QP Code:UV25C002 **Reg. No : .....**

Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20
III SEMESTER (CBCSS-VUG) DEGREE EXAMINATIONS, OCTOBER 2025
B. Voc Multimedia
A11 : BASIC MATHEMATICS FOR MEDIA ARTS
2024 Admission Onwards

Time: 2.5 Hours **Maximum Marks: 80**

Section A

Short answer type carries **2 Marks each (Ceiling 25)**

1. Define acute-angled triangle.
2. Write two examples of polygons.
3. Define statistics.
4. List two statistical enquiry methods.
5. Define standard deviation.
6. Find area of a parallelogram with base 12 cm and height 8 cm.
7. Find circumference of a circle with radius 14 cm..
8. Explain two types of statistical enquiry.
9. If the height of a triangular pyramid is doubled, how will its volume change.
10. What is the sum of the interior angles of a parallelogram.
11. Calculate the volume of a rectangular pyramid with a base length of 8 cm, base width of 5 cm, and a height of 10 cm.
12. Find the volume of a triangular pyramid with a base area of 10 cm^2 and a height of 6 cm.
13. Find perimeter of a semicircle with radius 7 cm.
14. Find volume of a cube with side 5 cm.
15. Find volume of a cone with radius 3 cm and height 4 cm.

Section B

Paragraph types carries **5 Marks each (Ceiling 35)**

16. Explain geometric mean and harmonic mean.
17. Find volume a pyramid base with 25 m^2 and height 12 m.
18. Find volume and surface area of a cylinder with radius 5 m and height 7 m.
19. The mean of a dataset is 10, and the variance is 4. What is the standard deviation?
20. A hemisphere of radius 7 cm is melted into cones of radius 7 cm and height 3cm. Find number of cones.
21. List types of data presentation with examples.
22. Define measures of central tendency.
23. Calculate the standard deviation of the dataset 2, 4, 6, 8, 10.

Section C

Essay-type carries **10** Marks : Answer **any two** questions.

24. Find the surface area and volume of a cube with side length 5 cm.
25. A cylinder with a radius of 5 cm and a height of 10 cm is melted and recast into a cube. Find the length of the side of the cube.
26. A cylindrical tank with radius 25 inches and height 120 inches is filled with water. Find the volume in litres.
27. Explain the scope and limitations of statistics.

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