

## Comprehensive Test Series-01 Trigonometric Function

TIME: 1 hr.

MM: 30

### General Instructions:

- All Questions are compulsory.
  - Marks are given alongwith the questions individually.
  - Use of calculator is not permitted.
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- Q.1 The minute hand of a watch is 1.5 cm long. How far does its tip move in 40 minutes?  
(use  $\pi = 3.14$ ).
- Q.2 Find the radian measures corresponding to the following degree measures:  
(i)  $-47^{\circ}30'$                       (ii)  $520^{\circ}$
- Q.3 Find the degree measures corresponding to the following radian measures (Use  $\pi = \frac{22}{7}$  ).  
(i)  $-4$                                       (ii)  $\frac{11}{16}$
- Q.4 A wheel makes 360 revolutions in one minute. Through how many radians does it turn in one second?
- Q.5 In a circle of diameter 40 cm, the length of a chord is 20cm. Find the length of minor arc of the chord
- Q.6 If in two circles, arcs of the same length subtend angles  $60^{\circ}$  and  $75^{\circ}$  at the centre, find the ratio of their radii.
- Q.7 If  $\cot x = -\frac{5}{12}$ ,  $x$  lies in second quadrant, find the values of the other five trigonometric functions.
- Q.8 Find the value of  $\sin \frac{31\pi}{3}$ .
- Q.9 Find the value of the trigonometric functions.  
(i)  $\operatorname{cosec} (-1410^{\circ})$   
(ii)  $\cot \left(-\frac{15\pi}{4}\right)$
- Q.10 Find the value of trigonometric functions.  
 $\tan x = -\frac{5}{12}$ ,  $x$  lies in second quadrant.