Q.28 What are the causes of permanent hardness of water? (CO2)

Q.29 Derive molecular formula of (CO1)

(i) Sodium Chloride

(ii) Hydrochloric Acid

Q.30 Define ion and molecule with examples. (CO1)

Q.31 Calculate the molecular mass $Fe_2(So_4)_3$ Atomic mass of Fe=56, S=32 and 0=16 (CO1)

Q.32 Explain the process of Electrorefining. (CO4)

Q.33 State any four industrial application of pH. (CO3)

Q.34 Calculate the weight of Cu deposited, when a current of 0.2 ampere is passed for 5 minutes through a solution of $CuSO_4$. (CO4)

(ECE of Cu is 0.00032)

Q.35 State disadvantage of hard water in boiler? (CO2)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain different modulus of elasticity. (CO4)

Q.37 (i) Give five examples of transformation of energy from one form to another. (CO2)

(ii) State any four qualities of drinking water.

Q.38 Calculate the % age composition of Aniline (Atomic mass: C=12,H=1,N=14) (CO1)

(**Note:** Course outcome/CO is for office use only)

No. of Printed Pages : 4
Roll No. .....

2nd Sem./ Branch : Textile. Design
Subject:- Applied Science

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Which of the following is a scalar quantity? (CO2)

a) Work b) Displacement

c) Area d) Force

Q.2 SI Unit of energy is (CO3)

a) Newton b) Kelvin

c) Joule d) Ampere

Q.3 With increase in temperature surface tension of a liquid (CO4)

a) Decreased b) Increases

c) Remains Same d) None of these

Q.4 Average kineticenergy of molecules is called (CO5)

a) Pressure b) Viscosity

c) Heat d) Temperature

Q.5 Heating of an iron rod is an example of (CO6)

a) Conduction b) Convection

c) Radiation d) None of these

Q.6 Symbol of sodiumis (CO1)

a) S b) Na

c) K d) Fe

Q.7 Permanent hardness of water is due to the presence of (CO2)

a) $CaCO_3$ b) NaCI

c) $MgSO_4$ d) $Mg(HCO_3)_2$

Q.8 pH of water is (CO3)

a) 9 b) 7

c) 6 d) None of the above

Q.9 Anions are.....charged ions. (CO3)

a) Negative b) Positive

c) Neutral d) None of these

Q.10 State which of the following is not an element (CO1)

a) Diamond b) Graphite

c) Ozone d) Silica

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 A stretched bow is an example of .....energy. (CO3)

Q.12 The SI unit power is watt. (True/False) (CO3)

Q.13 Pascal is the SI unit of..... (CO4)

Q.14 Mathematically, force per unit length is called..... (CO4)

Q.15 Heat radiation travel in.....(straight/curved) lines. (CO6)

Q.16 Rain water is an example of..... (CO2)

Q.17 The short hand notation used for the full name of an element is called..... (CO1)

Q.18 State the valency of ferrous ion.....(CO1)

Q.19 $CuSO_4$ is non-electrolyte. (True/False) (CO4)

Q.20 Hard water does not give lather with soap. (True/False) (CO2)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Give dimensional formula of area, force, work , power and surface tension. (CO1)

Q.22 Give full form each of FPS, CGS, MKS and SI system of units. (CO1)

Q.23 Define scalar and vector quantity and give one example of each. (CO2)

Q.24 Derive expression for work done in moving an object on horizontal surface. (CO3)

Q.25 Define kinetic and potential energy with one example of each. (CO)

Q.26 Differentiate between heat and temperature on the basis of K.E. of molecules. (CO5)

Q.27 Give any five applications of surface tension. (CO4)