,

(ii) characteristics of good paint,

(iii) proximate analysis of coal,

(iv) water pollution.