



CLASS-VIII	AARAMBH	DATE: 01-10-19
Max. Time: 120 min		Max marks: 320

Instructions:

- 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.
- Mental Ability 1 to 20, Mathematics 21 to 35, Physics 36 to 50 and Chemistry 51 to 65, Biology 66 to 80.
- Each question has only one correct option.
- Each correct answer carries **4 Marks**.
- No negative marking for wrong answer.

MAT (Q.NO.1 TO 20)

- In a certain code, BREAKTHROUGH is written as EAOUHRBRGHKT. How is DISTRIBUTION written in that code?**
 - TISTBUONDIRI
 - STTIBUONDRIDI
 - RISTTIBUDION
 - None of these
- In a certain language ,’sun shines brightly’ is written as ‘ ba lo sul’, ‘houses are brightly lit’ as ‘kado ula ari ba’ and ‘ light comes from sun’ as ‘dopi kup lo nro’. What code-words are written for ‘sun’ and ‘brightly’?**
 - ba, sul
 - sul, lo
 - lo, ba
 - ba,lo

Directions : (Q.no : 3 – 4)

Prashant Arora has three children – Sangeetha, Vimal and Ashish. Ashish married Monika, the eldest daughter of Mr. and Mrs.Roy . The Roys married their youngest daughter to the eldest son of Mr. and Mrs. Sharma , and they had two children named Amit and Shashi. The Roys have two more children , Roshan and Vandana, both elder to Veena. Sameer and Ajay are sons of Ashish and Monika. Rashmi is the daughter of Amit.

- What is the surname of Rashmi?**
 - Sharma
 - Roy
 - Arora
 - None of these
- How is Sameer related to Monika’s father ?**
 - Grandson
 - Son
 - Cousin
 - Son-in –law

5. If 'P+Q' means 'P is the father of Q', 'P×Q' means P is the brother of Q'; 'P - Q' means 'P is the mother of Q', then which of the following is definitely true about C-A+B?

- 1) B is the son of A
- 2) A is the son of C
- 3) B is the father of A
- 4) C is the mother of B

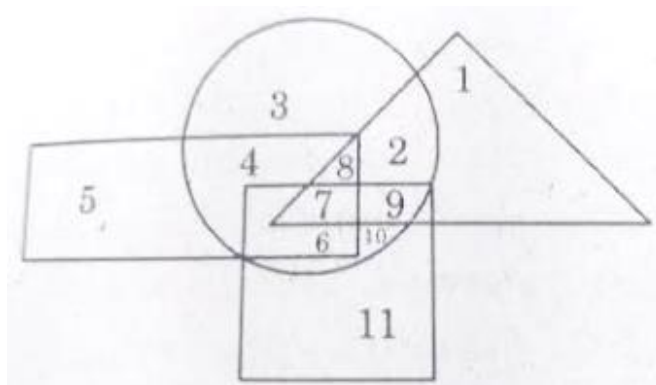
6. After walking 6 km , I turned right and covered a distance of 2 km, then turned left and covered a distance of 10km. In the end, I was moving towards the north. From which direction did I start my journey?

- 1) North
- 2) South
- 3) East
- 4) West

7. It is 3'o clock in a watch. If the minute hand points towards the North – east , then the hour hand will point towards the

- 1) South
- 2) South – west
- 3) North – west
- 4) South – east

Directions: (Q.no : 8 -9): In the following figure , rectangle, square , circle and triangle represent the regions of wheat, gram, maize and rice cultivation respectively . On the basis of the above figure, answer the following questions.



8. Which area is cultivated by all the four commodities?

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

9. Which area is cultivated by maize only?

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

Directions: (Q.no : 10-11) : If > denotes +, < denotes -, + denotes ÷, ^ denotes ×, - denotes =, × denotes > and = denotes <, choose the correct statement in each of the following questions.

