

Vidya Vikas Mandal's
Ramacrisna Madeva Salgaocar Higher Secondary School
Margao Goa

Std: XI VOC – CT

Second Quarterly Exam Feb, 2022

Duraton: 1 hr.

Date: 25/02/22

Subject : Mathematics (voc)

Marks:20

- Instructions : 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Write the number of questions clearly.

Question numbers from 1 to 4 carry 1 mark each.

1. Convert the following angle into radian .

i) 180° ii) 270°

2. Convert the following angle into degree.

i) $\frac{\pi^c}{2}$ ii) $\frac{3\pi^c}{5}$

3. Evaluate

$$\begin{vmatrix} 2 & -7 \\ 1 & 3 \end{vmatrix}$$

4. Solve

$$\begin{vmatrix} x & 5 \\ 4 & 2 \end{vmatrix} = 0$$

Question numbers from 5 to 8 carry 2 marks each.

5. The angles of a quadrilateral are in the ratio 2:3:5:8, find them in radian and degree.

6. In ΔABC measure of angle A is 90° and measure of angle C is $\frac{\pi}{6}$, $l(AC) = \sqrt{3}$, find $l(AB)$, and $l(BC)$.

7. Evaluate

$$\begin{vmatrix} 1 & 3 & 4 \\ 2 & -1 & 3 \\ 2 & 1 & 2 \end{vmatrix}$$

8. Verify the following using the tables

$$\cos 30^\circ \cos 60^\circ + \sin 30^\circ \sin 60^\circ = \frac{\sqrt{3}}{2}$$

Question numbers from 9 and 10 carry 4 marks each.

9. Solve the following equation using Determinants

$$2x + 3y = -4 \quad , \quad 3x - 5y = 7$$

10. Find all the trigonometric ratios of $\frac{\pi}{6}$
