

COMMON ANNUAL EXAMINATION - 2023

C

Standard VIII
MATHEMATICSReg No

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Time : 2.30 hrs

Marks : 100

14 x 1 = 14

I. Choose the correct answer:

1. If the word 'PHONE' is coded as 'SKRQH', how will 'RADIO' be coded?
 - a) SCGNH
 - b) VRGNG
 - c) UDGLR
 - d) SDHKQ
2. How many outcomes can you get when you toss three coins once?
 - a) 6
 - b) 8
 - c) 3
 - d) 2
3. Inclusive series is a _____ series.
 - a) continuous
 - b) discontinuous
 - c) both
 - d) none of these
4. Data is a collection of _____.
 - a) numbers
 - b) words
 - c) measurements
 - d) all the three
5. The hypotenuse of a right angled triangle of sides 12 cm and 16 cm is _____.
 - a) 28 cm
 - b) 20 cm
 - c) 24 cm
 - d) 21 cm
6. The medians of a triangle cross each other at _____.
 - a) circumcircle
 - b) mean
 - c) centroid
 - d) radius
7. The area of the Rhombus is _____.
 - a) $\frac{1}{2}h(a + b)$ sq.units
 - b) $\frac{1}{2} \times d_1 \times d_2$ sq units
 - c) $\frac{1}{2}bh$ sq.units
 - d) lb sq units
8. Similar triangles have the same _____, but not necessarily the same size.
 - a) area
 - b) shape
 - c) equal
 - d) similarity
9. The sum of the three angles of a triangle is _____.
 - a) 160°
 - b) 180°
 - c) 90°
 - d) 400°
10. If 5 persons can do 5 jobs in 5 days, then 50 persons can do 50 jobs in _____.
 - a) 7 days
 - b) 5 days
 - c) 50 days
 - d) 10 days
11. A fruit vendor sells fruit for Rs 200 gaining Rs.40. His gain percentage is _____.
 - a) 20%
 - b) 22%
 - c) 25%
 - d) $16\frac{2}{3}\%$
12. Loss or gain percentage in is always calculated on the _____.
 - a) cost price
 - b) selling price
 - c) marked price
 - d) discount
13. X-axis and Y-axis intersect at _____.
 - a) origin
 - b) x-axis
 - c) y-axis
 - d) II quadrant
14. _____ is added to 24^2 to get 25^2 .
 - a) 4^2
 - b) 5^2
 - c) 6^2
 - d) 7^2

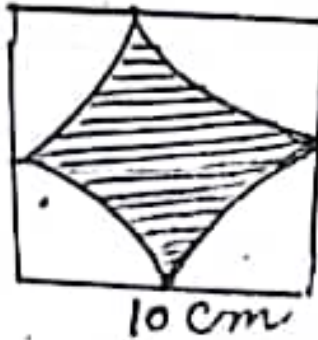
(2)

VIII Mathematics

10 × 2 = 20

II. Answer any 10 of the following questions:

15. Find the value of $(-3)^4 \cdot \left(\frac{5}{3}\right)^4$
16. Find the square root of $\frac{144}{225}$
17. Find the area of the shaded part in the given square.



18. Expand : $(3m + 5)^2$
19. Find the value of x if $2x + 5 = 9$
20. If $x\%$ of 600 is 450, then find the value of x .
21. What is 25% of 30% of 400?
22. Factorise : $x^2 + 8x + 16$
23. If selling an article for Rs.820 causes 10% loss on the selling price, then find its cost price.
24. Can a right triangle have sides that measure 5 cm, 12 cm and 13 cm.
25. Give the statement of Pythagoras theorem.
26. 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
27. If you have 2 school bags and 3 water bottles then, in how many different ways can you choose each one of them, while going to school?
28. Using repeated division method, find the HCF : 455 and 26.
- III. Answer any 10 of the following :

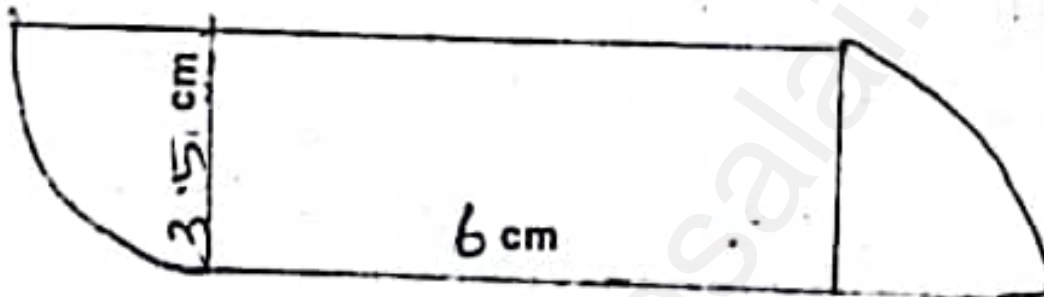
29. Find the sum : $-4\frac{2}{3} + 7\frac{5}{12}$ ii) $\frac{-3}{11} + \frac{8}{11}$
30. Find the square root by long division method : 17956

10 × 5 = 50

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31. The radius of sector is 21 cm and its central angle is 120° , find its area and find the length of the arc.
32. Factorise using $(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$
 $64x^3 + 144x^2 + 108x + 27$
33. Expand : $(98)^3$
34. Factorise : $49x^2 - 64y^2$
35. One number is seven times another of their difference is 18, find the numbers.
36. Multiply : $(2x + 5y)$ and $(3x - 4y)$
37. Find the perimeter and area of the figure given :



38. Draw a pie chart for the following data relating to the cost of construction of a house.

| Particulars | Bricks | Steel | Cement | Timber | Labour | Others |
|-------------|--------|-------|--------|--------|--------|--------|
| Expenses | 10% | 15% | 25% | 10% | 20% | 20% |

39. Draw a histogram for the following data.

| Class Interval | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
|-----------------|------|-------|-------|-------|-------|-------|
| No. of students | 5 | 15 | 23 | 20 | 10 | 7 |

40. The price of a raincoat was slashed from Rs.1060 to Rs.901 by a shopkeeper in the rainy season to boost the sales. Find the rate of discount given by him.
41. By repeated subtraction method, verify the result : 320, 120 and 95
42. Find the best buy of the egg purchase. Baskar buy $1\frac{1}{2}$ dozen of eggs for Rs.81 and Aruna buy 15 eggs for Rs.64.50

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IV. Answer the following :

8 x 2 = 16

43. i) Construct a rectangle with the given measurements and also find their area Draw a rectangle HAND with HA = 7 cm and AN = 4 cm.

(OR)

ii) Construct a quadrilateral DEAR with DE = 6 cm, EA = 5 cm, AR = 5.5 cm, RD = 5.2 cm and DA = 10 cm.

44. i) Plot the following points in a graph sheet.

A(5,2), B(-7,-3), C(-2,4)

D(-4,0), E(0,7), F(7,-4)

(OR)

ii) Draw the graph of $y = x - 4$

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