AMRITA VIDYALAYAM
SUMMATIVE ASSESSMENT-I (2016-17)
SET I

CLASS : - VIII

TIME ALLOWED:- 3 HRS

SUBJECT:-MATHEMATICS

MAX.MARKS:- 90

GENERAL INSTRUCTIONS:-

i.   All questions are compulsory.
i.   Answer in sequence.
i.   The question paper consists of 31 questions divided into four sections A, B, C and D .
- Section-A comprises of 4 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
- Section-D comprises of 11 questions of 4 marks each.

SECTION-A

Represent the number on the number line $\frac{3}{5}$ 1

From a well shuffled deck of 52 cards, one card is drawn at random. What is the probability that the card drawn is either a king or queen?   1

Write the number in the usual form 1.0001×10^9 1

If $2z5$ is divisible by 11, where z is a digit , what is the value of z ?   1

SECTION-B

Find the value of x ,if $\left(\frac{-3}{4}\right)^4 \div \left(\frac{-3}{4}\right)^3 = \left(\frac{-4}{3}\right)^x$ 2

By what rational number should we multiply $\frac{5}{12}$ so that the product is $\frac{-2}{9}$?   2

Find the cube root of 91125 by prime factorisation.   2

A can do a piece of work in 3 days, B can do it in 9 days and C can do it in $4\frac{1}{2}$ days. How long will they take to complete the work if they work together?   2

Express the following numbers in standard form.   2

   a) 0.0072
   b) 387000000

Two numbers are in the ratio 7:5 .If they differ by 16. What are the numbers?   2

SECTION-C

Find the least perfect square number which is exactly divisible by 6, 18 and 30. Also find the square root of this number.   3

A can do a piece of work in 12 days and B in 18 days. They worked together for 4 days when A fell ill and B had to complete the remaining work. In how many days was the work completed?   3

13. From a well shuffled deck of 52 cards, one card is drawn at random. Find the probability of getting   3

    i) a face card   ii) a black card   iii) a diamond

14. Find five rational numbers between $\frac{3}{5}$ and $\frac{3}{4}$ 3

15. Find the smallest number that must be added to 400 to make it a perfect cube. Also, find the cube root   3
of this perfect cube.

16. A train takes 3 hours to reach a destination by travelling at the speed of 90 km/h. How long will it   3
take the train when it travels at the speed of 120 km/h?

17. Draw a histogram for the following frequency distribution: 3

| Class interval	30-60	60-90	90-120	120-150
Frequency	5	12	18	10

18. The marks obtained by 40 students of class x in an examination are given below.   3

9, 7, 19, 7, 8, 14, 21, 20, 3, 3, 22, 12, 6, 17, 10, 14, 9, 5, 19, 14, 0, 24, 4, 4, 8, 13, 15, 20, 19, 8, 23, 5, 2, 3, 8, 24, 10, 17, 11, 17.

Prepare a frequency distribution table with equal class intervals starting from 0-5 .

19. By what number should $\left(\frac{-4}{7}\right)^{-1}$ be divided so that the quotient may be $\left(\frac{-8}{7}\right)^{-1}$?   3

20. Find the value of each letters.   3

    2 A 6 2
  + A 2 5 A
   C C C B 0

SECTION-D

1. Two dice are thrown simultaneously. Find the probability of getting: 4

    i) The same number on both dice,   ii) An even number as the sum   iii) a total of at least 10.

2. Simplify the following and express the result as a rational number in standard form.   4

    a) $\frac{-2}{7} \times \left(\frac{7}{16} - \frac{21}{4}\right)$

    b) $\frac{-5}{18} \cdot \frac{-7}{24} + \frac{5}{12}$

3. The product of two numbers is 2475 and their quotient is $\frac{7}{9}$. Find the numbers.   4

4. One of the two digits of a two digit number is twice the other digit. If you interchange the digits of their two   4
digits and add the resulting number to the original number, you get 66. What is the original number?

25. Simplify the following

    (a) $(3^{-1} \times 6^{-1}) \div 3^{-2}$

    (b) $\dfrac{3^{-4} \times 10^{-5} \times 25}{5^{-7} \times 6^{-4}}$

26. Evaluate: i) $\sqrt[3]{512 \times 3375}$ ii) $\sqrt[3]{373.248}$

27. Suppose 3.5 kg weight of rice contains 1.75×10^5 grains. How many grains are there in

    i) 4.5 kg weight of rice?

    ii) 2.2 kg weight of rice?

28. The following histogram shows the frequency distribution of the ages of 22 teachers in a school.
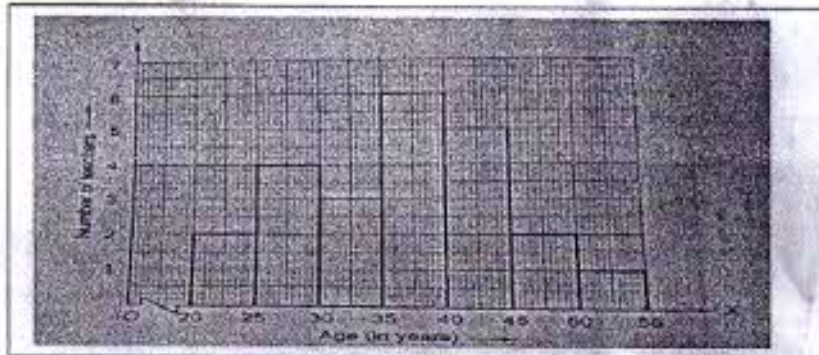
    a) What is the number of eldest and youngest teachers in the school?
    b) Which age group teachers are more in the school and which least?
    c) What is the size of the classes?
    d) What is the class mark of the class 40 - 45?

29. For a school function, 6000 chairs have to be arranged in rows and columns such that the number of rows equal to the number of columns. Find out if all the chairs will be used in this arrangement, if not, how many chairs will be left? Write one value you get participating in school function?

30. Solve the equation

    $\dfrac{x+3}{x-3} + \dfrac{x+2}{x-2} = 2$

31. The following data represents the collection of stamps of different countries, by a student. Represent the data by a pie chart.

Country	India	USA	Germany	UK	South Africa
Number of stamps	105	150	90	120	75