

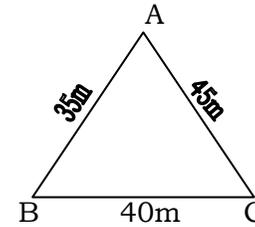
I. Choose the correct answer: 13x1=13

- The perimeter of an equilateral triangle is 30cm. The area is _____.
 a) $10\sqrt{3}$ cm² b) $12\sqrt{3}$ cm² c) $15\sqrt{3}$ cm² d) $25\sqrt{3}$ cm²
- The lateral surface area of a cube of side 12cm is _____.
 a) 144cm² b) 196cm² c) 576cm² d) 664cm²
- The capacity of a water tank of dimensions 10m×5m×1.5m is _____.
 a) 75 litres b) 750 litres c) 7500 litres d) 75000 litres
- The total surface area of a cuboid with dimensions 10cm ×6cm×5cm is _____.
 a) 280cm² b) 300cm² c) 360cm² d) 600cm²
- The number of bricks each measuring 50cm×30cm×20cm that will be required to build a wall whose dimensions are 5m×3m×2m is _____.
 a) 1000 b) 2000 c) 3000 d) 5000
- Given that $\sin\alpha = \frac{1}{2}$ and $\cos\beta = \frac{1}{2}$, then the value of $\alpha + \beta$ is _____.
 a) 0° b) 90° c) 30° d) 60°
- The value of $\operatorname{Cosec}(70^\circ + \theta) - \sec(20^\circ - \theta) + \tan(65^\circ + \theta) - \cot(25^\circ - \theta)$ is _____.
 a) 0 b) 1 c) 2 d) 3
- If $2\sin 2\theta = \sqrt{3}$, then the value of θ is _____.
 a) 90° b) 30° c) 45° d) 60°
- The value of $\frac{1 - \tan^2 45^\circ}{1 + \tan^2 45^\circ}$ is _____.
 a) 2 b) 1 c) 0 d) $\frac{1}{2}$
- If $\tan\theta = \cot 37^\circ$, then the value of θ is _____.
 a) 37° b) 53° c) 90° d) 1°
- The value of $\sin\theta \times \operatorname{cosec}\theta + \cos\theta \times \sec\theta$ is _____.
 a) 1 b) 0 c) 2 d) -1
- The radius of unit circle is _____.
 a) 0 b) 1 c) any value d) half
- _____ is the measure of the amount of space occupied by a three dimensional solid.
 a) LSA b) TSA c) Volume d) Area of the shape

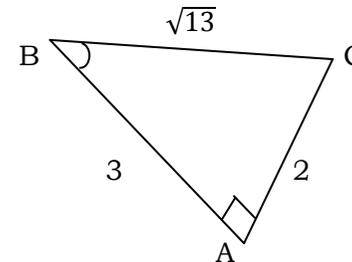
II. Answer any six of the following: 6x2=12

- Find the volume of the cube whose side is 21cm.
- Verify $1 + \tan^2 30^\circ = \sec^2 30^\circ$

16. Find the semiperimeter for the given figure.



- Find the value of $\sin 21^\circ 21'$
- Three identical cubes of side 4cm are joined end to end. Find the total surface area of the new resulting cuboid.
- Evaluate: $\frac{\sec 63^\circ}{\operatorname{cosec} 27^\circ}$
- In the given figure, find all the trigonometric ratios of angle B.



- The length, breadth and depth of a pond are 20.5m, 16m and 8m respectively, find the capacity of the pond in litres.
- Answer any five of the following: 5x5=25
- The dimensions of a brick are 24cm×12cm× 8cm. How many such bricks will be required to build a wall of 20m length, 48m breadth and 6m height?
- Find the value of $8\sin 2x \cos 4x \sin 6x$ when $x = 15^\circ$
- If $3\cot A = 2$, then find the value of $\frac{4\sin A - 3\cos A}{2\sin A + 3\cos A}$
- The length, breadth and height of a hall are 25m, 15m, and 5m respectively. Find the cost of renovating its floor and four walls at the rate of ₹80 per m².
- Find the value of $\tan 70^\circ 58' + \cos 15^\circ 26' - \sin 84^\circ 59'$
- The sides of the triangular ground are 22m, 120m and 122m. Find the area and cost of leveling the ground at the rate of ₹20 per m².
- Find the value of $\frac{\cot\theta}{\tan(90^\circ - \theta)} + \frac{\cos(90^\circ - \theta) \tan\theta \sec(90^\circ - \theta)}{\sin(90^\circ - \theta) \cot(90^\circ - \theta) \operatorname{cosec}(90^\circ - \theta)}$

ENGLISH

Section - I (Vocabulary)

1. Choose the most appropriate synonym of the underlined word:

3x1=3

i) You will grow up a child of the light unafraid and unruffled.