- 10. 1) $6 + 3 > 8 = 4 + 2 < 1$
- 2) $4 > 6 + 2 \times 3 2 + 4 < 1$
- 3) $8 < 4 + 2 = 6 > 3$
- 4) $14 + 7 > 3 = 6 + 3 > 2$

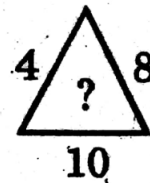
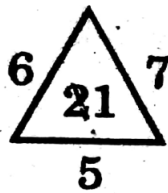
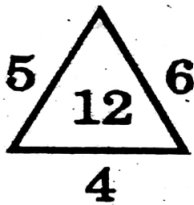
- 1) 1 2) 2 3) 3 4) 4

11. 1) $14 > 18 + 9 = 16 + 4 < 1$ 2) $4 > 3 \wedge 8 < 1 - 6 + 2 > 24$
 3) $3 < 6 \wedge 4 < 25 = 8 + 4 > 1$ 4) $12 > 9 + 3 < 6 \times 25 + 5 > 6$

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

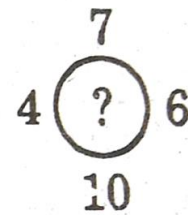
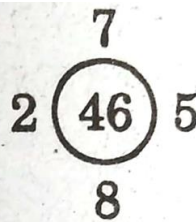
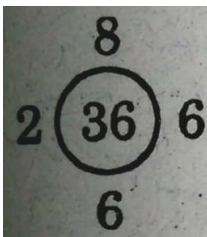
Directions (Q. No-12 to 15): Find the missing character from among the given alternatives.

12.



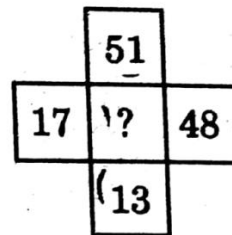
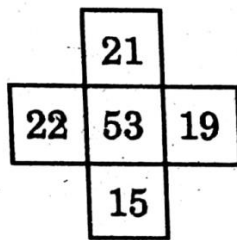
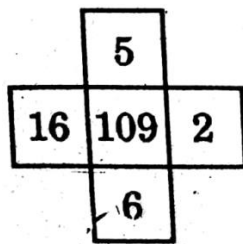
- 1) 47 2) 29 3) 32 4) None of these

13.



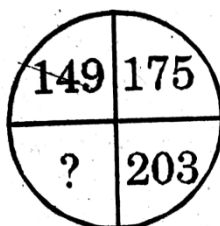
- 1) 42 2) 46 3) 48 4) 50

14.



- 1) 7 2) 25 3) 49 4) 129

15.



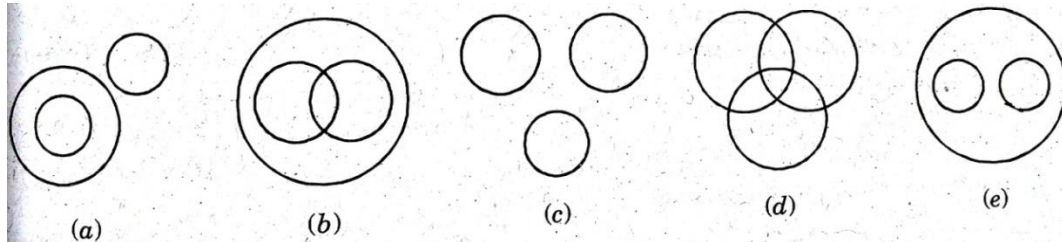
1) 148

2) 208

3) 213

4) 233

Directions (Q.No-16 to 17) : 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.



16. Diseases, Leprosy, Scurvy

1) a

2) b

3) c

4) e

17. Doctors, Lawyers, Professionals

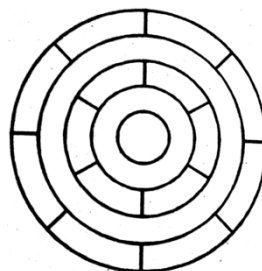
1) a

2) e

3) c

4) d

18. Consider the adjoining diagram:



What is the minimum number of different colours required to paint the figure given above such that no two adjacent regions have the same colour ?

