

TERM-II SESSION ENDING EXAMINATION (2018-19)
CLASS - VIII
SUBJECT - MATHEMATICS

Time:- 2.30 Hours

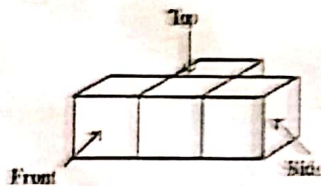
Max. Marks: 80

General Instructions :

1. All the questions are compulsory.
2. The question paper consists of 30 questions divided into four sections: A, B, C and D.
3. Section - A comprises of 6 questions of 1 mark each. Section - B comprises of 6 questions of 2 marks each. Section - C comprises of 10 questions of 3 marks each and Section - D comprises of 8 questions of 4 marks each.
4. There is no overall choice. However internal choice has been provided in 3 questions of five marks each and 3 questions of 4 mark each. You have to attempt only one of the alternatives in all such questions.

Section - A (Each question carries 1 mark)

- Q.1. Draw front view of the following solid shape:-



- Q.2. What will be the unit digit of the squares of the number 799.
- Q.3. Solve the following equation : $2x + 3 = 5$
- Q.4. Identify the type of proportion: The number of workers on a job and the time to complete the job.
- Q.5. Convert the ratio 2:3 into percentage
- Q.6. The diagonals of a rhombus are 8 cm and 10 cm. Find its area

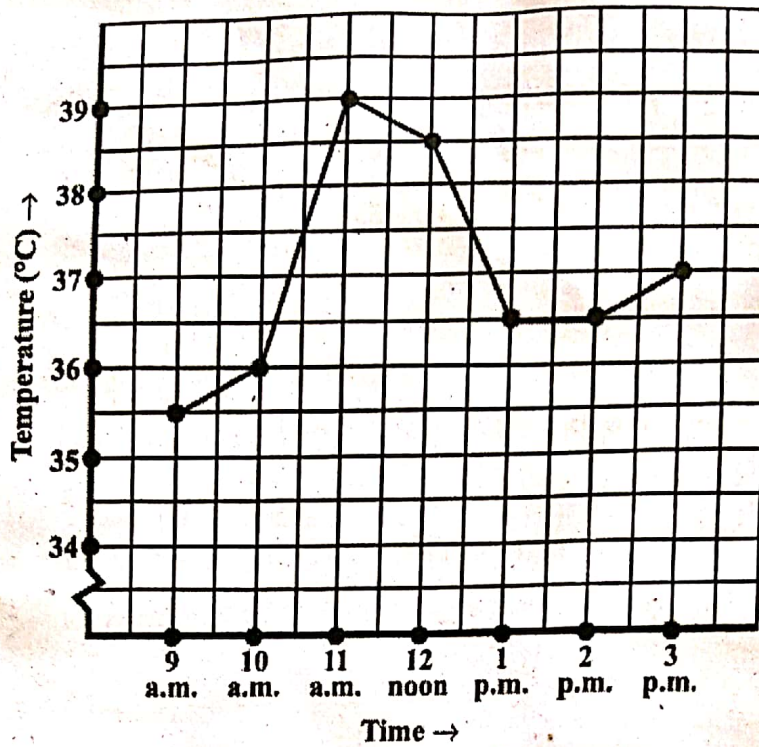
Section - B (Each question carries 2 marks)

- Q.7. Name the property under multiplication used in each of the following.

$$(i) \frac{-13}{17} \times \frac{-2}{7} = \frac{-2}{7} \times \frac{-13}{17} \quad (ii) \frac{-19}{29} \times \frac{29}{-19} = 1$$

- Q.8. Add : $a - b + ab, b - c + bc, c - a + ac$
- Q.9. The following graph shows the temperature of a patient in a hospital, recorded every 4 hours.
(a) What was the patient's temperature at 1 p.m.?

(b) When was the patient's temperature 38.5°C ?



Q.10. Find the square root of 7744

Q.11. Find the value of $(3^{-7} \div 3^{-10}) \times 3^{-5}$

Q.12. Find the common factors of the given terms. $14pq, 28p^2q^2$

Section -C (Each question carries 3 marks)

Q.13. Find m so that $(-3)^{m+1} \times (-3)^5 = (-3)^7$

Q.14. Draw a map of your school compound using proper scale and symbols for various features like playground main building, garden etc.

OR

Using Euler's formula find the unknown.

Faces	?	5	20
Vertices	6	?	12
Edges	12	9	?

Q.15. Using identities, evaluate.: 297×303

Q.16. Find the area of a rhombus whose side is 6 cm and whose altitude is 4 cm. If one of its diagonals is 8 cm long, find the length of the other diagonal.

OR

The area of a trapezium is 34 cm^2 and the length of one of the parallel sides is 10 cm and its height is 4 cm. Find the length of the other parallel side.

Q.17. Factorise : $p^2 + 6p + 8$

Q.18. If $31z5$ is a multiple of 3, where z is a digit, what might be the values of z ?

OR

If $21y$ is a multiple of 9, where y is a digit, what is the value of y ?

Q.19. Find CI on Rs 12600 for 2 years at 10% per annum compounded annually

Q.20. Rashmi has a road map with a scale of 1 cm representing 18 km. She drives on a road for 72 km. What would be her distance covered in the map?

Q.21. The weekly wages (in Rs) of 30 workers in a factory are.

830, 835, 890, 810, 835, 836, 869, 845, 898, 890, 820, 860, 832, 833, 855, 845, 804, 808, 812, 840, 885, 835, 835, 836, 878, 840, 868, 890, 806, 840

Using tally marks make a frequency table with intervals as 800–810, 810–820 and so on and Draw a bar graph to illustrate it.

Q.22. Three consecutive integers add up to 51. What are these integers.

Section –D(Each question carries 4 marks)

Q.23. A road roller takes 750 complete revolutions to move once over to level a road. Find the area of the road if the diameter of a road roller is 84 cm and length is 1 m.

OR

A closed cylindrical tank of radius 7 m and height 3 m is made from a sheet of metal. How much sheet of metal is required?

Q.24. Find the cube root of each of the following numbers by prime factorisation method.

(I) 512 (II) 27000

Q.25. Draw the graphs for the following tables of values, with suitable scales on the axes. Cost of apples

Number of apples	1	2	3	4
Cost (in Rs)	5	10	15	20

Q.26. If a box of sweets is divided among 24 children, they will get 5 sweets each. How many would each get, if the number of the children is reduced by 4?

OR

A farmer has enough food to feed 20 animals in his cattle for 6 days. How long would the food last if there were 10 more animals in his cattle?

Q.27. Draw a square of side 4.5 cm also write the steps of construction.

Q.28. Show that.: $(a - b)(a + b) + (b - c)(b + c) + (c - a)(c + a) = 0$

Q.29. (I) Express the number appearing in the following statements in standard form. Charge of an electron is 0.000,000,000,000,000,16 coulomb.

(II) Express the following numbers in usual form 3.61492×10^6

Q.30. Factorise the expressions and divide them as directed.

$$96abc(3a - 12)(5b - 30) \div 144(a - 4)(b - 6)$$

OR

Factorise : $x^4 - (y + z)^4$