DPP Daily Practice Problem *Physics*	*Topic : Mathematical Tools* DPP No. 1	Time : 30 min. Total Marks : 52 Max.

Type of Questions
Single choice Objective ('–1' negative marking) Q. 1 to Q. 9
Multiple choice Objective ('–1' negative marking) Q. 10 to Q. 13

Q 1) Value of tan225° is :
A) $\sqrt{3}$ B) $\frac{1}{\sqrt{3}}$
C) 1 D) -1

Q 2) sin 300° is equal to
A) 1/2 B) $-1/2$
C) $-\frac{\sqrt{3}}{2}$ D) $\frac{\sqrt{3}}{2}$

Q 3) If $sin\ \theta = \frac{1}{3}$, then $\cos\theta$ will be-
A) $\pm\frac{8}{9}$ B) $\pm\frac{4}{3}$
C) $\pm\frac{2\sqrt{2}}{3}$ D) $\pm\frac{3}{4}$

Q 4) Values of sin 15°.cos 15° is :
A) 1 B) 1/2
C) 1/4 D) $\frac{\sqrt{3}}{2}$

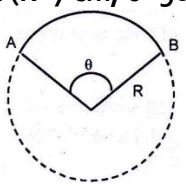
Q 5) Value of sin (37°) cos (53°) is -
A) $\frac{12}{25}$ B) $\frac{9}{25}$
C) $\frac{16}{25}$ D) $\frac{4}{5}$

Q 6) Which of the following has value 1 :
A) tan 45° B) sin 90°
C) cos 90° D) cos 0°

Q 7) If sin θ=$\frac{3}{5}$ and cos θ<0, then find tan θ -
A) $\frac{3}{5}$ B) $-\frac{3}{4}$
C) $\frac{4}{3}$ D) $-\frac{4}{3}$

Q 8) Sin 2θ =
A) 2sin θ cos θ B) 2sin θ
C) 2cos θ D) $\frac{\sin\theta\cos\theta}{2}$

Q 9) The length of the arc AB, shown in the figure (R=7 cm, θ=90°, π=22/7



A) 11 cm B) 22 cm
C) 650 cm D) None of these

Q 10) Which of the following is/are correct trigonometric identity:
A) $1 + tan^2\theta = sec^2\theta$ B) $1 - cot^2\theta = cosec^2\theta$
C) $sin^2\theta + cos^2\theta = 1$ D) $sin\theta sec\theta = tan\theta$

Q 11) Which of the following has value 1?
A) $\tan 45°$ B) $\sin 90°$
C) $\cos 90°$ D) $\cos 0°$

Q 12) Which of the following has value zero?
A) $\sin 0°$ B) $\tan 0°$
C) $\cos 0°$ D) $\sec 0°$

Q 13) Convert the following angles into radian :-
(i) $30°$ (ii) $45°$ (iii) $60°$ (iv) $90°$ (v) $120°$ (vi) $135°$ (vii) $150°$ (viii) $180°$ (ix) $270°$