Yakeen NEET 2.0 2026

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Units and Measurements

DPP: 8

Q1 The Sun's angular diameter is measured to be $1920''$. The distance D of the Sun from the Earth is 1.496×10^{11} m. What is the diameter of the Sun?
(A) 1.39×10^{9} m
(B) 1.5×10^{9} m
(C) 1.9×10^{9} m
(D) 3.6×10^{9} m

Q2 The unit of potential energy is:
(A) $g\left(\frac{cm}{sec^2}\right)$
(B) $g\left(\frac{cm}{sec}\right)^2$
(C) $g\left(\frac{cm^2}{sec}\right)$
(D) $g\left(\frac{cm}{sec}\right)$

Q3 Which of the following is a derived unit?
(A) Unit of mass
(B) Unit of area
(C) Unit of time
(D) Unit of current

Q4 Light year is a unit of
(A) Time
(B) Mass
(C) Distance
(D) Energy

Q5 Calculate the dimensional formula of energy from the equation $E = \frac{1}{2}mv^2$
(A) $\left[\mathrm{M^0\ L^2\ T^2}\right]$
(B) $\left[\mathrm{M^1\ L^2\ T^{-2}}\right]$
(C) $\left[\mathrm{M^0\ L^2\ T^{-2}}\right]$
(D) $\left[\mathrm{M^0\ L^{-2}\ T^{-2}}\right]$

Q6 Two physical quantities A and B have different dimension. Which mathematical operation given below is physically meaningful?
(A) A B
(B) $\mathrm{A} + \mathrm{B}$
(C) $\mathrm{A} - \mathrm{B}$
(D) None of these

Q7 The dimensions of universal gravitational constant are
(A) $\mathrm{M^{-2}\ L^2\ T^{-2}}$
(B) $\mathrm{M^{-1}\ L^3\ T^{-2}}$
(C) $\mathrm{ML^{-1}\ T^{-2}}$
(D) $\mathrm{ML^2\ T^{-2}}$

Q8 The dimensions $\mathrm{ML^{-1}\ T^{-2}}$ may correspond to
(A) Work done by a force
(B) Linear momentum
(C) Pressure
(D) Energy per unit area

Q9 The number of particles crossing per unit area perpendicular to x-axis in unit time is $N = -D\frac{n_1 - n_2}{x_2 - x_1}$ where $\mathrm{n_1}$ and $\mathrm{n_2}$ are number of particles per unit volume for x_1 and x_2 respectively. The dimensions of diffusion constant D are
(A) $\left[\mathrm{ML^0\ T^2}\right]$
(B) $\left[\mathrm{M^0\ L^2\ T^{-4}}\right]$
(C) $\left[\mathrm{M^0 LT^{-3}}\right]$
(D) $\left[\mathrm{M^0\ L^2\ T^{-1}}\right]$

Q10 Taking into account the significant figures, what is the value of $(9.99\ \mathrm{m} - 0.0099\ \mathrm{m})$?
(A) 9.98 m
(B) 9.980 m
(C) 9.9 m

(D) $9.9801\ \mathrm{m}$

Q11 The numbers 2.745 and 2.735 on rounding off to 3 significant figures will give:

(A) 2.75 and 2.74

(B) 2.74 and 2.73

(C) 2.75 and 2.73

(D) 2.74 and 2.74

Answer Key

Q1	(A)
Q2	(B)
Q3	(B)
Q4	(C)
Q5	(B)
Q6	(A)
Q7	(B)
Q8	(C)
Q9	(D)
Q10	(A)
Q11	(D)