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182512

1st Year Annual Pattern (Batch 18))

Branch : TD

Sub.: Applied Science

Time : 3 Hrs. **M.M. : 60**

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

Q.1 SI Unit of power is (CO-3)

a) Newton b) Watt

c) Joule d) Ampere

Q.2 With increase in temperature surface tension of a liquid. (CO-4)

a) Decreases b) Increases

c) Remains Same d) None of these

Q.3 Heating of an iron rod is an example of (CO-6)

a) Conduction b) Convection

c) Radiation d) None of these

Q.4 A basic solution has the pH value. (CO-3)

a) Less than 7 b) More than 7

c) 7 d) None of the above

Section-D

Note: Long answer questions. Attempt any Two question out of Three Question. (2x8=16)

Q.23 State law of conservation of energy and derive expression for it. (CO-3)

Q.24 (i) Write a short note on viscosity.

(ii) Define solute and solvent with examples. (CO-4)

Q.25 (i) Define Normality and Molarity with examples. (CO-3)

(Ii) Differentiate electrolytes and non electrolytes with examples. (CO-4)

Q.5 An example of weak electrolyte is (CO-4)

a) HCI b) H_2SO_4

c) CH_3COOH d) KOH

Q.6 During electrolysis electrons are (CO-4)

a) Gained

b) Lost

c) Gained by cations and Lost by anions

d) Lost by cations and gained by anions

Section-B

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

Q.7 A moving car is an example of _____ energy. (CO-3)

Q.8 Pressure inside a tyre is an example of _____ (gauge/absolute) Pressure. (CO-4)

Q.9 Heat radiation travel in _____ (straight/curved) Lines. (CO-6)

Q.10 Normality is denoted by M. (True/False) (CO-3)

Q.11 Reduction involves gain of electrons. (True/False) (CO-4)

Q.12 _____ is denoted by M. (CO-3)

Section-C

Note: Short answer type Question. Attempt any Eight questions out of Ten Questions. (8x4=32)

Q.13 Give four examples of transformation of energy from one form to another. (CO-3)

Q.14 Give four applications of surface tension. (CO-4)

Q.15 Define kinetic and potential energy with one example of each. (CO-3)

Q.16 Differentiate between heat and temperature on the basis of K.E. of molecules. (CO-5)

Q.17 Define stress and stain. Give SI unit of each. (CD-4)

Q.18 State and explain Farady's 1^{st} law of electrolysis. (CO-4)

Q.19 A solution is prepared by dissolving 8g of NaOH in 500ml of water. (CO-3)

Q.20 Calculate equivalent weight of H_2SO_4 (Atomic mass H=01,S=32, O=16) (CO-3)

Q.21 Give example of any four industrial applications of electrolysis. (CO-4)

Q.22 List any two electrolytes and any two non-electrolytes. (CO-4)

Section-D