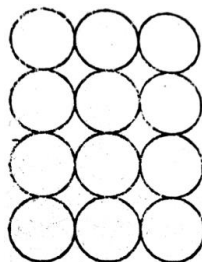
1) 3

2) 4

3) 5

4) 6

19. In the adjoining figure, if the centers of all the circles are joined by horizontal and vertical lines, then find the number of squares that can be formed.



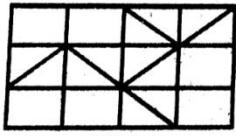
1) 6

2) 7

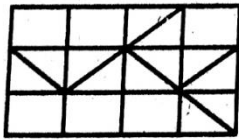
3) 8

4) 1

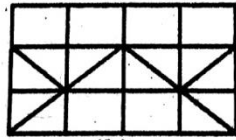
20. Find out the water images



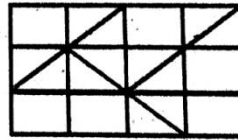
(X)



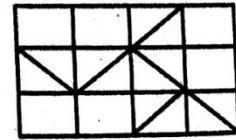
(a)



(b)



(c)



(d)

1) a

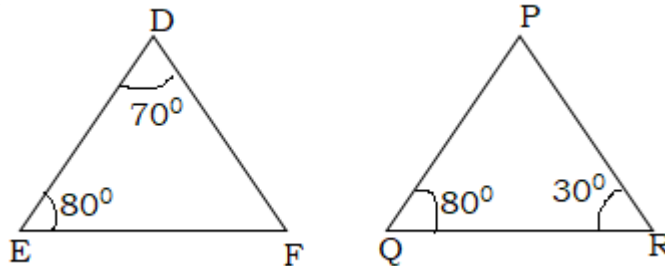
2) b

3) c

4) d

MATHEMATICS (Q.NO.21 TO 35)

21. In the below figure, if $EF = QR$ then the congruence rule used for the congruency of the given triangles is



1) SAS

2) ASA

3) SSS

4) RHS

22. $\sqrt[3]{4 \frac{508}{1331}} =$

1) $2\frac{7}{11}$

2) $3\frac{7}{11}$

3) $4\frac{7}{11}$

4) $1\frac{7}{11}$

23. Which of the following is an example of distributive property of multiplication over addition for rational numbers.

1) $-\frac{1}{4} \times \left\{ \frac{2}{3} + \left(-\frac{4}{7} \right) \right\} = \left[-\frac{1}{4} \times \frac{2}{3} \right] + \left[-\frac{1}{4} \times \left(-\frac{4}{7} \right) \right]$

2) $-\frac{1}{4} \times \left\{ \frac{2}{3} + \left(-\frac{4}{7} \right) \right\} = \left[\frac{1}{4} \times \frac{2}{3} \right] - \left(-\frac{4}{7} \right)$

3) $-\frac{1}{4} \times \left\{ \frac{2}{3} + \left(-\frac{4}{7} \right) \right\} = \frac{2}{3} + \left(-\frac{1}{4} \right) \times \frac{-4}{7}$

4) $-\frac{1}{4} \times \left\{ \frac{2}{3} + \left(-\frac{4}{7} \right) \right\} = \left\{ \frac{2}{3} + \left(-\frac{4}{7} \right) \right\} - \frac{1}{4}$

24. $\frac{1}{2}(x+1) + \frac{1}{3}(x-1) = \frac{5}{12}(x-2)$, the value of x is

1) $-\frac{12}{5}$

2) $\frac{12}{5}$

3) $-\frac{5}{12}$

4) $\frac{5}{12}$

25. In a quiz, 40 prizes consisting of 1st and 2nd prizes only are to be given. 1st and 2nd prizes are worth Rs.2500 and Rs.1500, respectively. If the total prize money is Rs. 85,000, then

