Yakeen NEET 2.0 2026

Physics by MR Sir

Basic Maths & Calculus (Mathematical Tools)

DPP: 3

Q1 If $\tan\theta = \frac{5}{12}$; then what is the value of $3\sin\theta + 2\cos\theta$.

(A) 3 (B) 4

(C) -3 (D) 12

Q2 Which of the following option is correct for the value of $\sin\theta$.

(A) 2

(B) $\frac{1}{\sqrt{5}}$

(C) $\sqrt{2}$

(D) $\frac{\sqrt{5}}{2}$

Q3 Correct value of $\cos(2^\circ)$

(A) 2°

(B) $\frac{\pi}{50}$

(C) 1

(D) 0

Q4 Find the value of $\sin 105^\circ$

(A) $\frac{\sqrt{3}}{2}$

(B) $\frac{\sqrt{3}}{2\sqrt{2}}$

(C) $\frac{2\sqrt{2}}{\sqrt{3}+1}$

(D) $\frac{\sqrt{3}+1}{2\sqrt{2}}$

Q5 Find the value of $\cos 75^\circ$

(A) $\frac{\sqrt{3}-1}{2\sqrt{2}}$

(B) $\frac{2\sqrt{2}}{\sqrt{3}-1}$

(C) $\frac{\sqrt{3}}{\sqrt{2}}$

(D) $\sqrt{2}$

Q6 A car is moving towards a building with speed 10 $\mathrm{m/s}$. At any instant the angle of elevation of the building is 30° after $5\mathrm{sec}$. the angle of elevation of the building becomes 45°, then height of building is

(A) $h = \frac{50}{\sqrt{3}+1}$

(B) $h = \frac{20}{\sqrt{3}+1}$

(C) $h = \frac{20}{\sqrt{3}-1}$

(D) $h = \frac{50}{\sqrt{30}-1}$

Q7 Find the value of $\sin(90+\theta)$

(A) $\sin\theta$

(B) $-\sin\theta$

(C) $\cos\theta$

(D) $-\cos\theta$

Q8 Find value of different trigonometric function

(i) $\sin(135^\circ)$

(ii) $\tan(120^\circ)$

(iii) $\cos(150^\circ)$

(iv) $\tan(45^\circ)$

(v) $\tan 37^\circ$

(vi) $\cos 53^\circ$

(vii) $\cos(-60^\circ)$

Q9 Find value of $\tan(3^\circ)$

(A) 3°

(B) $\sin(3^\circ)$

(C) $\frac{\pi}{60}\mathrm{rad}$

(D) All of the above

Answer Key

Q1 (A)

Q2 (B)

Q3 (C)

Q4 (D)

Q5 (A)

Q6 (D)

Q7 (C)

Q8 (i) $\frac{1}{\sqrt{2}}$

(ii) $-\sqrt{3}$

(iii) $-\frac{\sqrt{3}}{2}$

(iv) 1

(v) $\frac{3}{4}$

(vi) $\frac{3}{5}$

(vii) $\frac{1}{2}$

Q9 (D)