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**SONI COLLEGE**  
**SOLAPUR**



### Question Paper-Batch-I

Date: 07.12.2025

Maximum Marks: 300

Std. VIII

#### SYLLABUS

**MATHS** : Rational & Irrational numbers, Indices & Cube root, Equations in one variable, Quadrilateral: types, Factorization of Algebraic Expression

**SCIENCE** : Living World & Classification of Microbes, Cell & Cell Organelles, Metal & Non Metals, Force & pressure, Pollution

**LOGIC & REASONING**

#### INSTRUCTIONS TO CANDIDATE

##### GENERAL:

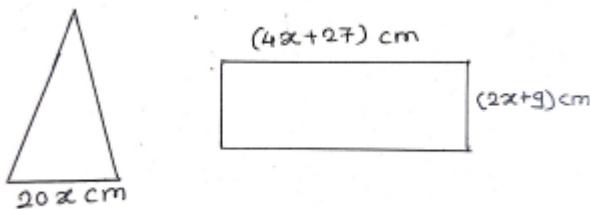
1. This Question paper consists of 3 - sections. Containing 75 Questions.
2. Section-I = Mathematics (Q.1 - Q.30)
3. Section-II = Science. This session consists of 30 questions from Chemistry, Physics and Biology (Q. 31 - Q. 60)
4. Section - III = Logic and Reasoning (Q. 61 - Q. 75)
5. There is Negative Marking.

##### MARKING SCHEME:

1. Each Question has four options, from which only one option is correct.
2. For each correct option '4' marks will be given.
3. There is (-1) for every wrong answer



12. Rita distributed her counters amongst Myra , Jack and Tim and was left with 30 counters. If Myra gets  $\frac{1}{6}$ th of the counters, Jack gets  $\frac{1}{4}$ th and Tim gets  $\frac{1}{3}$ rd of the counters. Find the number of counters Rita originally had.
- a) 110                                      b) 120                                      c) 130                                      d) 140
13. A cuboid dimensions 126m, 140m, 525 m has been melted to form a cube. Find the side of the cube
- a) 220 m                                      b) 210 m                                      c) 230 m                                      d) 240 m
14. What is the smallest number that should be multiplied by 5488 to make it a perfect cube ---.
- a) 3    b) 4    c) 5    d) 6
15. Which of the following is the linear equation in one variable  $x$  ?
- a)  $\frac{4}{x} = \frac{x}{4}$                                       b)  $\frac{1}{x} + \frac{1}{x-1} = 1$                                       c)  $\frac{x}{2} + \frac{x}{3} + \frac{1}{4} = 0$                                       d)  $x^2 + 2x + 3 = 0$
16. Solve  $\frac{x+2}{3} - \frac{x+1}{5} = \frac{x-3}{4} - 1$  find  $x$
- a) 20    b) 16    c) 19    d) 18
17. Apurva has a maths period tomorrow. Her teacher asked her to make two polygons from a cardboard only condition is that both the shapes should have same perimeter. She made one equilateral triangle and a rectangle as shown below.



- Which of the following equation can be written to represent the mention condition of perimeter ?
- a)  $20x=2[(x+7) +(x+10)]$                                       b)  $20x=(x+7) +(x+10)$   
c)  $60x=2[(4x+27) +(2x+9)]$                                       d)  $60x=[(x+7) +(x+17)]$
18. What is the area of given rectangular shape in Q.17 ?
- a)  $400\text{cm}^2$    b)  $396\text{cm}^2$    c)  $100\text{cm}^2$    d)  $50\text{cm}^2$
19. What is the value of  $x$  in equation given in Q17?
- a)  $X=4$    b)  $x=1\frac{1}{2}$    c)  $x=2$    d)  $x=1$
20. What is the perimeter of given equilateral triangle in above diagram of Q.17 ?
- a) 45 cm   b) 60cm   c) 75cm   d) 90cm

21.  $\left(\frac{4}{3}m - \frac{3}{4}n\right)^2 + 2mn = ?$

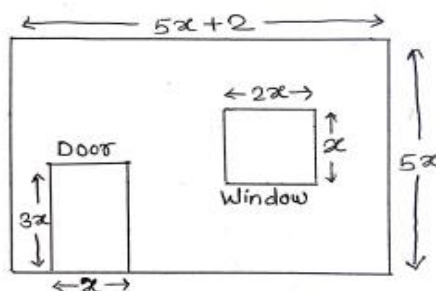
a)  $\frac{16}{9}m^2 - \frac{9}{16}n^2$

b)  $\frac{16}{9}m^2 + \frac{9}{16}n^2 - 4mn$

c)  $\frac{16}{9}m^2 + \frac{9}{16}n^2 + 4mn$

d)  $\frac{16}{9}m^2 + \frac{9}{16}n^2$

22. The figure shows the dimensions of a wall having a window and a door of a room. Write an algebraic expression for the area of the wall to be painted.



