
	NARAYANA GROUP OF SCHOOLS	
CLASS-VIII Max. Time: 120 min	AARAMBH	DATE: 04-10-19 Max marks: 320

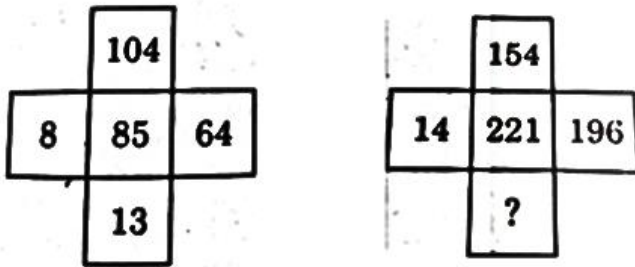
Instructions:

- i. The test paper consists of **80** multiple choice questions numbered from **1 to 80**, each question followed by four alternatives 1, 2, 3 and 4.
- ii. Mental Ability 1 to 20, Mathematics 21 to 35, Physics 36 to 50 and Chemistry 51 to 65, Biology 66 to 80.
- iii. Each question has only one correct option.
- iv. Each correct answer carries **4 Marks**.
- v. No negative marking for wrong answer.

MAT (Q.NO.1 TO 20)

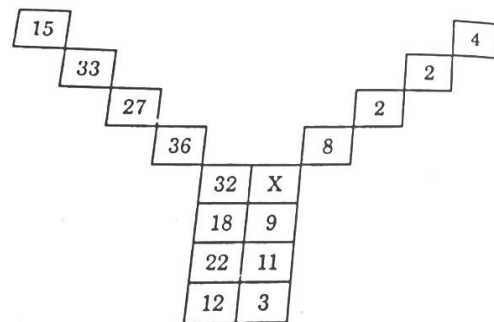
Directions (Q. No-1 to 4): Find the missing character from among the given alternatives.

1.



- 1) 11 2) 13 3) 15 4) 17

2.



- 1) 3 2) 4 3) 8 4) 12

3.

BD ₃	CE ₅	DF ₁₅
EG ₂	FH ₄	GI ₈
HJ ₄	IK ₆	?

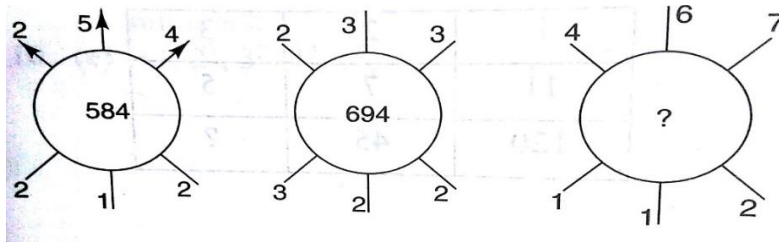
1) JL₂₄

2) IJ₁₈

3) JK₁₈

4) JL₁₂

4.



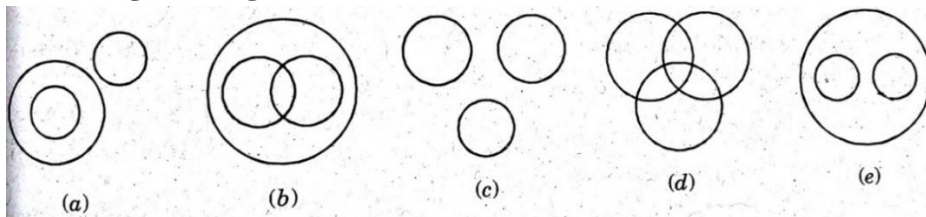
1) 937

2) 824

3) 769

4) 678

Directions (Q.No-5 to 6) : Each of the following questions below contains three elements. These three elements may or not have some linkage. Each group of the elements may fit into one of the diagrams at (a), (b), (c), (d) and (e). You have to indicate groups of elements in each questions fit into which of the diagram given below. The letter indicating the diagram is the answer.



