

# AMRITA VIDYALAYAM

## HALF YEARLY EXAMINATION 2018 - '19

Class : VIII

Marks : 80

Time : 2½ hrs

### MATHEMATICS

**GENERAL INSTRUCTIONS:**

Section A : 1 to 6 carry 1 mark each.

Section B : 7 to 12 carry 2 marks each.

Section C : 13 to 22 carry 3 marks each.

Section D : 23 to 30 carry 4 marks each.

#### SECTION - A

1. Square of an even number is \_\_\_\_\_.
2. Cube root of 512 is \_\_\_\_\_.
3. Reciprocal of -3 is \_\_\_\_\_.
4. The cost of 5 meters of cloth is ₹ 150. Find the cost of 12 meters of cloth.
5. Number of times that a particular entry occurs is \_\_\_\_\_.
6. Find the multiplicative inverse of  $(-5/8 \times -3/7)$

#### SECTION - B

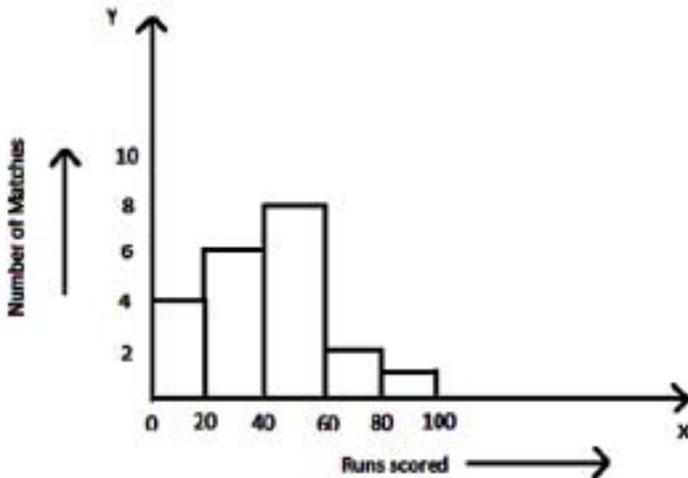
7. Represent  $9/8$  and  $-1/8$  on the number line.
8. Express  $13^2$  as the sum of two consecutive integers.
9. Find  $\sqrt{121}$  by repeated subtraction method.
10. Find the smallest number by which 192 must be divided to obtain a perfect cube.
11. A bag contains 8 black, 7 blue and 5 white balls. A ball is drawn from the bag at random. Find the probability of getting a blue ball.
12. A train is moving at uniform speed 90 km/hr. How far it will travel in 30 minutes?

## SECTION - C

13. Find ten rational numbers between  $-\frac{3}{5}$  and  $\frac{1}{2}$ .  
14. Evaluate  $\sqrt{53.29}$ .  
15. Draw a histogram for the following frequency table.

Class interval	Frequency
0 - 10	2
10 - 20	10
20 - 30	21
30 - 40	19
40 - 50	7
50 - 60	1
Total	60

16. If 28 men can do a piece of work in 65 days, how many men will do it in 35 days?  
17. Find the cube root of 343000.  
18. Find  $\frac{2}{3} + \frac{-3}{5} + \frac{1}{6} + \frac{-8}{15}$ .  
19. The following histogram shows the number of runs scored by a cricketer in one day matches.



From the histogram answer the following questions.

- a) How many matches did he play?
  - b) In how many matches did he score more than 60 runs?
  - c) How many matches were played in highest run group?
20. Raj made a cuboid of plasticine of sides 15 cm, 30 cm, 15 cm.  
How many such cuboids will he need to form a perfect cube?
21. 2 kg of sugar contains  $9 \times 10^6$  crystals. How many sugar crystals are there in
- a) 5 kg of sugar?
  - b) 1.2 kg of sugar?
22. Find the smallest square number which is exactly divisible by each of the numbers.  
8, 12, 15 and 20

### SECTION - D

23. Find.
- a)  $\left(\frac{1}{3} \times \frac{2}{5}\right) + \left(\frac{-3}{5} \times \frac{-7}{2}\right) + \left(\frac{-2}{3} \times \frac{1}{4}\right)$
  - b)  $\left(\frac{4}{6} \times \frac{-2}{5}\right) - \left(\frac{3}{5} \times \frac{2}{12}\right)$
24. Find the smallest 4 digit number which is a perfect square.
25. Find.
- a) The cube root of 110592 by prime factorization method.
  - b) The cube root of 17576 through estimation.
26. a) A boat covers 15 km in 3 hours. What distance will it cover in 2 hours?
- b) 3 boys can do a work in 2 days. How long will 6 boys take to complete the same work?
27. Prakash spends 40 % of monthly income on food items, 20 % on the house rent and 30 % on miscellaneous items. He saves 10 % of his income every month. Construct a pie chart to represent this information.
28. a) Find  $\sqrt{500}$  by estimation method.
- b) Find  $\sqrt{9216}$  by prime factorisation method.

29. Numbers 1 to 10 are written on 10 separate slips kept in a box and mixed well. One slip is chosen random from the box. What is the probability of

- a) getting a number 6?
- b) getting a number less than 6?
- c) getting a number greater than 6?
- d) getting a one digit number?

30. Using appropriate properties find.

a)  $\frac{-2}{3} \times \frac{3}{5} + \frac{5}{2} - \frac{3}{5} \times \frac{1}{6}$

b)  $\frac{2}{5} \times \frac{-3}{7} - \frac{1}{14} - \frac{3}{7} \times \frac{3}{5}$