

M - 91

SUMMATIVE ASSESSMENT - I - DECEMBER 2021

MATHEMATICS - Paper II

(English Version)

PART - A & B

IX Class]

(Max.Marks: 40)

[Time: 2.45 Hrs.

Marks : 35]

Part - A

[Time: 2:15 Hrs.

General Instructions :

- i) Answer all the questions in separate answer sheet.*
- ii) 15 minutes time is allotted to read the question paper thoroughly and 2.30 hrs. for writing the answers.*
- iii) In Section - III, every question has an internal choice. Answer any one alternative.*
- iv) Write answers to the multiple choice questions (Section - IV) and attach it to the answer booklet of Part - A.*

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Section - I

I. i) Answer all the following questions.

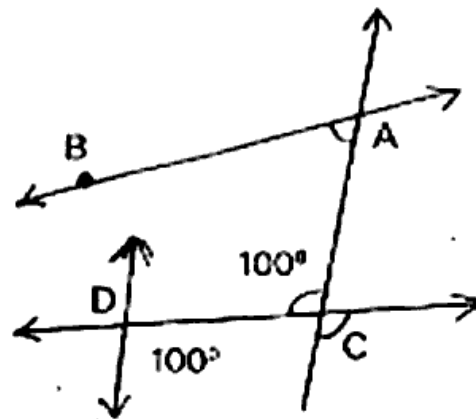
ii) Each question carries 1 mark.

7x1=7

- 1. Write the formula for the volume of cylinder and explain its terms.**
- 2. Rajini said "The sum of two complementary angles is 90° . Justify your answer.**
- 3. Find the mean of first five even numbers.**
- 4. If $2x^\circ$ and $4x^\circ$ are supplementary angles, then find the value of 'x'.**

[Turn Over

5. In the given figure, which lines are parallel and why ?



6. The median of the data 7, 8, 10, x, 12, 13 is 7, then find 'x'.

2 complementary are in Ratio 4:5. Find the Angles

7. The radius and height of a cone is 6 cm, 8 cm respectively, then find its slant height.

Section - II

- I. i) Answer all the questions.

- ii) Each question carries 2 marks.

6x2=12

8. Srilakshmi said "The half of the complete angles is supplementary angle". Do you agree with her ? Justify your answer.

9. Find the surface area of a box whose length, 40 cm, breadth 27 cm and height 10 cm.
Write the Use of Maths in Real Life

10. Explain supplementary angle with figure.

11. Draw the figure of Reflex angle.

12. The degree of a polynomial $x^{2021} + 7x^{2020} + x^{19} + 7$ is a side of cube, then find its total surface area.
Find the median of 2, 3, 5, 7, 11.

13. Find the mean of all the factors of 12.

Section - III

iii) i) Answer the following questions.

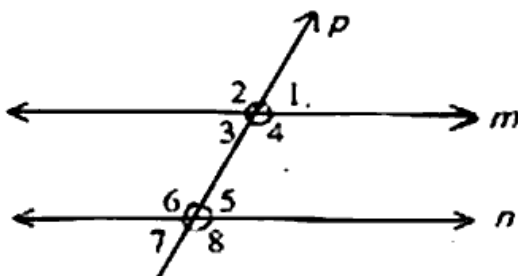
ii) Each of the following internal choice questions, two options are there.

Answer one option only.

iii) Each question carries 4 marks.

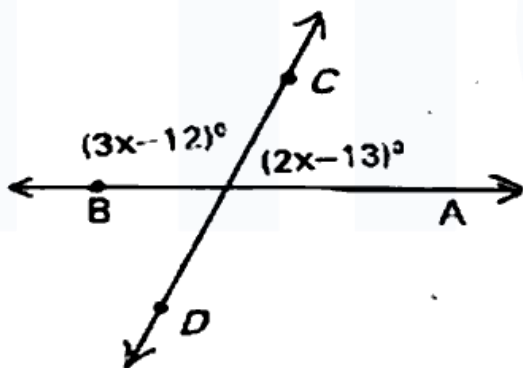
4x4=16

14. A) The given figure 'P' is a transversal to lines 'm' and $\angle 2 = 120^\circ$ and $\angle 5 = 60^\circ$, prove that $m \parallel n$.



(or)

- B) In the given figure if $\angle AOC = (2x - 13)^\circ$ and $\angle BOC = (3x - 12)^\circ$, then prove that $\angle AOC = \angle BOD$ and $\angle BOC = \angle AOD$.



15. A) Find the value of 'p' if the mean of the following distribution, whose mean is 7.5.

x	3	5	7	9	11	13
y	6	8	15	p	8	4

(or)

- B) The median of the observations 11, 12, 14, 18, $x + 2$, $x + 4$, 30, 32, 35, 41 arranged in ascending order is 24. Find the value of 'x'.

[Turn Over

16. A) If the volume of a cuboid is 20 and whose length, breadth and height are $(x + 1)$, $(x + 2)$ and $(x + 3)$ respectively, then find a cubic polynomial.

(or)

B) If the zeroes of a polynomial $x^3 + 2x^2 - x - 2$ are length, breadth and height of a cuboid, then find its volume.

17. A) Given below are the ages of 25 students of class IX in a school. Construct a discrete frequency distribution table.

15, 16, 16, 17, 17, 16, 15, 15, 16, 16, 17, 15, 16,
16, 14, 16, 15, 16, 16, 15, 14, 14, 15, 14, 15

(or)

B) Construct a frequency table for the following data.

25, 33, 24, 29, 30, 29, 24, 29, 24, 23
21, 23, 21, 33, 24, 28, 30, 29, 33, 23

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