5. Machine, Lathe, Mathematics

1) a

2) b

3) c

4) e

6. Honesty, Intelligence, Aptitude

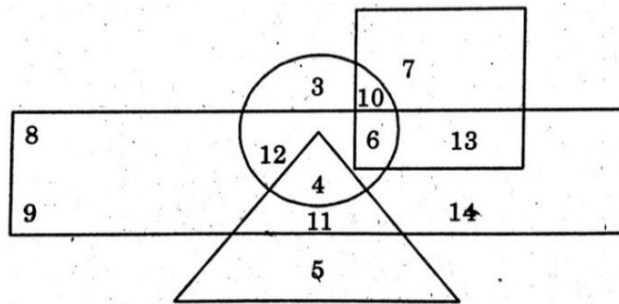
1) a

2) b

3) c

4) d

Directions (Q.No-7 to 8) : This question based on the diagram given below.



1) Rectangle represents males

2) Triangle represents educated

3) circle represents urban

4) Square represents civil servants

7. Who among the following is neither a civil servant nor educated but is urban and not a male ?

- 1) 2 2) 3 3) 6 4) 10

8. Who among the following is only a civil servant but not a male nor urban oriented and uneducated ?

- 1) 7 2) 8 3) 9 4) 14

9. If $20 - 10$ means 200, $8 \div 4$ means 12, 6×2 means 4, then

$$100 - 10 \times 1000 \div 1000 + 100 \times 10 = ?$$

- 1) 0 2) 20 3) 1090 4) 1900

Directions (Q.No-10) : In the following questions, the symbols

@, &, \$, % and # are used with the following meanings as illustrated below :

‘A \$ B’ means ‘A is not smaller than B’;

‘A # B’ means ‘A is not greater than B’;

‘A @ B’ means ‘A is neither smaller than nor equal to B’;

‘A & B’ means ‘A is neither smaller than nor greater than B’;

‘A % B’ means ‘A is neither greater than nor equal to B’.

Now, in each of the following questions, assuming the given statements to be true, find which of the three conclusions I, II and III given below them is/are definitely true and give your answer accordingly.

10. Statements : K # N, N \$ T, T % J

Conclusion : I. J @ N

II. K @ T

III. T @ K

- 1) None is true 2) Only I and II are true
3) Only II and III are true 4) Only I and III are true

11. If ZIP = 198 and ZAP = 246, then how will you code VIP

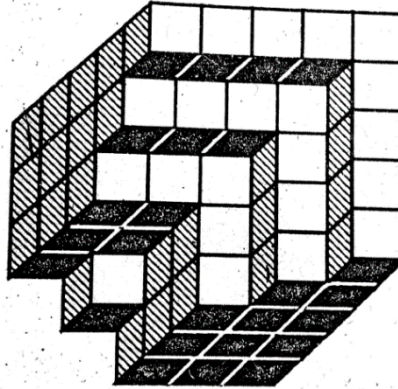
- 1) 175 2) 222 3) 888 4) 990

Directions (Q. No:12): The correct terms to be interchanged have been given as one of the four alternatives under the expressions. Find the correct alternative in each case.

12. $7 \times 2 - 3 + 8 \div 4 = 5 + 6 \times 2 - 24 \div 3$

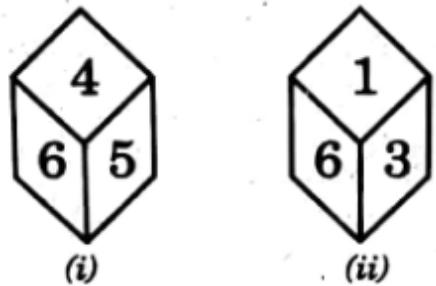
- 1) 2, 6 2) 6, 5 3) 3, 24 4) 7, 6

13. Count the number of cubes. Given below diagram.



- 1) 80 2) 87 3) 89 4) 90

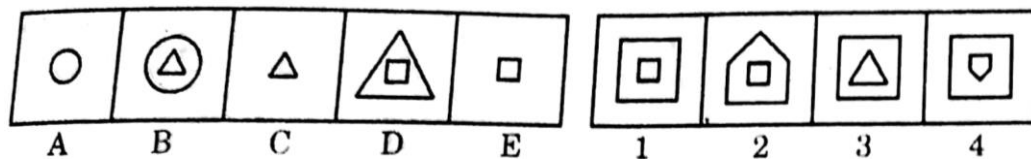
14. Two positions of a dice are shown below. Identify the number at the bottom when the top is '3'?



