Yakeen NEET 2.0 2026

Physics By Manish Raj Sir

Units and Measurements

DPP: 5

Q1 Assertion (A): Special functions such as trigonometric, logarithmic and exponential functions are not dimensionless.
Reason (R): A pure number, ratio of similar physical quantities, such as angle and refractive index, has no dimensions.
(A) Assertion (A) is true, Reason (R) is true; Reason (R) is a correct explanation for Assertion (A).
(B) Assertion (A) is true, Reason (R) is true; Reason (R) is not a correct explanation for Assertion (A).
(C) Assertion (A) is true, Reason (R) is false.
(D) Assertion (A) is false, Reason (R) is true.

Q2 In the relation: $\frac{dy}{dt} = 2\omega \sin(\omega t + \phi_0)$, the dimensional formula for $(\omega t + \phi_0)$ is
(A) $[\mathrm{MLT}]$
(B) $[\mathrm{MLT}^0]$
(C) $[\mathrm{ML}^0\ \mathrm{T}^0]$
(D) $[\mathrm{M}^0\ \mathrm{L}^0\ \mathrm{T}^0]$

Q3 Let P represent radiation pressure, c represent speed of light and I represent radiation energy striking an unit area per second, then $p^x I^y c^z$ will be dimensionless for
(A) $x = 0, y = z$
(B) $x = y = z$
(C) $x = z = -y$
(D) $x = y = -z$

Q4 The number of significant figures in 0.006
(A) 2 (B) 1
(C) 4 (D) 3

Q5 The number of significant figures in 343.00 is
(A) 2 (B) 3
(C) 5 (D) 6

Q6 The sum of the numbers $436.32, 227.2$ and 0.301 in appropriate significant figures is
(A) 663.821 (B) 664
(C) 663.8 (D) 663.82

Q7 $3.1421 + 0.241 + 0.09$ is equal to (after rounding off two decimal place)
(A) 3.43 (B) 3.47
(C) 3.48 (D) 3.46

Q8 The area of a square is 5.29 cm^2. The area of 7 such squares taking into account the significant figures is;
(A) 37.030 cm^2 (B) 37.0 cm^2
(C) 37.03 cm^2 (D) 37 cm^2

Q9 Using significant figures, match the following.

Column-I		Column-II	
A.	0.12345	P.	5
B.	0.12100 cm	Q.	4
C.	47.23 ÷ 2.3	R.	1
D.	3×10^8	S.	2

(A) A-(P); B-(P); C-(S); D-(R)
(B) A-(P); B-(Q); C-(R); D-(S)
(C) A-(R); B-(P); C-(Q); D-(S)
(D) None of these

Q10 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

Q11 If length of a rectangle is $2.1\ \mathrm{m}$ and width is $1.62\ \mathrm{m}$, then its area will be;
(A) $3.402\ \mathrm{m}^2$
(B) $3.4\ \mathrm{m}^2$
(C) $3.40\ \mathrm{m}^2$
(D) $3\ \mathrm{m}^2$

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Q12 The most accurate reading of the length of a $6.28\ \text{cm}$ long fibre is

(A) $6\ \text{cm}$

(B) $6.5\ \text{cm}$

(C) $5.99\ \text{cm}$

(D) $6.0\ \text{cm}$

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Answer Key

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

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