الصفجة الالكترونية لمقررات الفيزيا لكليات التقنية

المؤسسة العامة للتدريب التقني والمهني Technical and Vocational Training Corporation



اعداد : أ. عبدالعزيز العنزي

Homework on Chapter 3

Question1

Select the most correct answers of the followings: 1. The rate of change of the position of an object is: c) Velocity. a) Distance. b) Length. d)displacement. 2. Which of the following is a vector quantity? b) Length. c) Distance. d)displacement. a) Area. 3. Which of the following is a scalar quantity? a) acceleration. b)Velocity. c)Distance. d)displacement. 4. The SI units for velocity is: c) m/s^2 . b) m/s. a) km/h. d) m/h. 5. The dimension of velocity is: c) m/s^2 . d) L/TS. a) L/T. b) L.T. 6. An object moves with a constant velocity of 9.8 m/s, its acceleration in ms^{-2} is: a) 9.8 b) Zero c)0.98 d)987. 7. The SI units of acceleration is: b) m/sc) m/s^2 a) m.s d) cm/s8. When an object is moving with uniform velocity, what is its acceleration? b) Uniform. a) Zero. c)non-uniform. d)Negative.

Question2

Solve the following problems:

1- The position of a particle moving on the x axis is given by $x = 20 + 4 t^2 - 3t^3$.

(a)What is its instantaneous velocity at t = 2 seconds?

(b) Find the average velocity in the interval between 1 Sec and 6 Sec?

(c) What is its instantaneous acceleration at t = 3 seconds?

2- A body travelling with a velocity of (120 ms^{-1}) accelerates uniformly at the rate of (20 ms^{-2}) for a period of (40 s). Calculate the velocity and the distance travelled in (40 s)?

3- A stone is dropped from rest from the top of a tall building, After 2.00 s of free-fall, (a) what is the velocity of the stone?

(b) what is the displacement y of the stone?