- 1) 2 2) 4 3) 5 4) 6

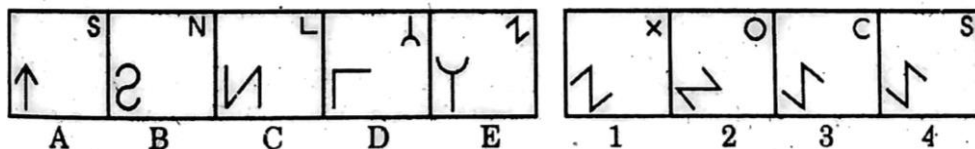
Directions(Q.No : 15-16) : Figure series

15.



- 1) 1 2) 2
3) 3 4) 4

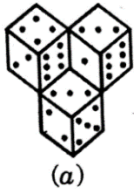
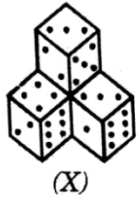
16.



- 1) 1 2) 2
3) 3 4) 4

Directions (Q. No:17-18): Water Images.

17.



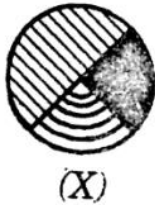
1) a

2) b

3) c

4) d

18.



1) a

2) b

3) c

4) d

19. Pointing to a woman, Arijit said, “She is the daughter of the only child of my grandmother.” How is the woman related to Arijit?

1) Mother

2) Niece

3) Cousin

4) Data inadequate

20. If $X + Y$ means X is the daughter of Y; $X - Y$ means X is the brother of Y; $X \% Y$ means X is the father of Y and $X \times Y$ means X is the sister of Y. Which of the following means I is the niece of J?

1) $J - N + C \times I$

2) $I \times C - N \% J$

3) $J + M \times C \% I$

4) $I \times C + N - J$

MATHEMATICS (Q.NO.21 TO 35)

21. The hypotenuse of a right triangle is 37 cm long. If one of the remaining two sides is 12 cm in length, then the length of the other side is

- 1) 38 cm 2) 30 cm 3) 35 cm 4) 70 cm

22. If a number is doubled then which of the following is a correct statement?

- 1) Its cube is two times the cube of the given number.
 2) Its cube is three times the cube of the given number.
 3) Its cube is six times the cube of the given number.
 4) Its cube is eight times the cube of the given number.

23. Which of the following is the cube root of $-\frac{64}{243}$?

- 1) $\frac{7}{4}$ 2) $-\frac{7}{4}$ 3) $\frac{4}{7}$ 4) $-\frac{4}{7}$

24. If $\frac{a}{b}$ is the additive inverse of $-\frac{c}{d}$, then $-\frac{c}{d}$ is the additive inverse of

- 1) $\frac{a}{b}$ 2) $\frac{b}{a}$ 3) $-\frac{b}{a}$ 4) $-\frac{a}{b}$

25. Sum of two numbers is 95. If one exceeds the other by 15, then the numbers are

- 1) 25 & 40 2) 50 & 65 3) 30 & 45 4) 40 & 55

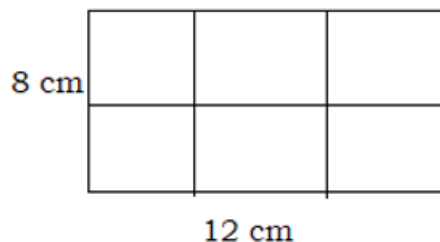
26. The solution of the equation $ax + b = 0$ is

- 1) $\frac{a}{b}$ 2) $-b$ 3) $-\frac{b}{a}$ 4) $\frac{b}{a}$

27. When the integers 10, 0, 5, -5, -7 are arranged in descending or ascending order, then Find out which of the following integers always remains in the middle of the arrangement.

- 1) 0 2) 5 3) -7 4) -5

28. Following rectangle is composed of 6 congruent parts.



Area of each part is

- 1) 72 cm^2 2) 36 cm^2 3) 16 cm^2 4) 9 cm^2

29. In the word "MATHS" which of the following pairs of letters shows rotational symmetry

- 1) M and T 2) H and S 3) A and S 4) T and S

30. How many diagonals does a convex quadrilateral has?

- 1)one 2)two 3)three 4) four

31. $\sqrt{52 \frac{857}{2116}} =$

- 1) $\frac{146}{33}$ 2) $\frac{146}{333}$ 3) $\frac{46}{333}$ 4) $\frac{333}{46}$

32. Statement - 1: The square root of certain decimals are obtained by first changing the decimals into fractions with perfect squares as their numerators and denominators.