- i) The equation formed is
- ii) The number of 1st prizes are
- iii) The number of 2nd prizes are

(i)	(ii)	(iii)
1) $2500x + 1500(40 - x) = 85000$	25	15
2) $2500x - 1500(40 - x) = 85000$	36	4
3) $2500x \times 1500(x - 40) = 85000$	20	20
4) $2500x - 1500(x - 40) = 85000$	15	25

26. The value of $(9) \times (4) \times (6) \times (2) \times 0 + 0 \times (-8) \times (-2) \times (-3) \times (-4)$ is

- 1) 144
- 2) -144
- 3) 240
- 4) 0

27. In reference to a circle the value of π is equal to

- 1) $\frac{\text{area}}{\text{circumference}}$
- 2) $\frac{\text{area}}{\text{diameter}}$
- 3) $\frac{\text{circumference}}{\text{diameter}}$
- 4) $\frac{\text{circumference}}{\text{radius}}$

28. A solid that has two opposite identical faces and other faces as parallelograms is a

- 1) prism
- 2) pyramid
- 3) cone
- 4) sphere

29. What is the minimum interior angle possible for a regular polygon

- 1) 60°
- 2) 80°
- 3) 120°
- 4) 160°

30. How many non perfect squares are between 100 & 121?

- 1) 10
- 2) 15
- 3) 20
- 4) 25

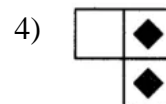
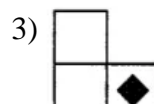
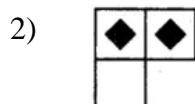
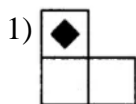
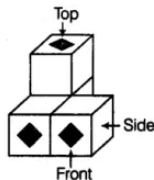
31. The value of $\left\{ \left(\frac{1}{4} \right)^{-3} - \left(\frac{1}{3} \right)^{-3} \right\} \div \left(\frac{1}{4} \right)^{-2}$ is

- 1) $\frac{37}{16}$
- 2) $\frac{16}{37}$
- 3) 1
- 4) 0

32. Which of the following has the smallest value?

- 1) 0.0002
- 2) $\frac{2}{1000}$
- 3) $\frac{(0.2)^2}{2}$
- 4) $\frac{2}{100} \div 0.01$

33. Which of the following is the top view of the given shape?



34. The area of a square field is $101\frac{1}{400}$ square meters. Find the length of one side of the field
- 1) $\frac{201}{20}$ 2) $\frac{20}{201}$ 3) 5 4) 6
35. The value of $(7^{-1} - 8^{-1})^{-1} - (3^{-1} - 4^{-1})^{-1}$ is
- 1) 44 2) 56 3) 68 4) 12

PHYSICS (Q.NO.36 TO 50)

36. A beaker contains 200g of water. The heat capacity of the beaker is equal to that of 20g water. The initial temperature of water in the beaker is 20°C . If 440g of hot water at 92°C is poured in, the final temperature (neglecting radiation loss) will be nearly
- 1) 58°C 2) 68°C 3) 73°C 4) 78°C
37. Ebonite rod is rubbed with cat's skin, then the charge acquired by the cat's skin is
- 1) Positively 2) Negatively
3) Uncharged 4) Partly positive and partly negative
38. A body is said to have 1 coulomb charge, if it has excess or deficit of :
- 1) 6.25×10^6 electrons 2) 6.25×10^{16} electrons
3) 6.25×10^{18} electrons 4) 6.25×10^9 electrons
39. Two pistons of a hydraulic press have diameters of 30cm and 2.5cm. What is the force exerted by a large piston, when 50kg weight is placed on the smaller piston?
- 1) 7200kg wt 2) 7800kg wt 3) 7000kg wt 4) 8000kg wt
40. The distance between a compression and the next rarefaction in a longitudinal wave is
- 1) $\lambda/2$ 2) λ 3) $\lambda/4$ 4) 2λ
41. If distance travelled by the wave is x m and time taken is y s, then the wave velocity is
- 1) $\frac{x}{y}$ m/s 2) $\frac{y}{x}$ m/s 3) xy m/s 4) $\frac{x^2}{y^2}$ m/s
42. The temperature of equal masses of three different liquids A, B and C are 12°C , 19°C and 28°C respectively. When A and B are mixed the temperature is 16°C and when B and C are mixed it is 23°C . The temperature when A and C are mixed is
- 1) 10.1°C 2) 20.2°C 3) 30.3°C 4) 40.4°C
43. The position of image when a point object is placed 60 cm from the pole of a concave mirror of focal length 10 cm is
- 1) 12 cm 2) 25 cm 3) 48 cm 4) 18 cm

