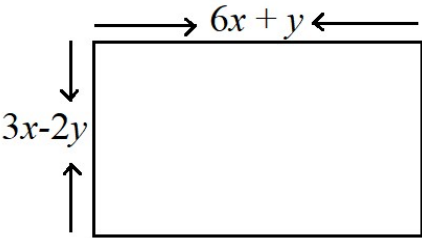# INTO 8ᵀᴴ CLASS ICSE

MATHEMATICS

1. Which of the following is a linear equation?

   1) $x^2 + 2x + 2 = 0$ 2) $2x + 4 = 8$ 3) $x^3 - 8 = 0$ 4) Both 1 & 3

2. The product of two numbers is 14. If one of the number is $-\dfrac{8}{7}$. Then the other number is

   1) $-\dfrac{49}{4}$ 2) $\dfrac{49}{4}$ 3) $-\dfrac{49}{7}$ 4) $-\dfrac{49}{8}$

3. If $(a - 2b + 3c) + (b + 2c - 3a) + (5c - 4b + 6a)$

   1) $4a + 5b - 10c$ 2) $4a - 5b + 10c$ 3) $4a - 5b - 10c$ 4) $4a + 5b + 10c$

4. If $5^{2P+1} \div 5^2 = 125$ then the value of 'P'

   1) 0   2) 1   3) 2   4) 3

5. What should be added to $1 + 2p - 3p^2$ to get $p^2 - p - 1$?

   1) $4p^2 + 3p - 2$ 2) $4p^2 - 3p + 2$ 3) $4p^2 - 3p - 2$ 4) $-4p^2 - 3p + 2$

6. $A = 235 + \dfrac{7}{10} + \dfrac{9}{100}$, $B = 235 + \dfrac{7}{10} + \dfrac{6}{1000}$, $C = 235 + \dfrac{8}{100} + \dfrac{6}{1000}$ then the smaller one is

   1) A   2) B   3) C   4) All of these

7. Value of : $18 + 64 \div 4\left\{26 - \left(14 - \overline{7 - 3}\right)\right\}$

   1) 18   2) 19   3) 17   4) 13

8. If $3x + 5 = 5x - 11$ then $x = ?$

   1) 7   2) 0   3) 16   4) 8

9. If $a - b = 4$ and $ab = 21$ then the value of $a^3 - b^3 =$

   1) 300   2) 316   3) 315   4) 314

10. Standard form of 0.00001275

    1) 1.275×10^{-5} 2) 1.275×10^{-4} 3) 1.275×10^{-3} 4) 1.275×10^{-2}

11. How many rational numbers between two consecutive rational numbers is

    1) 0   2) 1   3) Finite   4) Infinite

12. If $\dfrac{a}{5} = \dfrac{b}{7} = \dfrac{c}{2}$ then $\dfrac{a+b+c}{b} = ?$

    1) 7   2) 2   3) $\dfrac{1}{2}$ 4) $\dfrac{1}{7}$

13. If the sum of two numbers is 36 and their HCF and LCM are 3 and 105 respectively, the sum of the reciprocals of the two numbers

    1) $\dfrac{2}{35}$ 2) $\dfrac{3}{35}$ 3) $\dfrac{4}{35}$ 4) $\dfrac{6}{35}$

14. Find the perimeter of the below rectangle whose length is $6x + y$ and breadth is $3x - 2y$

    1) $2(9x - y)$ 2) $18x - 2y$ 3) Both 1 and 2   4) $9x - y$

15. If $3^{2x-y} = 3^{x+y} = \sqrt{27}$ then the value of y is

    1) $\dfrac{1}{2}$ 2) $\dfrac{1}{4}$ 3) $\dfrac{3}{2}$ 4) $\dfrac{3}{4}$

16. Find the value of $4 - \dfrac{5}{1 + \dfrac{1}{3 + \dfrac{1}{2 + \dfrac{1}{4}}}}$

    1) 4   2) 3   3) $\dfrac{31}{8}$ 4) $\dfrac{1}{8}$

17. If $1^3 + 2^3 + \ldots\ldots + 9^3 = 2025$, then the value of $(0.11)^3 + (0.22)^3 + \ldots\ldots + (0.99)^3 =$

    1) 0.2695   2) 0.3695   3) 2.695   4) 3.695

18. By what number should 3^{-4} be multiplied so that the product is 729?

    1) 3^6 2) 3^{-10} 3) 3^{10} 4) 3^4

19. Find the value of $x^2 - y + 2$ if $x = 0$ and $y = -1$
    1) 1   2) 2   3) 3   4) 0

20. How many natural numbers between a and b (where $a < b$)
    1) $b - a + 1$ 2) $b - a - 1$ 3) $a - b - 1$ 4) $a - b + 1$

21. If $a^x = b$, $b^y = c$ and $c^z = a$, then the value of xyz is
    1) 0   2) 1   3) $\dfrac{1}{abc}$ 4) abc

22. The additive inverse of $-(-7)$
    1) -7 2) $-\dfrac{1}{7}$ 3) 7   4) $\dfrac{1}{7}$

23. What should be subtracted from 100 to give 19.29?
    1) 81.79   2) 80.71   3) 81.71   4) 82.71

24. If $a = 2$ and $b = 3$ then $a^b + b^a =$
    1) 31   2) 125   3) 17   4) 5

25. Hema is 24 years older than her daughter Dhamini 6 years ago, Hema was thrice as old as Dhamini then the present age of Hema is
    1) 18   2) 42   3) 24   4) 30

