MULTIPLE CHOICE QUESTIONS

BOOK- MCQs

1. The respective number of significant figures for the numbers 23.023, 0.0003 and 2.1×10^3 are:

   (a) 5, 1, 2 (b) 5, 1, 5 (c) 5, 5, 2 (d) 4, 4, 2

2. Which among the following is the supplementary unit?

   a) Mass b) Time **(c) Solid angle** (d) Luminosity

3. The unit of solid angle is:

   (a) second **(b) Steradian** (c) kilogram (d) Candela

4. The quantity having the same unit in all system of unit is:

   (a) Mass **(b) Time** (c) Length (d) Temperature

5. Random errors can be eliminated by:

   (a) taking number of observations and their mean
   (b) measuring the quantity with more than one instrument
   (c) eliminate the cause
   (d) careful observations

6. Systemic error can be:

   (a) either positive or negative (b) positive only
   (c) negative only (d) zero error

7. $[MLT^{-2}]$ is dimensional formula of:

   (a) strain **(b) force** (c) displacement (d) pressure

8. Which of the following pair has the same dimension?

   (a) moment of inertia and torque **(b) impulse and momentum**
   (c) surface tension and force (d) specific heat and latent heat

9. Dependent Variable is:

   (a) cause (b) cause and effect **(c) effect** (d) reason

10. Dimension of Kinetic Energy is same as that of:

    (a) acceleration **(b) work** (c) velocity (d) force

PROF: IMRAN HASHMI

EXAMS PRACTICE MULTIPLE CHOICE QUESTIONS

1 What is the slope of the line represented by the equation $y = 2x + 1$?

(a) 2 (b) 1 (c) 0 (d) Infinity

2 Which of the following is the definition of accuracy?

(a) The closeness of a measurement to the true value.
(b) The closeness of repeated measurements to each other
(c) Both (a) and (b)
(d) None of the above

3 The dimension of G are;

(a) ML^2T^3 **(b)** $M^{-1}L^{-2}T^{-3}$ **(a)** $M^{-1}L^3T^{-2}$ **(d)** L^2MT^1

4. The dimension of Torque is:

(a) ML^2T **(b)** ML^2T^{-2} **(c)** ML^2T^{-3} **(d)** MLT^2

5. The unit of Luminous intensity is:

(a) Decibel **(b) Candela** **(c)** Dioptre **(d)** W/m^2

6. The dimension of force is:

(a) MLT **(b)** MLT^1 **(c)** MLT^2 **(d)** MLT^{-2}

7. Light year is the unit of:

(a) time **(b) distance** **(c)** velocity **(d)** intensity

8. The products of two number 5.642 and 4.71 in the prospective significant number is:

(a) 26.57382 **(b)** 26.574 **(c) 26.6** **(d)** 26.5738

9 The dimensions of angular momentum is:

(a) $L^2M^2T^2$ **(b)** L^2M^2T **(c)** L^2MT **(d)** L^2MT^{-1}

10. The number of significant figures 7.050×10^{-2} is:

(a) 2 **(a)** 3 **(c) 4** **(d)** 6

11. The number of significant figure in 2.50×10^{3} is:

(a) 2 **(b) 3** **(c) 4** **(d)** 7

12. The dimensions of the kinetic energy are:

(a) $1/2\ ML^2T^2$ **(b)** ML^2T^{-2} **(c)** $1/2\ ML^2T^2$ **(d)** MLT^1

13. The number of significant figure in 0.0050 are:

(a) 3 **(b) 2** **(c)** 5 **(d)** 6

14. For the quantity 0.121203; the number of significant figures are:

(a) 3 **(b)** 4 **(c) 6** **(d)** 7

15 Zero error produced by measuring instruments is called

(a) systematic error **(b)** random error

(c) frequent error **(d)** exponential error

16 One light year is equal to

(a) 9.5 x 10^{15} cm **(b) 9.5 x 10^{15} km**

(c) 9.5 x 10^{15} m **(d) 9.5 x 10^{15} dm**

17 Absolute uncertainty in a measurement depends upon

(a) magnitude of the measurement (b) percentage error in the measurement

(c) least count of the instrument (d) all of these

18 Total uncertainty, in result obtained from the subtraction of two measurement, is equal to

(a) product of their absolute uncertainties

(b) difference of their absolute uncertainties

(c) division of their absolute uncertainties

(d) sum of their absolute uncertainties

19 Which one is the highest power multiple?

(a) mega **(b) tera** (c) giga **(d)** Deca

20 Dimensional analysis is helpful for

(a) deriving a possible formula (b) checking the constant in equation

(c) verification of laws **(d)** all of these

21 Which equation is not dimensionally correct?

(a) $x = m\,\frac{\lambda}{2}$ **(b)** $S = \frac{1}{2}\,a\,t^2$

(c) $v_f = v_i + a\,t$ **(d)** $H = \frac{v_0\ sin^2\theta}{2\,g}$

22 The percentage uncertainty in the measurement (3.67 ± 0.25) m

(a) 5.8 % (b) 6.8 % (c) 7.8 % (d) 8.8 %

23 If the uncertainty in the measurement of current is 3%, resistance is 5% and time is 1% the total uncertainty in the calculation of energy supplied is

(a) 9 % (b) 12 % (c) 15 % (d) 18 %

24 For simple pendulum if uncertainty in length is 0.5 % and gravitational acceleration is 1% the uncertainty in measuring time by such pendulum will be

(a) 0.5 % (b) 0.75 % (c) 1.5 % (d) 2.5 %

25 From dimensional analysis correct formula cannot be derived if formula contains

(a) length **(b) angle** (c) velocity **(d)** force