44. Two vertical plane mirrors are inclined at an angle of 60° with each other. A ray of light travelling horizontally is reflected first from one mirror and then from the other mirror. then the resultant deviation is
- 1) 60° 2) 120° 3) 180° 4) 240°
45. Heat is the ability to do
- 1) work 2) force 3) time 4) mass
46. Ice of density 350 g/cm^3 is floating in water of density 700 g/cm^3 Find the fraction of volume of the piece of ice inside the water
- 1) 0.1 2) 0.2 3) 0.5 4) 0.6
47. Increase in surface area of a sheet on heating is called
- 1) Linear expansion 2) Superficial expansion
3) Cubical expansion 4) None of these
48. The force exerted by air on a unit surface area is called
- 1) Pressure 2) Thrust 3) Force 4) mass
49. The _____ exerted at any point in an enclosed and incompressible liquid is transmitted equally in all directions.
- 1) Pressure 2) Temperature 3) area 4) force
50. Force of buoyancy (or) buoyant force =
1. Volume of solid \times density of solid \times g
 2. Volume of liquid \times density of solid \times g
 3. Volume of liquid displaced \times density of liquid \times g
 4. Volume of liquid displaced \times density of solid \times g

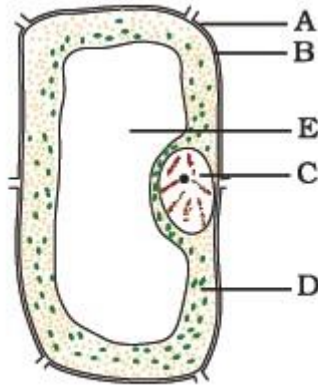
CHEMISTRY (Q.NO.51 TO 65)

51. The acids present in Curd and Milk is :
- 1) Maleic acid 2) Tartaric acid 3) Lactic acid 4) Palmitic acid
52. Growing of plants is an example of
- 1) Fast change 2) Slow change 3) Periodic change 4) Reversible change
53. Seas and Oceans contain presents of water available on the earth
- 1) 50% 2) 97.4% 3) 95% 4) 85%
54. Which among the following statements is false?
- 1) Natural fibres are made by cotton, Wool and silk.
 - 2) Artificial fibres are made by Nylon, Terylene and Rayon.
 - 3) Woollen threads are non-elastic.
 - 4) The process of drawing and winding silk fibres is called "reeling".
55. How many non- metals present in Periodic table
- 1) 22 2) 20 3) 18 4) 16
56. The ore having two metal atoms is
- 1) Haematite 2) Galena 3) Magnetite 4) Copper pyrites
57. Candle Wax, common Salt, Zinc oxides are the example for _____change
- 1) Periodic change 2) Non-Periodic change
3) Physical change 4) Chemical change

69. The most important function of cell membrane is that it:

- 1) controls the entry and exit of materials from cells.
- 2) controls only the entry of materials into cells.
- 3) controls only the exit of materials from cells.
- 4) allows entry and exit of materials without any control.