Statement - 2: $(26.1)^2$ lies between 400 and 900.

- 1) Statement-1 is true and statement-2 is false.
 2) Statement-1 is false and statement-2 is true.
 3) Both statements 1 and 2 are false.
 4) Both statements 1 and 2 are true.

33. The value of $\frac{\left(p + \frac{1}{q}\right)^m \left(p - \frac{1}{q}\right)^m}{\left(q + \frac{1}{p}\right)^m \left(q - \frac{1}{p}\right)^m}$ is

- 1) $\frac{p}{q}$ 2) $\left(\frac{p}{q}\right)^m$ 3) $\left(\frac{p}{q}\right)^{2m}$ 4) $\left(\frac{q}{p}\right)^{2m}$

34. The decimal expression for 8 rupees 8 paise (in Rupees) is

- 1) 8.8 2) 8.08 3) 8.008 4) 88.0

35. How many number of faces does a solid sphere has?

- 1) 1 2) 2 3) Many 4) 5

PHYSICS (Q.NO.36 TO 50)

36. The depolarization used in leclanche cell is

- 1) Solution of ammonium chloride 2) Porous pot
 3) Powered carbon 4) manganese dioxide

37. 50g of copper is heated to increase its temperature by 10°C . If the same quantity of heat is given to 10 g of water, the rise in its temperature is

(Specific heat of copper = $420\text{J/kg}^{\circ}\text{C}$)

Specific heat of water = $4200\text{J/kg}^{\circ}\text{C}$

- 1) 5°C 2) 6°C 3) 7°C 4) 8°C

38. A liquid of mass 'm' and specific heat 'S' is at a temperature '2t'. If another liquid of thermal capacity 1.5 times, at a temperature of t/3 is added to it, the resultant temperature will be
- 1) $\frac{4}{3}t$ 2) t 3) $\frac{t}{2}$ 4) $\frac{2}{3}t$
39. A 700 g solid cube having an edge of length 10 cm floats in water. How much volume of the cube is outside the water? Density of water = 1000 kg m^{-3} .L
- 1) 30 cm^3 2) 300 cm^3 3) 700 cm^3 4) 1000 cm^3
40. The frequency of a wave travelling at a speed of 500m/s is 25 Hz. Its time period will be
- 1) 20s 2) 0.05s 3) 25s 4) 0.04s
41. Two sound waves in air have wavelength ratio 1:3. Then their frequency ratio will be
- 1) 1:3 2) 2:1 3) 3:1 4) 1:2
42. A ray reflected successively from two plane mirrors inclined at a certain angle undergoes a deviation of 300° . The number of observable images
- 1) 60 2) 12 3) 11 4) 5
43. When a mirror is rotated through an angle the reflected ray from it, turns through an angle of
- 1) θ 2) $\theta/2$ 3) 2θ 4) 0
44. A piece of brass (alloy of copper and zinc) weighs 12.9 g in air. When completely immersed in water it weighs 11.3 g. What is the mass of copper contained in the alloy? Specific gravities of copper and zinc are 8.9 and 7.1 respectively.
- 1) 1.67 g 2) 7.61 g 3) 6.11 g 4) 7.16 g
45. A man runs towards a mirror at a rate of 6ms^{-1} . If the mirror is at rest, his image will have a velocity (with respect to man)
- 1) $+12\text{ms}^{-1}$ 2) -6ms^{-1} 3) 6ms^{-1} 4) -12ms^{-1}
46. The temperature of which Fahrenheit and reaumur scale read the same is
- 1) -25.6 2) -20.6 3) 25.6 4) 20.6
47. A faulty centigrade thermometer is examined. The upper and lower points are found to be 99.5°C and 0.5°C respectively. What is the correct temperature if this faulty thermometer reads 15.5 ?
- 1) 15.15°C 2) 16.16°C 3) 17.17°C 4) 18.18°C

48. Ice of density $900\text{g}/\text{cm}^3$ is floating in water of density $1100\text{g}/\text{cm}^3$. The fraction of volume of the ice above the water is

