Yakeen NEET 2.0 2026

Physics By Manish Raj Sir

Units and Measurements

DPP: 7

Q1 The length and breadth of a rectangle are (5.7 ± 0.1) cm and (3.4 ± 0.2) cm. The area of rectangle with error limits is approximately:
(A) (19.4 ± 1.5) cm^2
(B) (19.4 ± 2) cm^2
(C) (19.0 ± 2) cm^2
(D) (19 ± 1.5) cm^2

Q2 The temperature of two bodies measured by a thermometer are t_1 = [20 °C ± 0.5 °C] and t_2 = [50 °C ± 0.5 °C]. The temperature difference and the error there in is;
(A) 30 °C ± 1 °C
(B) 70 °C ± 0.5 °C
(C) 30 °C ± 0.5 °C
(D) 70 °C ± 1 °C

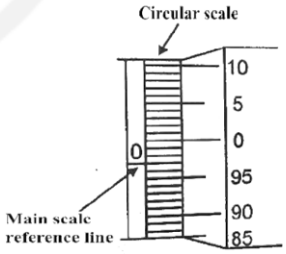
Q3 If $Z = \frac{A^2B^3}{C^4}$, then the relative error in Z will be;
(A) $\frac{\Delta A}{A} + \frac{\Delta B}{B} + \frac{\Delta C}{C}$
(B) $\frac{2\Delta A}{A} + \frac{3\Delta B}{B} - \frac{4\Delta C}{C}$
(C) $\frac{2\Delta A}{A} + \frac{3\Delta B}{B} + \frac{4\Delta C}{C}$
(D) $\frac{\Delta A}{A} + \frac{\Delta B}{B} - \frac{\Delta C}{C}$

Q4 The velocity of projection of a body is increased by 2%. Other factors remaining unchanged, what will be the percentage change in the maximum height attained?
(A) 1% (B) 2%
(C) 4% (D) 8%

Q5 In a Vernier calipers, one main scale division is x cm and n division of the Vernier scale coincide with $(n-1)$ division of the main scale. The least count (in cm) of the calipers is:
(A) $\left(\frac{n-1}{n}\right)x$
(B) $\left(\frac{nx}{n-1}\right)$
(C) $\frac{x}{n}$
(D) $\left(\frac{x}{n-1}\right)$

Q6 In a vernier calliper, N division of vernier scale coincide with $(\mathrm{N}-1)$ divisions of main scale (in which 1 division represents $1\ \mathrm{mm}$). The least count of the instrument in cm. should be
(A) N
(B) $\mathrm{N}-1$
(C) $\frac{1}{10\,\mathrm{N}}$
(D) $\frac{1}{\mathrm{N}-1}$

Q7 In the given figure zero error will be?



(A) Nil (B) Positive
(C) Negative (D) None of these

Q8 The pitch of a screw gauge is $0.5mm$ and there are 100 divisions on it circular scale. The instrument reads +2 divisions when nothing is put in-between its jaws. In measuring the diameter of

a wire, there are 8 divisions on the main scale and 83rd division coincides with the reference line. Then the diameter of the wire is

(A) $4.05mm$ (B) $4.405mm$

(C) $3.05mm$ (D) $1.25mm$

Q9 A screw gauge gives the following readings when used to measure the diameter of a wire

Main scale reading : $0mm$

Circular scale reading : 52 divisions

Given that $1mm$ on main scale corresponds to 100 divisions on the circular scale. The diameter of the wire from the above data is:

(A) $0.026cm$ (B) $0.26cm$

(C) $0.052cm$ (D) $0.52cm$

Q10 A screw gauge has least count of 0.01 mm and there are 50 divisions in its circular scale. The pitch of the screw gauge is;

(A) 0.25 mm (B) 0.5 mm

(C) 1.0 mm (D) 0.01 mm

Q11 In a screw gauge, the main scale division is $1mm$ and there are 100 divisions on circular scale. The least count of screw gauge is (Pitch $= 1mm$)

(A) 0.01 mm (B) 0.1 mm

(C) 0.02 mm (D) 0.2 mm

Q12 Statement-I: A screw gauge having a smaller value of pitch has greater accuracy.

Statement-II: The least count of screw gauge is directly proportional to the number of divisions on circular scale.

(A) Both Statement-I and Statement-II are correct.

(B) Both Statement-I and Statement-II are incorrect.

(C) Statement-I is correct & Statement-II is incorrect.

(D) Statement-I is incorrect & Statement-II is correct.

Answer Key

Q1	(D)	Q7	(C)
Q2	(A)	Q8	(B)
Q3	(C)	Q9	(C)
Q4	(C)	Q10	(B)
Q5	(C)	Q11	(A)
Q6	(C)	Q12	(C)