SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions.   (2x8=16)

Q.23   What are the different modulus of elasticity? Explain with examples.

Q.24   Define different temperature scales. Explain relationship between these temperature scales.

Q.25   What are electrolytes, non-electrolytes conductors and non conductors with suitable examples.

1st Year / Textile Design

Subject : Applied Sciences

Time : 3 Hrs.   M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory   (6x1=6)

Q.1   Formula of Faraday 1st law of electrolysis is------

a)   t=Z.C.w   b)   W=Z.C.t

c)   W=Z.C.   d)   W=Z.P.t

Q.2   The solution having PH value = 7 is_____ in nature

a)   Neutral   b)   Basic

c)   Acidic   d)   Buffer

Q.3   Units of molarity are

a)   g mol   b)   g mol L- 1

c)   g mol L   d)   mol L-1

Q.4 Which of the following is a secondary cell?

a) Dry cell   b) Super Dry cell

c) Ni-Cd cell   d) H_2-O_2 cell

Q.5 Formula of Faraday 2nd law of electrolysis is_____

a) $W_1/W_2=Z_1/Z_2$ b) $W_1/W_1=Z_1/Z_2$

c) $W_2/W_2=Z_1/Z_2$ d) $W_1/W_2=Z_1/Z_1$

Q.6 Molarity of a solution_____with temperature

a) Does not change   b) Change

c) Both A & B   d) None

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory.   (6x1=6)

Q.7 Give two examples of zero work.

Q.8 Define Potential Energy.

Q.9 Define stress.

Q.10 Define strain.

Q.11 Calculate the molecular mass of $Fe_2(SO_4)_3$. Atomic mass of Fe=56, S=32 and O=16

Q.12 Define Solute and solvent.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions.   (8x4=32)

Q.13 Define work and derive work done is moving an object on horizontal.

Q.14 State the principle of conservation of mechanical energy. Give some examples.

Q.15 Define viscosity. How viscosity change with increase with temperature.

Q.16 Define gauge, absolute and atmospheric pressure.

Q.17 Define conduction and radiation with examples.

Q.18 Derive the expression for the kinetic energy of a body.

Q.19 Define acidity and basicity with examples.

Q.20 What are strength of a solution in terms of normality and morality?

Q.21 State Faraday's first law of electrolysis.

Q.22 Explain the process of electro refining.