

Virudhunagar District Common Examinations  
Common Annual Examination - 2023

038421

Time: 2.30 Hours

**Standard 8**  
**MATHS**

Marks: 100  
9x1=9

**I. Choose the best option:**

- Which of these rational numbers which have additive inverse?
  - 7
  - $\frac{-5}{7}$
  - 0
  - all of these
- The scientific form of 0.000000002020 is .....
  - $2.02 \times 10^9$
  - $2.02 \times 10^{-9}$
  - $2.02 \times 10^{-8}$
  - $2.02 \times 10^{-10}$
- Circumference of a circle is .....
  - $2\pi r$
  - $\pi r^2$
  - $\frac{1}{4} \pi r^2$
  - $(\pi + 2)r$
- A cube has ..... faces
  - 4
  - 6
  - 3
  - 8
- The product of  $7P^3$  and  $(2P^2)^2$  is
  - $14P^{12}$
  - $28P^7$
  - $9P^7$
  - $11P^{12}$
- Factors of  $9x^2 + 6xy$  are
  - $3y, (x + 2)$
  - $3x, (3x + 3y)$
  - $6x, (3x + 2y)$
  - $3x, (3x + 2y)$
- A fruit vendor sells fruits for Rs.200 gaining Rs.40, His gain percentage is
  - 20 %
  - 22%
  - 25%
  - $16 \frac{2}{3}$  %
- The upper limit of the class interval (25 – 35) is .....
  - 20
  - 25
  - 30
  - 35
- Every 3rd number of the Fibonacci sequence is a multiple of .....
  - 2
  - 3
  - 5
  - 8

**II. Fill in the blanks with suitable answer:**

5x1=5

- The multiplicative inverse of  $\frac{7}{8}$  is .....
- $a^0 = \dots\dots\dots$
- The longest chord of a circle is .....
- If  $\frac{x}{2} = 10$ , then x is .....
- Corresponding sides of similar triangles are .....

**III. Say True or False:**

5x1=5

- The additive inverse of  $\frac{-11}{-17}$  is  $\frac{11}{17}$
- $(-10, 20)$  lies in the second quadrant.
- Comparison of parts of a whole may be done by a pie chart.
- In a right angled triangle, the hypotenuse is the longest side.
- The standard form of  $2 \times 10^{-4}$  is 0.0002.

**IV. Answer any 10 of the following:**

10x2=20

**Qn. No. 31 is compulsory**

- Find the Sum :  $\frac{7}{5} + \frac{3}{5}$
- Simplify:  $\sqrt{12} \times \sqrt{3}$
- Find the cube root of 27000.
- If the radius of a sector is 18cm and its central angle is  $35^\circ$  then find the length of the arc.
- Divide  $(32y^2 - 8yz)$  by  $2y$ .
- Solve:  $2x + 5 = 9$

V8M

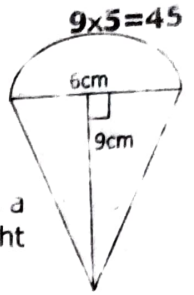
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- 26) Factorise:  $x^2 + 8x + 15$
- 27) 48 is 32% of which number?
- 28) Find the difference in C.I and S.I for  $P = Rs. 5000$ ,  $r = 4\% pa$  and  $n = 2$  years
- 29) A 20 feet ladder leans against a wall at height of 16 feet from the ground. How far is the base of the ladder from the wall?
- 30) Represent the following data in ungrouped frequency table which gives the number of children in 25 families.  
1, 3, 0, 2, 5, 2, 3, 4, 1, 0, 5, 4, 3, 1, 3, 2, 5, 2, 1, 1, 2, 6, 2, 1, 4
- 31) Using repeated subtraction method, find the HCF of 36 and 80.

V. Answer any 9 of the following:

Qn. No. 42 is compulsory

- 32) Find the square root of 459684 by long division method.
- 33) Simplify :  $\frac{2^8 \times 2187}{3^5 \times 32}$
- 34) Find the area of the combined figure given, formed by joining a semicircle of diameter 6cm with a triangle of base 6cm and height 9cm ( $\pi=3.14$ )
- 35) Divide  $(5xy^2 - 18x^2y^3 + 6xy) \div 6xy$
- 36) Factorise  $27p^3 + 54p^2q + 36pq^2 + 8q^3$  by using  $(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$ .
- 37) A number when decreased by 20% gives 80. Find the number.
- 38) A mat of length 180m is made by 15 women in 12days. How long will it take for 32 women to make a mat of length 512m?
- 39) Draw a histogram for the following table which represents the age groups from 100 people in a village.



Ages	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Number of people	11	9	8	20	25	10	8	6	3

40) Decode the given pigpen cipher text and compare your answer

i) The room number in which the treasure took place

□ □

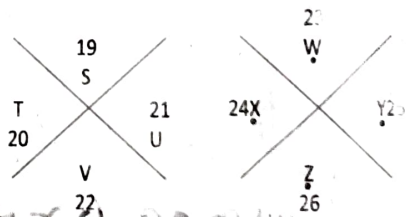
1 A	2 B	3 C	10 J	11 K	12 L
4 D	5 E	6 F	13 M	14 N	15 O
7 G	8 H	9 I	16 P	17 Q	18 R

ii) Place of the treasure

□ □ □ □ □

iii) The name of the treasure

□ □ □ > A E K L □ □ □ □



41) Using repeated division method, find the HCF of 184, 230 and 276.

42) Add :  $\frac{-5}{9}, \frac{-4}{3}, \frac{7}{12}$

VI. Answer the following questions:

2x8=16

43) Construct a trapezium BOAT in which  $\overline{BO}$  is parallel to  $\overline{TA}$ ,  $BO = 7cm$ ,  $OA = 6cm$ ,  $BA = 10cm$  and  $TA = 6 cm$  Also find its area.

(OR)

Construct a square LAMP of side 4cm. Also find its area.

44) Draw a straight line by joining the points  $A(-2, 6)$  and  $B(4, -3)$ .

(OR)