

V.P.M's B. N. Bandodkar College of Science, Thane
F.Y.J.C First Mid Terminal Examination September 2018
Subject: Physics

Date: 18.09.2018
Day: Tuesday

Time: 08.45 am to 09.45 am
Marks: 25

- Q.1** Select and write the most appropriate answer to each of the following questions:
- i) 1 N/m^2 01
a) 10^7 dyne/cm^2 b) 10^5 dyne/cm^2 c) 10^3 dyne/cm^2 d) 10 dyne/cm^2
- ii) A screw gauge and spherometers can be used to measure reading as small as _____ 01
a) 10^{-3} m b) 10^4 m c) 10^{-5} m d) 10^{-6} m
- iii) Frictional force is _____ type of force. 01
a) Electrical b) Gravitational c) Nuclear d) Pseudo
- iv) The force of friction acts in a direction _____ to the direction of motion of object. 01
a) same b) opposite c) perpendicular d) downwards
- v) SI unit of conductivity is _____ 01
a) ohm – metre b) ohm/metre c) siemens – metre d) siemens/metre
- vi) Thermistors can measure temperature as small as _____ 01
a) 0.01°C b) 0.1°C c) 0.001°C d) 0.0001°C
- vii) The Refractive index of glass is 1.5, the velocity of light in glass is _____. 01
[velocity of light in air = $3 \times 10^8 \text{ m/s}$]
a) $3 \times 10^8 \text{ cm/s}$ b) $4.5 \times 10^{10} \text{ cm/s}$ c) $2 \times 10^8 \text{ m/s}$ d) 10^{10} m/s
- viii) Wavelength of light in different media are proportional to _____ 01
a) Speed of light in that medium
b) Amplitude of light in that medium
c) Frequency of light in that medium
d) Both Amplitude & Frequency of light in that medium
- Q.2**
- i) Define dispersive power of a prism. 01
- ii) Define critical angle? 01
- iii) Determine the number of significant figures of the following. 01
a) 93.26 b) 2.35×10^{-19}
- iv) Find order of magnitude of the following: 01
a) Length of rod 7 m b) The gravitation constant $G = 6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$
- v) Evaluate resistance for the following colour coded resistor. 01
Yellow – Violet – Black – Silver