- 1) $\frac{2}{11}$ 2) $\frac{9}{11}$ 3) $\frac{11}{9}$ 4) $\frac{11}{2}$

49. According to the law of floatation

1) Fraction of body inside the liquid $f_{\text{inside}} = \frac{V_{\text{body submerged}}}{V_{\text{liquid}}}$

2) Fraction of body inside the liquid $f_{\text{inside}} = \frac{d_{\text{body}}}{d_{\text{liquid}}}$

- 3) Both (1) and (2)
4) Neither (1) nor (2)

50. Fraction of body inside the liquid = $f_{\text{inside}} = \frac{V_{\text{body submerged}}}{V_{\text{liquid}}} = \frac{d_{\text{body}}}{d_{\text{liquid}}}$

If the density of ice is 0.9 g cm^{-3} , what portion of an iceberg will remain below the surface of water in the sea ? (density of sea water = 1.1 g cm^{-3})

- 1) $\frac{9}{11}$ th part 2) $\frac{11}{9}$ th part 3) $\frac{3}{4}$ th part 4) $\frac{4}{3}$ th part

CHEMISTRY (Q.NO.51 TO 65)

51. Acetic acid prepared from

- 1) Kerosene 2) Alcohol 3) Petrol 4) Water

52. Sneezing and coughing are examples of _____ change.

- 1) Reversible change 2) Slow change
3) Non periodic change 4) Desirable change

53. Permanent hardness can be removed by treating the water with:

- 1) Washing soda- Na_2CO_3 2) Baking soda- NaHCO_3
3) Baking powder- NaHCO_3 4) Marble chips- CaCO_3

54. Which of the following is manmade fibre

- 1) Cotton 2) Wool 3) Silk 4) Rayon

55. Heating of ore in presence of air

- 1) Froth floatation 2) Crushing 3) Roasting 4) Calcination

56. What is the formula of oxalic acid

- 1) HCOOH 2) CH_3COOH 3) CH_3CHO 4) $(\text{COOH})_2$

57. Zinc oxide on cooling having _____ color and on heating having _____ colour.
1) Green, white 2) Yellow, white 3) White, yellow 4) Green, yellow
58. Who proved that water is a compound made up of two elements
1) Cavendish 2) Bohr 3) Berzelius 4) Rutherford
59. _____ sheep gives wool of the best quality
1) Merino 2) Mexico 3) Mushroom 4) Mosco
60. $Mg(HCO_3)_2 \rightarrow A + B + C$: A, B, C represents:
1) $MgCO_3, H_2O, CO_2$ 2) $MgO, 2H_2O, 2CO$
3) $Mg(OH)_2, H_2O, O_2$ 4) Mg, H_2O, CO_2
61. The chemical name of nitre is: x
1) Sodium nitrate 2) Potassium nitrate 3) Calcium nitrate 4) Ammonium nitrate
62. Which of the following is an example of Reversible change?
1) Melting of ice 2) Burning of paper 3) Cutting of wood 4) Growth of a plant
63. Formula of Glauber's salt
1) $MgSO_4 \cdot 7H_2O$ 2) $Na_2SO_4 \cdot 10H_2O$ 3) $CaSO_4 \cdot 2H_2O$ 4) $ZnSO_4 \cdot 10H_2O$
64. The length wise threads are known as _____
1) Charka 2) Loom 3) Warp 4) Threads
65. $MgSO_4 \cdot 7H_2O$ is
1) EPSOM salt 2) Gypsum salt 3) Blue vitriol 4) green vitriol

BIOLOGY (Q.NO.66 TO 80)

66. Identify the sac like structures present inside the lungs and what are they useful for



- 1) Bronchioles exchange of oxygenated and deoxygenated blood.
2) Cartilaginous rings, prevent collapse of trachea.
3) Alveoli, Exchange of gases
4) Air sacs, exchange of oxygenated and deoxygenated blood.

67. Which one contains hemoglobin out of the following?

- 1) Red blood cells 2) White blood cells 3) Blood platelets 4) Chlorophyll

68. Match the following

Column A

- a) Arteries and veins are joined by a network
b) The rhythmic expansion and contraction
c) The main excretory product in human beings
d) Fight against germs.

