No. of Printed Pages : 4 222013
Roll No. .....

1st Year/Branch : Advance Diploma
In Tool And Die Making
Subject : Applied Physics

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Dimensional formula for pressure is.

a) $[ML^{-1}T^{-2}]$ b) $[MLT^{-1}]$

c) $[LT^{-1}]$ d) $[LT^{-2}]$

Q.2 linear momentum is product of.

a) Mass And Speed

b) Mass And Velocity

c) Mass And Acceleration

d) Inertia And Speed

Q.3 Si unit of energy is.

a) Newton b) Watt

c) Joule d) Dyne

Q.4 Which of the following is a plastic body?

a) Steel b) Ruber

c) Mud d) Quartz

SECTION-D

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

Q.23 Explain banking of roads with a neat diagram.

Q.24 Explain free, forced and resonant vibrations with examples.

Q.25 Explain modes of transfer of heat.

Q.5 Conduction is the process of heat transfer in_____

a) Solids

b) Liquids

c) Gases

d) Both Liquids and gases.

Q.6 Ultrasonic waves have frequency.

a) Less than 20hz b) Greater than 20khz

c) Less than 20khz d) Greater than 20hz

SECTION-B

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

Q.7 Waves which require a material medium for propagation are called_____waves.

Q.8 Write an application of TIR.

Q.9 Number of vibrations completed in one second is called._____.

Q.10 kilowatt-hour is the unit of_____.

Q.11 Write the SI unit of conductance.

Q.12 Material whose conductivity lies between that of conductor and insulator is called._____

SECTION-C

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

Q.13 State newton's first and second laws of motion.

Q.14 Derive the expression for potential energy of a body.

Q.15 Define atmospheric and gauge pressure.

Q.16 Define interference and diffraction.

Q.17 State any four applications of telescope.

Q.18 State and explain coulomb's law of electrostatics.

Q.19 Explain series combination of resistances.

Q.20 Differentiate between intrinsic and extrinsic semiconductors.

Q.21 Explain diamagnetic and paramagnetic materials.

Q.22 Write any four applications of laser.