- a) worried b) anxious c) unsteady d) peaceful

ii) Do you remember, how fascinated you were!

- a) puzzled b) attracted c) affected d) anxious

iii) Mathematically each will get an infinite number of bananas.

- a) definite b) uncountable c) composite d) indivisible

2. Choose the most appropriate antonym of the underlined word:

3x1=3

iv) Others claimed it to be unity

- a) integrity b) university c) infinity d) security

v) A letter can hardly take the place of a talk.

- a) barely b) scarcely c) easily d) totally

vi) Beyond the world lie other wonderful and mysterious world.

- a) curious b) frank c) concealed d) obscure

Section - II (Grammar)

3. Complete the following sentences using suitable connectors

from the brackets: 2x1=2

vii) I shall do it _____ you like it or not.

- a) as if b) however c) but d) whether

viii) Pawan is an eminent scholar _____ for his oration.

- a) finally b) additionally c) notably d) equally

4. Rewrite as directed: 2x2=4

ix) Convert the following sentences into other voices.

a) Sohan will have achieved his target next month.

b) Don't keep the classroom untidy.

Section - III (Poetry)

5. Quote from memory: 1x4=4

x) With a -----

----- the force.

6. Read the following lines from the poem and answer the questions: 4x1=4

xi) If one should come too close to earth

The atmosphere will shake,

With shock wave reaching to the ground

Causing the land to quake.

a) What will happen if a comet comes too close to the earth?

b) What is meant by atmosphere?

c) Pick out the rhyming words

d) Mention the rhyme scheme of the stanza

Section - IV (Prose)

7. Answer any three of the following in brief: 3x2=6

i) Who initiated a move to provide Ramanujan with a research fellowship?

ii) Which book triggered the mathematical genius in him?

iii) What does the phrase 'great drama' refer to?

iv) Why did Nehru dislike sermonizing?

Section - V (Prose and Poetry)

8. Answer any one in a paragraph of about 100 words:

1x4=4

- a) Explain the important elements of Nehru's letter.
- b) Describe the life of Srinivasa Ramanujan in India.
- c) Give a detailed account of various effects caused by the comet to the earth.

Section - VI (Supplementary Reader)

9. Rearrange the following sentences in coherent order: 4x1=4

- a) People of different nationalities who work in Selenopolis come here after work.
- b) They're walking towards the lake.
- c) And there are some tourists.
- d) 'It's quite an exotic experience to have a swim on the moon.'

10. Answer in a paragraph of about 100 words: 1x4=4

Write a paragraph listing all the sentimental and the scientific reasons given by the mother against the expedition to neighbouring galaxy.

Section - VII (Writing Skills) 1x4=4

11. You are the school monitor of Modern Matriculation

School, Villupuram. Your school Principal has requested you to inform the students about a trip to Ooty for 3 days. Prepare a notice giving the details such as date of journey, mode of transportation, amount, dress code - etc.,

12. Spot the Errors and Rectify them: 4x1=4

- a) My keys is missing
- b) As I am not well, so I don't go to school
- c) I lost one of my book at school
- d) The two first units of the text book are interesting

13. Read the passage given below and answer the questions:

4x1=4

'Look son, isn't it a miracle?

The Earth floats through space, all by itself. See the snow-cap on the pole, and the glittering ocean. The cradle of life. And you want to leave this fabulous beauty'. He suddenly saw everything with different eyes. He saw how beautiful his native planet was, a real wonder of nature. He had never felt that way before. His heart ached.

- 1) What floats through space?
- 2) How does the ocean look?
- 3) How was his native planet?
- 4) What do you think is the cradle of life mentioned here?