70. Label the parts A C and E in the given diagram



- | | |
|-------------------------------------|---------------------------------|
| 1)Cell wall, Cell membrane, Nucleus | 2) Cell wall, vacuole, Nucleus |
| 3)Cell wall, Nucleus, Vacuole | 4)Cell membrane,vacuole,Nucleus |

71. I control the functions of a cell. Who am I?

- | | | | |
|-----------|----------------|---------|-------------|
| 1)Nucleus | 2)Mitochondria | 3)Genes | 4)Cytoplasm |
|-----------|----------------|---------|-------------|

72. Identify the diagram and what process takes place in the structures seen



- 1)Insectivorous plants, respiration
- 2)Leguminous plants, nitrogen fixation
- 3)Insectivorous plants, Photosynthesis
- 4) Leguminous plants, carbon fixation

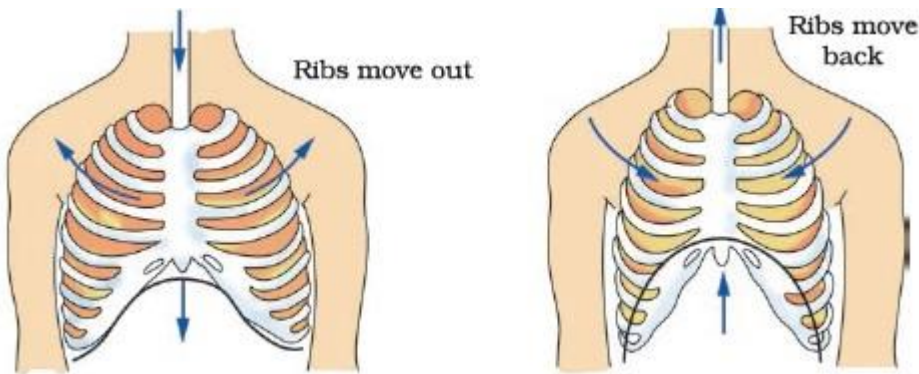
73. Pasteurisation is a milk purification process where

- 1)The milk is heated to above 70 degrees C for 30 to 40 seconds
- 2)The milk is heated to above 90 degrees C for 20 to 30 seconds
- 3)The milk is heated to above 70 degrees C for 15 to 30 seconds
- 4)The milk is heated to above 100 degrees C for 15 to 30 seconds

74. Raising of fish in inland waters and coastal waters are called

- | | | | |
|-----------------|------------|-----------------|---------------|
| 1) Pisciculture | 2) Fishery | 3) fish culture | 4) harvesting |
|-----------------|------------|-----------------|---------------|

75. In the figure Which is not indicated?



- | | |
|----------------------|--------------------------|
| 1) movement of air | 2) movement of diaphragm |
| 3) Movement of lungs | 4) movement of ribs |

76. Which of the following is generally used for making compost?

- | | |
|-------------|---------------------------|
| 1) Microbes | 2) Earthworm |
| 3) Soil | 4) Animal and plant waste |

77. Leeches and frogs breathe through their skin because of which the skin of both the organisms is

- | | |
|---------------------|---------------------|
| 1) moist and rough. | 2) dry and rough. |
| 3) dry and slimy. | 4) moist and slimy. |

78. Which of the following serve as green lungs?

- | | |
|--------------------------------|----------------------|
| 1) Green pigment of the plants | 2) Forests |
| 3) Kitchen gardens | 4) Green house gases |

79. Pick the odd-one-out from each of the groups given below on the basis of respiratory organs.

- | | | | |
|----------|------------|---------|---------|
| 1) Snake | 2) Tadpole | 3) Crow | 4) Goat |
|----------|------------|---------|---------|

80. Yeast is used in wine and beer industries because it respire

- 1) aerobically producing oxygen.
- 2) aerobically producing alcohol.
- 3) anaerobically producing alcohol.
- 4) anaerobically producing CO₂.