Column B

- i) Capillaries
ii) WBC
iii) Heart beat
iv) Urea

1) a-i, b-ii, c-iv, d-iv

2) a-iii, b-i, c-iv, d-ii

3) a-i, b-iii, c-ii, d-iv

4) a-i, b-iii, c-iv, d-ii

69. The excretory substance in fishes:

- 1) Urea 2) Ammonia 3) Uric acid 4) Both urea and Uric acid

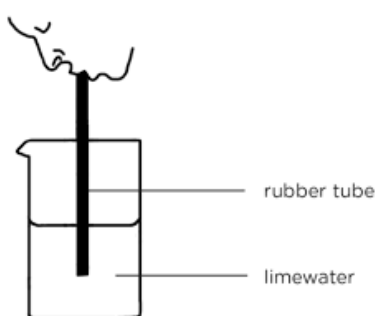
70. Choose the wrong statement from the following

- 1) Veins carry blood from all parts of the body back to the heart.
2) Removal of waste products from the body also comes under Transportation.
3) A lot of water is lost by plants in the form of vapour through stomata during transpiration.
4) Salts and urea are removed along with water as sweat.

71. Identify the product we don't get from forests

- 1) Fruits and vegetables 2) Timber and wood.
3) Turpentine, latex. 4) Rice, wheat pulses

72. In the diagram when air is blown in, which gas enters the beaker and what change is observed



- 1) Nitrogen, lime water remains unchanged
2) Oxygen. Lime water turns milky.
3) Mixture of gases enter, so no change is observed
4) Carbon dioxide enters, Lime water turns milky.

73. Which among the following in the food chain consumes the producer

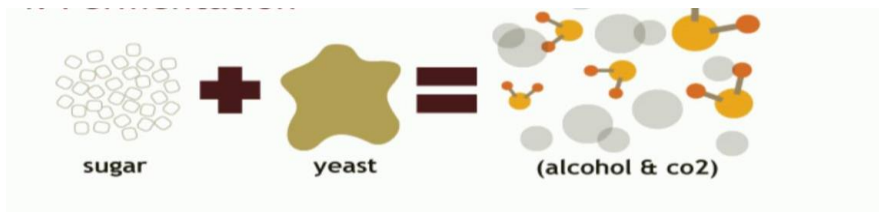
Grass -----> grass hopper -----> frog -----> snake -----> owl

- 1) Frog 2) Snake 3) Grasshopper 4)Owl

74. i)Threshing a) Cutting and gathering of crops.
 ii) Weeding b) 2,4-D
 iii) Harvesting c) Rice
 iv) Weedicide d) Removal of weeds from a field.
 e) Separating grains from chaff.

- 1)i-e, ii-d, iii-a, iv-b
 2) i-b, ii-d, iii-a, iv-e
 3)i-e, iii-d, ii-b, iv-a
 4) i-d, ii-e, iii-a, iv-b

75. Which process does the following reaction depict?

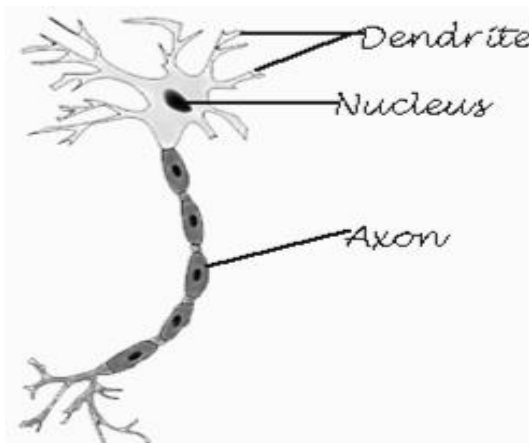


- 1) Aerobic respiration 2) anaerobic respiration 3) Fermentation 4)All

76. The yeast multiply by a process called

- 1) Binary fission 2) Budding
 3) Spore formation 4) Gamete fusion

77.



The cell shown is responsible for

- 1) Relaying electrical messages to cells and tissues in other organ system.
 2) Receive and transfer messages
 3) Control and coordinate the working of different parts of the body
 4) All the above

78. Robert hooke observed the cells of

- 1) Plant cell 2) Bacterial cell 3) Cork cell 4) Onion cell

79. The structures that control the transfer of a hereditary characteristics from parents to offspring.

- 1) Chromosomes 2) Genes 3) Nucleus 4) Nucleolus

80. Large scale rearing of fish is called

- 1) Apiculture 2) Pisciculture
3) Animal husbandry 4) White revolution
