DPP Daily Practice Problem *Physics*	*Topic : Mathematical Tools* DPP No. 2	Time : 30 min. Total Marks : 52 Max.

Type of Questions
Single choice Objective ('–1' negative marking) Q. 1 to Q. 10
Multiple choice Objective ('–1' negative marking) Q. 11 to Q. 13

Q 1) cos(A+B)=
A) cosAcosB - sinAsinB
B) cosAcosB + sinAsinB
C) sinAsinB +cosAcosB
D) None of these

Q 2) cos(A-B)=
A) cosAcosB - sinAsinB
B) cosAcosB + sinAsinB
C) sinAsinB +cosAcosB
D) None of these

Q 3) sin(A+B)=
A) sinAcosB + cosA sinB
B) sinAcosB - cosA sinB
C) cosAsinB - sinAcosB
D) None of these

Q 4) sin(A-B)=
A) sinAcosB + cosA sinB
B) sinAcosB - cosA sinB
C) cosAsinB - sinAcosB
D) None of these

Q 5) sinA + sinB =
A) $2sin\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$
B) $2sin\left(\frac{A-B}{2}\right)cos\left(\frac{A+B}{2}\right)$
C) $-2sin\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$
D) $2sin\left(\frac{A+B}{2}\right)cos\left(\frac{A+B}{2}\right)$

Q 6) sinA - sinB =
A) $2sin\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$
B) $2sin\left(\frac{A-B}{2}\right)cos\left(\frac{A+B}{2}\right)$
C) $-2sin\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$
D) $2sin\left(\frac{A+B}{2}\right)cos\left(\frac{A+B}{2}\right)$

Q 7) cosA + cosB =
A) $2sin\left(\frac{A+B}{2}\right)sin\left(\frac{A-B}{2}\right)$
B) $2cos\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$
C) $-2sin\left(\frac{A+B}{2}\right)sin\left(\frac{A-B}{2}\right)$
D) $-2cos\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$

Q 8) cosA - cosB =
A) $2sin\left(\frac{A+B}{2}\right)sin\left(\frac{A-B}{2}\right)$
B) $2cos\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$
C) $-2sin\left(\frac{A+B}{2}\right)sin\left(\frac{A-B}{2}\right)$
D) $-2cos\left(\frac{A+B}{2}\right)cos\left(\frac{A-B}{2}\right)$

Q 9) The value of sin(15°) is
A) $\frac{\sqrt{3}+1}{2\sqrt{2}}$
B) $\frac{\sqrt{3}-1}{2\sqrt{2}}$
C) $\frac{\sqrt{3}}{2\sqrt{2}}$
D) $\frac{1}{2\sqrt{2}}$

Q 10) The value of sin(75°) is
A) $\frac{\sqrt{3}+1}{2\sqrt{2}}$
B) $\frac{\sqrt{3}-1}{2\sqrt{2}}$
C) $\frac{\sqrt{3}}{2\sqrt{2}}$
D) $\frac{1}{2\sqrt{2}}$

Q 11) $sin^2\theta =$
A) $\frac{1+cos2\theta}{2}$
B) $\frac{1-cos2\theta}{2}$
C) $1-cos^2\theta$
D) $sin(2\theta)$

Q 12) $cos2\theta =$
A) $2cos^2\theta - 1$
B) $1-2sin^2\theta$
C) $cos^2\theta - sin^2\theta$
D) $cos^2\theta + sin^2\theta$

Q 13) $cos^2\theta =$
A) $\frac{1+cos2\theta}{2}$
B) $\frac{1-cos2\theta}{2}$
C) $1-sin^2\theta$
D) $cos(2\theta)$