



INDIAN SCHOOL AL MAABELA

(ISO 9001-2015 CERTIFIED INSTITUTION)

YEARLY EXAMINATION - 2019 -2020

MATHEMATICS (SAMPLE QUESTION PAPER)

ISAM/FR/MDL/QP/02

CLASS: VII

Max. Marks: 80

Time: 3 Hours

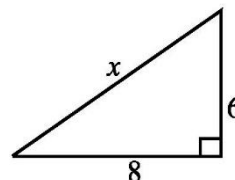
General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper consists of 40 questions divided into four sections A, B, C and D.
- (iii) Section A comprises of 20 questions of 1 mark each, Section B comprises of 6 questions of 2 marks each, Section C comprises of 8 questions of 3 marks each and Section D comprises of 6 questions of 4 marks each.
- (iv) There is no overall choice. However, an internal choice has been provided in two questions of 1 mark each, two questions of 2 marks each, three questions of 3 marks each, and three questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.
- (v) Use of calculators is not permitted.

SECTION A

I. (Q.1 – Q.10) Choose the correct answer from the options given.

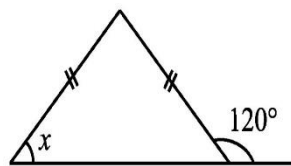
1. The numerical coefficient of y in expression $8 - 4xy + y^2$ 1
a) 1 b) - 4 c) - 4x d) 8
2. The order of rotational symmetry in a scalene triangle is ----- 1
a) 2 b) 3 c) 4 d) none of these
3. The probability of picking an even number from the set of numbers from 1 to 11 is ----- 1
a) $\frac{1}{2}$ b) $\frac{5}{11}$ c) $\frac{6}{11}$ d) $\frac{3}{10}$
4. The number of edges in a right rectangular prism is ----- 1
a) 4 b) 6 c) 8 d) 12
5. The product $\frac{3}{7} \times \frac{27}{343}$ equals ----- 1
a) $(\frac{3}{7})^3$ b) $(\frac{3}{7})^4$ c) $(\frac{3}{7})$ d) $(\frac{3}{7})^{-4}$
6. One- fourth of a number plus 3 gives 4. The number is ----- 1
a) 16 b) 12 c) 4 d) 1
7. The angles of a triangle are in the ratio 1:2:3. The measure of the smallest angle is----- 1
a) 90° b) 30° c) 45° d) 60°
8. Triangle construction of definite size is not possible for ----- 1
a) SAS b) ASA c) AAA d) SSS
9. Find x: 1
a) 10 b) 9 c) 12 d) 3
10. The ratio 0.4: 0.6 is----- 1
a) 4:5 b) 3:2 c) 5:4 d) 2:3



(Q.11- Q.20) Fill in the blanks.

11. The equation for the statement “3 subtracted from x gives 8” is-----

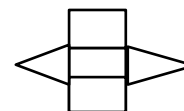
12. What is $\angle X$ in the given figure?



13. The radius of a circle when circumference is 44 cm is -----

14. Range of the data 10, -9, 12, -3, 18, -5 is -----

15. The solid that can be formed using the net shown is -----



16. Area of triangle whose base 15 cm and altitude 6 cm is -----

17. The value of $(-1)^{57}$ is -----

18. The sum of $-7xy + 4xy$ is -----

19. The perimeter of square of side 2.5 m is -----

OR

The value of expression $4m - 3$ when $m = -2$ is-----

20. The area of circular button of radius 7 cm is-----

OR

A quadrilateral with only two lines of symmetry is -----

SECTION B

21. The perimeter of a plot is given by the expression $(7x + 12)$ m. If $(7x - 8)$ m of the boundary is fenced, what length of the boundary is not fenced? 2

22. A crate contains 400 apples, 8 dozen apples were found spoiled. Find the percentage of good apples in the crate. 2

23. Find X: $\left(\frac{10}{13}\right)^8 \times \left(\frac{10}{13}\right)^5 \times \left(\frac{10}{13}\right)^2 = \left(\frac{10}{13}\right)^{3x}$ 2

24. The sum of two consecutive numbers is 53. Find the numbers. 2

25. The mean score of a cricketer in five innings is 56.8. His scores in five successive innings are 56, 54, 58, 70 and x runs respectively. Find x. 2

OR

Express the number $\frac{216}{343}$ in exponential form.

26. A room measures 12 m \times 9 m. The floor of the room is to be covered by marble tiles measuring 45 cm by 30 cm. How many tiles are needed? 2

OR

A garment store bought 50 shirts at the rate of ₹400 per shirt and sold them for ₹18400. Find his profit or loss.

SECTION C

27. Construct a right-angled triangle DEF in which DF= 8.7 cm, ED= 4.2 cm and $\angle E = 90^\circ$. 3
28. A road 2m wide is constructed all around outside a circular garden of radius 35m. Find the area of the road. (Take $\pi = \frac{22}{7}$) 3
29. A ship leaves a port and travels 12 km due east. Then it turns and travels 9 km due north. How far is the ship from the port? 3
30. What should be added to $3x^2+3xy-2y^2$ to get $5x^2+2xy+3y^2$? 3
31. The marks scored in a terminal exam by 11 students of class VII A for mathematics is as follows: 30, 53, 92, 63, 100, 80, 53, 47, 78, 21, 65. Find the mean, median & mode of this data. 3
32. If ₹ 250 amounts to ₹285 in 2 years, find the rate percent per annum. 3

OR

Find the cost of carpeting a 25 m long and 12 m broad hall with a 60 cm wide carpet at the rate of ₹15 per m.

33. Simplify: $\frac{2^5 \times 3^4 \times 16}{3^2 \times 64}$ 3

OR

Construct a triangle PQR, given that QR= 6.5 cm, $\angle Q = \angle R = 60^\circ$

34. Sunil is 48 years old. He is 7 years less than 5 times his daughter's age. What is his daughter's age? 3

OR

John deposited ₹5500 in a finance company which pays 14% interest per year. Find the amount he will receive after 3 years.

SECTION D

35. The table shows Arun & Sanjay's test scores. The tests were marked out of 20. 4

	English	Math	Science	History	Geography	Hindi	Art
Arun	20	7	12	14	16	18	11
Sanjay	17	13	18	9	19	10	8

Draw a double bar graph to compare their results.

36. Find the cost price of a watch if the selling price is ₹825 and the loss is 25%. 4
37. Simplify the following expressions and find their values for $x = 2$ and $y = -1$ 4
- (i) $2(x - 3) + 4y + 3(x - y)$
- (ii) $x^2 + y^2$
38. A wooden pole fixed in the ground, breaks at a point and falls down such that it touches the ground at a distance of 6m away from its base. If the point where it broke is 2.5 m from the ground, what was the actual height of the pole? 4

OR

Karan scored 66 out of 75 in Science and 47 out of 50 in Mathematics. In which subject did he perform better?

39. Simplify: $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

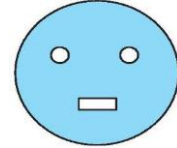
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OR

The sides of a rectangular plot are in the ratio 5:3. The area of the plot is 960m^2 . Find the cost of fencing the plot with barbed wire at the rate of ₹ 3.50 per m.

40. From a circular card sheet of radius 14 cm, two circles of radius 3.5 cm and a rectangle of length 3 cm and breadth 1cm are removed. (as shown in the adjoining figure). Find the area of the remaining sheet.

4



OR

From the sum of $3x - y + 11$ and $-y - 11$, subtract $3x - y - 11$.