- a)  $10x^2 + 20x$     b)  $20x^2 + 10x$     c)  $10x(2x + 1)$     d) Both b and c

23. If  $P = a^2 + b^2$ ,  $Q = b^2 + c^2$  and  $R = a^2 + c^2$  then find  $3p - 2q - R$ .

a)  $2a^2 - b^2 + 3c^2$

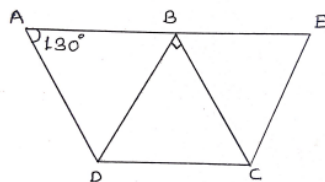
b)  $-2a^2 - b^2 + 3c^2$

c)  $2a^2 - b^2 - c^2$

d)  $2a^2 + b^2 - 3c^2$

24. In the given figure, ABCD & BDCE are parallelograms with common base DC.

If  $BC \perp BD$ , then  $\angle BEC =$



a)  $60^\circ$

b)  $30^\circ$

c)  $150^\circ$

d)  $120^\circ$

25. A playground in the town is in the form of a Kite. The perimeter is 106 meters. If one of its sides is 23 meters, What are the lengths of other three sides?

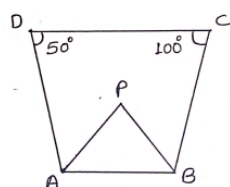
a) 23, 30, 40

b) 23, 30, 30

c) 23, 50, 50

d) 23, 40, 60

26. In the figure the bisectors of  $\angle A$  &  $\angle B$  meet at a point p. If  $\angle C = 100^\circ$  and  $\angle D = 50^\circ$ , find the measure of  $\angle APB$



a)  $80^\circ$

b)  $65^\circ$

c)  $75^\circ$

d)  $95^\circ$

27. A quadrilateral whose all sides, diagonals and angles are equal is a

a) Square

b) Trapezium

c) Rectangle

d) Rhombus

28. If  $\left(x - \frac{1}{x}\right) = 5$ , find  $x^2 + \frac{1}{x^2}$

a) 21

b) 23

c) 27

d) 29

29. Rahi has the following binomial  $x^2 - 5x$ ,  $x - 4$ ,  $x + 9$  she wants to find the product of these binomials. Which of the following will be the coefficient of  $x^2$  in her product
- a) 61                                      b) 19                                      c) - 35                                      d) - 9
30. Anila has to find an expression which is not equivalent to  $16x + 24$ . Which of the following could be the required expression
- a)  $2(8x + 12)$                                       b)  $4(4x + 6)$                                       c)  $6(3x + 4)$                                       d)  $8(2x + 3)$

**SECTION - 2- SCIENCE**

31. Which of the following is not a part of chloroplast?
- a) Cisternae                                      b) Granum                                      c) Stroma                                      d) Thylakoid
32. A semiautonomous organelle is -----.
- a) Lysosome                                      b) Chloroplast  
c) Peroxisome                                      d) Endoplasmic reticulum
33. Which of the following is multicellular filamentous alga?
- a) Chlorella                                      b) Chlamydomonas  
c) Volvox                                      d) Spirogyra

34. Find the odd man out
- a) Chloromycetin                                      b) Streptomycin                                      c) Penicillin                                      d) Gentamicin

35. Statement 1 : They have pseudopodia or hair like cilia or whip like flagella for locomotion.

Statement 2 : They are single celled organisms with well defined nucleus.

Identify the kingdom to which they belong from the given two statements.

- a) Monera                                      b) Protista                                      c) Fungi                                      d) Plantae
36. Four strips are cut from a fresh potato. The length of each strip is measured. One strip is place in water and others in different concentrations of sugar solution. After an hour, the strips were measured again. The results are shown in the table. Which of the liquids is water?

