

ANNUAL EXAMINATION, 2018-19

MATHEMATICS

Time : 3 hrs.

Class - VIII

M.M. : 80

Name of the student _____ Section _____ Date – 14.02.2019 (Thursday)

General Instruction:

- The question paper comprises of 30 questions divided into four sections.
- All questions are compulsory to attempt.
- 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.
- There are internal choices in all sections.
- Draw neat diagram wherever needed. Show calculation in fair.
- Use graph paper for Q.21 and Q.30.
- Use of calculator is not permitted.

Section A

- Q.1** In a single throw of die, what is the probability of getting an odd number ?
- Q.2** If 25% of x is 150, then find the value of x
- Q.3** Area of a semicircle of diameter 14 cm is _____

OR

Two cubes each of side 'b' units are joined to form a cuboid. What is a surface area of this cuboid ?

Q.4 $(5^0 + 4^{-1}) \times 2^2 =$ _____

OR

Express 3×10^{-5} in usual form.

Q.5 $(-20x^4) \div 10x^2 =$ _____

Q.6 The x-coordinate of any point lying on y-axis is _____

Section B

Q.7 Rajiv draws a ball from a bag that contains 10 white and 20 yellow balls. What is the probability of getting a white ball? Is it more or less than getting a yellow ball?

OR

What is the probability that a number selected from the numbers 3,4, 5, 6,20 is a multiple of 3 ?

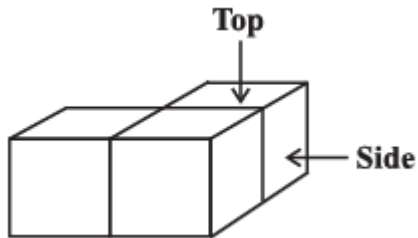
Q.8 The price of a fan is Rs. 1200. If the price of fan is decreased by 15%, then find the new price of fan.

OR

72% of 50 students are good in mathematics. How many are not good in mathematics?

Q.9 Multiply $(2x-3)(5+3x)$

Q.10 Draw the top and side view of the given solid.



Q.11 The diagonals of a rhombus are 16cm and 30cm. Find its area.

Q.12 Factorize $15pq + 15 + 9q + 25p$.

Section -C

Q.13 Construct a frequency distribution table for the data on weights (in kg) of 20 students of a class using intervals 30-35, 35-40 and so on.

40, 38, 33, 48, 40, 53, 31, 46, 34, 36, 49, 41, 55, 49, 59, 42, 44, 47, 38, 39.

Q.14 Find the compound interest on Rs. 10000 for $1\frac{1}{2}$ years at 20% per annum when compounded half yearly.

Q.15 Using identity evaluate:- 501×502 .

Q.16 Find number of faces of a polyhedron, which has 27 edges and 17 vertices.

Q.17 Find the height of a cylinder whose radius is 7cm and total surface area is 968cm^2 .

Q.18 Find m so that $(-3)^{m+1} \times (-3)^4 = (-3)^7$.

OR

Simplify $\{(1/3)^{-2} - (1/2)^{-3}\} \div (1/4)^{-2}$

Q.19 The scale of a map is given as 1:30000000. Two cities are 4 cm apart on the map. Find the actual distance between them.

OR

6 pipes are required to fill a tank in 1hr 20 minutes. How long will it take if only 5 pipes of the same type are used?

Q.20 Factorize $m^4 - 256$

OR

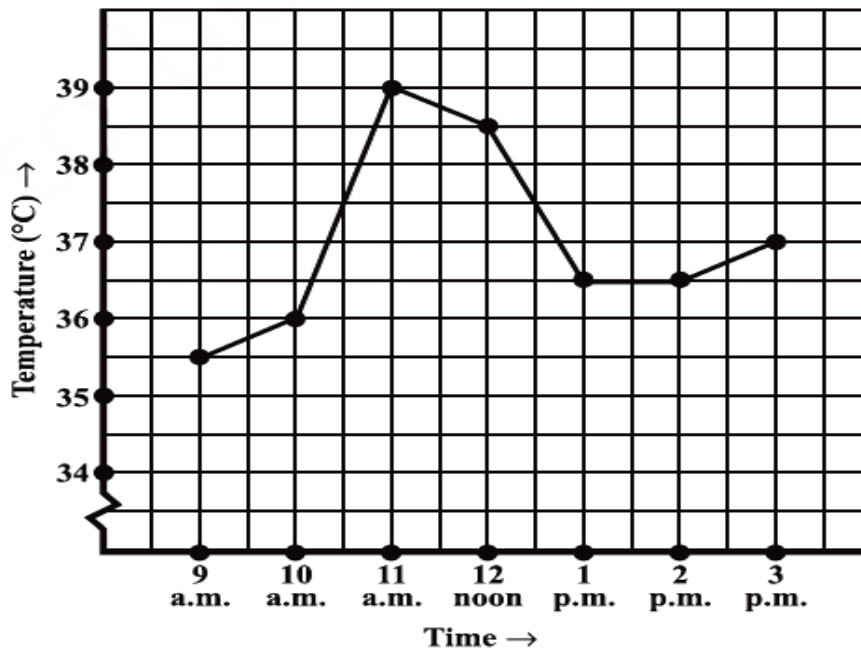
Factorize $(4x^2 - 12xy + 9y^2) - z^2$

Q.21 Plot the points A(0,2), B(2,1), C(4,0) on a graph sheet. Verify if they lie on a line.

OR

The following graph shows the temperature of a patient in a hospital, recorded every hour.

- What was the patient's temperature at 11 am.
- When was the patient's temperature 38.5°C .
- The patient's temperature was the same two times during the period given. What were these two times?



Q.22 If $53z1$ is a multiple of 9, where z is a digit, find all possible values of z .

Section D

Q.23 The number of students speaking different languages is given below. Display the data in a pie chart.

Languages	Hindi	English	Marathi	Bengali
Number of students	36	18	6	12

Q.24 A shopkeeper bought two washing machine at Rs.15000 each .He sold one at a profit of 15% and the other at a loss of 15%.Find the selling price of each .Also find whether he made overall profit or loss.

OR

Rahul bought an article for Rs. 784 which included GST of 12%. What was the price of article before GST was added?

Q.25 Simplify using identities: $(5a+7b)^2 - (5a - 7b)^2$

OR

Using identity evaluate: $\frac{154 \times 154 - 146 \times 146}{300}$

Q.26 An aquarium is in the form of a cuboid whose external dimensions are 80cmx30cm x40cm.The base, side and back faces are to be covered with coloured paper. Find the area of paper needed?

OR

A godown is in the form of a cuboid of measures 60m × 40m × 30m. How many cuboidal boxes can be stored in it if the volume of one box is 0.8m³.

Q.27 In a stack there are 5 books each of thickness 20mm and 5 sheets of paper each of thickness 0.014mm. What is the total thickness of stack? Write in standard form.

Q.28 The price of 6 bananas is Rs. 30. Find

- The price of 2 dozen bananas.
- Number of bananas purchased for Rs. 90

Q.29 Divide:-

- $9x^2y^2(3x - 24)$ by $27xy(x - 8)$
- $(p^2 + 6p + 8)$ by $(p + 4)$

Q.30 Ashwani can ride a scooter constantly at a speed of 60km/hr. Draw the time-distance graph for this situation. Use it to find,

- Time taken by Ashwani to travel 90km.
- Distance travelled by Ashwani in $3\frac{1}{2}$ hours.

