

By. Er. Dharmendra Sir

7974073108, 9584873492

# **DPM CLASSES**

6th to 10th (Math's & Science), 11th & 12th (Physics, Chemistry, Math's)

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**TEST - PAPER (CBSE/NCERT)**

## **INTRODUCTION TO TRIGONOMETRY**

**SESSION -2024-25**

**CLASS - 10<sup>th</sup>**

**JOIN TODAY FOR ADVANCE CONCEPTS**

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Time : 1 hr :- Introduction to Trigonometry :- mm:

Q. 1. match the columns :

(i)  $\sin 30$

(a)  $\cot \theta$

(ii)  $\sqrt{\sec^2 \theta - 1}$

(b)  $\cos 60$

(iii)  $\frac{\sqrt{1 - \sin^2 \theta}}{\sin \theta}$

(c)  $\tan \theta$

(iv)  $\sec^2 A - \tan^2 A$  (d)  $g$

(v)  $\tan 30$

(e)  $1$

(vi)  $\sin^2 25 + \cos^2 25$  (f)  $1/\sqrt{3}$



Q. 2. match the columns :-

(i)  $1 + \cot^2 \theta$

(a)  $\sqrt{3}$

(ii)  $\sec \theta$

(b)  $1$

(iii)  $\sin^2 \theta + \cos^2 \theta$

(c)  $\csc^2 \theta$

(iv)  $\tan 60$

(d)  $\frac{1}{\cos \theta}$

(v)  $\sec^2 \theta - 1$

(e)  $\tan^2 \theta$



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Q.3 match the following :-

(i)  $\sqrt{\sec^2 \theta - \tan^2 \theta}$

(a) 0

(ii)  $\sin 0^\circ$

(b)  $\frac{1}{\sqrt{2}}$

(iii)  $\tan \theta$

(c)  $\frac{\sin \theta}{\cos \theta}$

(iv)  $\cos 45^\circ$

(d) 1



Q.4. match the following :-

(i)  $\cos \theta$

(a)  $\frac{1}{\sec \theta}$

(ii)  $\cos 0$

(b)  $\sin \theta$

(iii)  $\sqrt{1 + \tan^2 \theta}$

(c) 1

(iv)  $\sqrt{1 - \cos^2 \theta}$

(d)  $\sec \theta$



Q.5. Evaluate :

$$\sin 60^\circ \cdot \cos 30^\circ + \sin 30^\circ \cdot \cos 60^\circ$$

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Q. 6. Evaluate :

$$2 \tan^2 45^\circ + \cos^2 30^\circ - \sin^2 60^\circ$$

Q. 7. If  $\tan A = \frac{4}{3}$ , then find the value of  $\sec A$  and  $\cos A$

Q. 8. If  $\sin A = \frac{3}{4}$ , calculate  $\cos A$  and  $\tan A$

Q. 9. In a triangle ABC, right angled at B, if  $\tan A = 1$  then verify that :

$$2 \sin A \cdot \cos A = 1$$



Q. 10. Prove that :

$$\frac{\cos A}{1 + \sin A} + \frac{1 + \sin A}{\cos A} = 2 \sec A$$



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