Liquid	Original length of strip (mm)	Final length of strip (mm)
P	75	75
Q	78	80
R	82	80
S	86	85

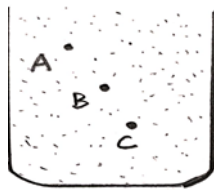
- a) P                                      b) R                                      c) S                                      d) Q

37. Read the different combinations of terms given below:

The correct combination of terms with reference to an animal cell is

- a) Cell wall, Cell membrane, nucleus, plastid  
b) cell wall, nucleus, ribosome, chromosome  
c) Cell membrane, mitochondria, ribosome, chromosome  
d) Cell membrane, ribosome, mitochondria, chloroplast
38. Euglena is an example of -----.
- a) bacteria                              b) virus                              c) Protozoa                              d) algae
39. Dengue is caused by -----.
- a) Virus                              b) bacteria                              c) protozoa                              d) fungi
40. Rod - like microbes belong to which of the following groups.
- a) Coccus                              b) Spirillum                              c) bacillus                              d) vibrio
41. Metals generally react with dilute acids to produce hydrogen gas. Which one of the following metals does not react with dilute hydrochloric acid?
- a) Magnesium                              b) Iron                              c) Copper                              d) Aluminium
42. Statement 1 : Foundations of buildings are made broader to increase the pressure on the ground.  
Statement 2 : A porter puts a piece of cloth on his head to carry heavy loads to decrease the area of
- a) Statement 1 is True but Statement 2 is false  
b) Both the statement are True  
c) Statement 1 is False but statement 2 is True  
d) Both the statements are False
43. Which of the following statements correct?
- i) Liquids exert pressure on the walls of container  
ii) Solids can exert pressure on a surface only  
iii) Liquids do not exert pressure on the base of the container.
- a) i & ii                              b) ii & iii                              c) i, ii & iii                              d) i & iii
44. Plasma membrane is made of -----.
- a) Proteins, lipids & carbohydrates      b) Proteins and lipids  
c) Proteins and Carbohydrates      d) Proteins, some nucleic acid and lipids

45. The given figure shows a container filled, with water. Which of the following statements is correct about pressure of water.



- a) Pressure at A > Pressure at B > Pressure at C
- b) Pressure at A = Pressure at B = Pressure at C
- c) Pressure A < Pressure at B
- d) Pressure at A = Pressure at C

46. Assertion (A) : Leucoplasts are colourless plastids as they have no pigments.

Reason (R) : Leucoplasts are normally found in the non – photo synthetic parts of a plant.

- a) A is True and R is False
- b) A is False and R is True
- c) Both A & R are True
- d) Both A & R are False

47. A wooden block exerts a force of 300 N on the ground. If the pressure exerted by the block is 960 Pa. What is the area of contact between the block and the ground?

- a) 3.20m<sup>2</sup>
- b) 0.29 m<sup>2</sup>
- c) 2.50m<sup>2</sup>
- d) 0.31m<sup>2</sup>

48. If two equal forces action in opposite direction on an object along the same line, then the net force action on the object will be

- a) Less than zero
- b) Greater than zero
- c) Equal to zero
- d) Greater than or equal to zero

49. Which of the following is the device used to measure atmospheric pressure?

- a) Sphygmomanometer
- b) Barometer
- c) Seisometer
- d) Calorimeter

50. The substance that will be flattened on beating with a hammer is -----.

- a) lump of sulphur
- b) Piece of Coal
- c) Crystal of iodine
- d) Zinc granule

51. Potable water is the water which is

- a) Obtained from a river
- b) Obtained from a lake
- c) Pure and fit for drinking
- d) Used only for washing cloths

52. Which of the following concept is used as a index for capturing various dimensions of environment, including air, water & land?

