Engineering physics (2018)

Q1.Choose the correct answer:

(i) How many significant degits are in 0.04058?

(a) 4 (b) 5 (c) 6 (d) 3

Ans.(a)

(ii) When we kick a stone, we get hurt this is due to

(a)Reaction (b)Velocity (c)momentum (d)inertia

Ans.(c)

(iii) The mass of the body is halved and its speed is doubled. What happen to the K.E of the body

(a) double (b)4 times (c) 8 times (d) remains unchanged

Ans.(b)

(iv) Viscosity is a property of

(a)liquid only (b)Solid only

(c)solid and liquid only (d)liquid and gases only

Ans.(d)

(v) The spherical shape of rain drop is due to

a)density of water (b)atmospheric pressure

c)gravity (d)surface tension

ns.(d)

i) Which one of the following substances possess the highest elasticity?

)rubber (b)glass (c)steel (d)copper

ns.(c)

i) As we go from equator to poles, the value of g

remains the same (b)increases

decreases (d)decreses upto a latitude of 45°

s.(b)

) A thin circular disk has a concentric hole in it . The disc is heated, the volume of the cavity will

crease (b) decrease

main unchanged (d)none of these

(ix) Echo is

(a)ghost talking (b)double vibration of air

(c)reflection of sound (d)none of these

Ans.(c)

(x) In a stationary wave, node is a point having

(a)maximum density (b)maximum displacement

(c)minimum amplitude (d)maximum stress

Ans.(c)

Q2.(a)State and explain Newtons law of gravitation? define gravitational constant(G). What is its S.I units?

Ans. Refers to chapter 3 Q. no. 1 & 2

Q2.(b) What is simple harmonic motion ? Find the expres for velocity and acceleration of a body executing SH

Ans. Refers to chapter 2.2 Q. no. 3 & 4

Q3.(a)Define the term:accuracy, precision, absolute error percentage error.

Ans. Refers to chapter 1 Q. no. 7 & 9

Q3.(b)Define surface tension and write its S.I unit.How you explain pheonomenon on the basis of molecu theory?

Ans. Refers to chapter 5.2 Q. no. 2 & 3

Q4.(a) State and explain Newton's laws of motion.

Ans. Refers to chapter 2.1 Q. no. 4

Q4.(b) What are the concept of scalar and vector quantities

Ans. Refers to chapter 2.1 Q. no. 1

Q5.(a)Defines Acoustics . What are the condition for g acoustics ?

Ans. Refers to chapter 7.2 Q. no.1 & 3

Q5.(b)Explain the differents modes of transmission of heat w examples.

Ans. Refers to chapter 6 Q. no. 1

Q6.Define work, energy and power. What is work- ener principle ?

Ans. Refers to chapter 4 Q. no. 6 & 8

Q7.(a)Define stress and strain with there types . Also write th unit?

Ans. Refers to chapter 5.1 Q. no. 2 , 3 & 4

Q7.(b) Calculate the strain produced in a material if the stress the 2000kg/m² and Y = 2 × 10⁶ kg/m².

Ans. Refers to chapter 5.1 (Solved Example)

Q8. What is viscosity ? State Newtons law of viscocity and derive the expression for coefficient of viscocity .

Ans. Refers to chapter 5.3 Q. no. 1 & 4

Q9. Define amplitude, period, frequency and wavelength.

Ans. Refers to chapter 7.1 Q. no. 1

OR

Q. If the broad casting frequency of wave is 20 × 10⁴ Hz. Calculate its wavelength?

Ans. Refers to chapter 7.1 Q. no. 7