- a) NWAP
- b) NPCA
- c) USERS
- d) CEPI

53. Which of the following is observed as National Pollution Prevention Day.

- a) 2<sup>nd</sup> December
- b) 22<sup>nd</sup> April
- c) 8<sup>th</sup> June
- d) 26<sup>th</sup> July

54. Which of the following is a non – metal that can be stored in the water?  
a) potassium                      b) sodium                      c) phosphorus                      d) calcium
55. Generally metallic oxides are basic and non-metallic oxides are acidic in nature. Solution of which of the following oxides for will change the colour of blue litmus to red?  
a) Sulphur dioxide                      b) Iron oxide  
c) Magnesium oxide                      d) Copper oxide
56. Non Metals which is used in making Micro chips  
a) Iron    b) Calcium  
c) Sodium    d) Sulphur
57. Incomplete combustion of fuels releases which gas?  
a) NO<sub>2</sub>                                      b) SO<sub>2</sub>                                      c) CO                                      d) NO
58. NMCG is a project approved as flagship programme by the union government in June 2014 to mainly accomplish which of the following?  
a) Conservation of animals                      b) Conservation of river  
c) Conservation of energy                      d) Conservation of biodiversity
59. By adding chromium to steel which of the following property is enhanced?  
a) Electrical characteristics                      b) Resistance to corrosion  
c) Ductility    d) Magnetic property
60. A blackish coloured deposit is formed on silver by reaction with which gas?  
a) Carbon dioxide                                      b) Hydrogen sulphide  
c) Nitrogen oxide                                      d) Silver Sulphide

### **SECTION – 3 – LOGIC & REASONING**

61. A, P, R, X, S and Z are sitting in a row. S and Z are in the centre. A and P are at the ends. R is sitting to the left of A. Who is to the right of P ?  
a) A                                      b) X                                      c) S                                      d) Z
62. If South-East becomes North, North-East becomes West and so on. What will West become?  
a) North-East   b) North-West   c) South-East   d) South-West

63. Find the correct alternative which will replace the question mark?

8	4	48
12	6	72
10	5	?

- a) 48    b) 52    c) 60    d) 36

64. Hardworking : Determined :: Happy : ?

- a) Sad    b) Upbeat    c) Lovely    d) Hilarious

65. Which of the region in the following figure represents students who play Volleyball or Football or both but not Basketball?

- a)  $A + D + G$     b)  $A + G - D$     c)  $C + D$     d)  $D$

66. Milly introduced a boy as the son of the only daughter of the mother of her maternal uncle. How is Milly related to that boy?

- a) Nephew    b) Son    c) Brother    d) Sister

67. In a certain code "CODE" is written as "DPEF". How is "DEFENCE" is written in that code?

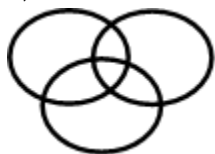
- a) KWMCJFL    b) ELDFSAP    c) EFGFODF    d) HRAOSCV

68. Find odd one out from the given jumbled words.

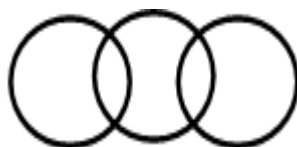
- a) LNUAIMMIU    b) ELEST    c) OPERPC    d) NMKOYE

69. Which of the following diagram depicts the relation among Metal, Copper and Silver?

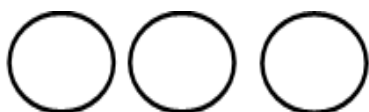
a)



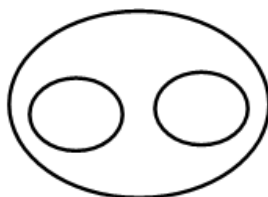
b)



c)



d)



70. Choose the figure which is different from the rest?



Figure A



Figure B



Figure C



Figure D

- a) Figure A   b) Figure B   c) Figure C   d) Figure D

71. S and K are brothers. W is mother of S. M is mother of T. If T is son of K, then how is W related to M?

- a) Mother-in-law   b) Sister   c) Father-in-law   d) Mother

72. In a row of 26 girls, when Sakshi shifted four places towards the left, she become 10th from the left end. What was her earlier position from the right end of the row?

- a) 10<sup>th</sup>   b) 11<sup>th</sup>   c) 13<sup>th</sup>   d) 12<sup>th</sup>

73. If 'A&B' means A is father of B, 'A\*B' means A is brother of B, 'A\$B' means A is mother of B then which of the following is correct about K\$T&M?

- a) M is brother of T   b) T is son of K   c) M is father of T   d) K is mother of M

74. If 'white' is called 'yellow', 'yellow' is called 'blue', 'blue' is called 'red', 'red' is called 'black', 'black' is called 'violet' and 'violet' is called 'green', then what would be the colour of light emitting from bulb?

- a) Blue   b) Red   c) Yellow   d) Black

75. Find the odd one out.

- a) BEK   b) CFL   c) MPS   d) GJP

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