26. The reciprocal of fraction $4\dfrac{2}{5}$
    1) $4\dfrac{5}{2}$ 2) $\dfrac{22}{5}$ 3) $\dfrac{5}{22}$ 4) $4\dfrac{3}{5}$

27. How many prime numbers from 1 to 100 is
    1) 21   2) 24   3) 25   4) 21

28. If $a + 2b + 3c = 0$ then the value of $a^3 + 8b^3 + 27c^3 =$
    1) $18abc$ 2) abc 3) 18   4) 0

29. Length of a rectangle is 4m less than 3 times its breadth. If the perimeter of rectangle is 32m. Then its length is
    1) 5m   2) 11m   3) 16m   4) Both 1 and 2

30. The value of $(-1)^{301} + (-1)^{302} + (-1)^{303} + \ldots\ldots + (-1)^{400}$
    1) 1   2) 101   3) 100   4) 0

31. The degree of $1 + 2x + 3x^2 + 4x^3 + \ldots$ (999 terms)
    1) 1   2) 998   3) 999   4) 1000

32. The sum of additive identity and multiplicative identity of rational numbers is
    1) 0   2) 1   3) 2   4) Not defined

33. Subtract $4m^2 - 7n^2 + 5mn$ from $3n^2 + 5m^2 - 2mn$
    1) $10m^2 + n^2 - 7mn$ 2) $m^2 + 10n^2 - 7mn$ 3) $m^2 - 7n^2 + 5mn$ 4) $5m^2 + 3n^2 - 4mn$

34. Which of the following is not a rational number?

1) -3 2) 0 3) $\dfrac{0}{4}$ 4) $\dfrac{8}{0}$

35. If $\dfrac{1}{a}+\dfrac{1}{b}+\dfrac{1}{c}=\dfrac{1}{a+b+c}$ then $\dfrac{a+b+c}{a}+\dfrac{a+b+c}{b}+\dfrac{a+b+c}{c}=?$

1) 1 2) 0 3) -1 4) -2

36. If $a+b+c=0$ then the value of $\left(x^a\right)^{a^2-bc}.\left(x^b\right)^{b^2-ca}.\left(x^c\right)^{c^2-ab}=$

1) -2 2) -1 3) 0 4) 1

37. What is the numerical coefficient of $'-y'$?

1) 1 2) -1 3) y 4) 0

38. Subtract the sum of $\dfrac{1}{4}$ and $\dfrac{3}{8}$ from the sum of $\dfrac{2}{3}, \dfrac{3}{4}$ and $\dfrac{7}{12}$

1) $\dfrac{24}{12}$ 2) $\dfrac{5}{8}$ 3) $\dfrac{11}{8}$ 4) $\dfrac{13}{8}$

39. Non – negative integers are denoted by

1) N   2) Z   3) Q   4) W

40. If $ab+bc+ca=0$ then $\left(\dfrac{1}{a^2-bc}+\dfrac{1}{b^2-ca}+\dfrac{1}{c^2-ab}\right)=$

1) 0 2) 1 3) 3 4) $a+b+c$

ARITHMETIC AND LOGICAL REASONING QUESTIONS:

41. Find the wrong number in the series 2, 9, 28, 65, 126, 216, 344

1) 2   2) 28   3) 65   4) 216

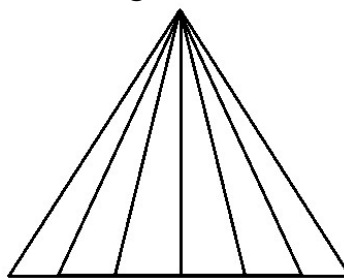42. Cost of 15 pens is Rs.360; what is the cost of 8 such pens?

1) Rs.144   2) Rs.168   3) Rs.192   4) Rs.216

43. Number of triangles are formed in the figure

1) 42   2) 20   3) 21   4) 22

44. Flow : River : : Stagnant : ?

1) Rain   2) Stream   3) Pool   4) Canal

45. The value of $\left(1-\dfrac{1}{2}\right)\left(1-\dfrac{1}{3}\right)\left(1-\dfrac{1}{4}\right)...........\left(1-\dfrac{1}{10}\right)=$ _____
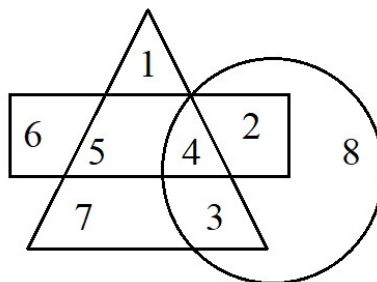
1) $\dfrac{10}{11}$ 2) $\dfrac{1}{9}$ 3) $\dfrac{1}{10}$ 4) $\dfrac{1}{2}$

46. ABCD : NPRT : : FGHI : ?
    1) KLMN   2) SUMY   3) OQRT   4) RTVW

47. Pointing towards a person, a man said to a woman, "His mother is the only daughter of your father." How is the woman related to that person?
    1) Daughter   2) Sister   3) Mother   4) Wife

48. Which number is in all the geometrical figures?

    1) 3   2) 4   3) 5   4) 8

49. Which of the following diagram represents professors, researches, scientists
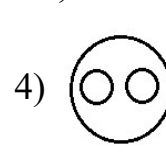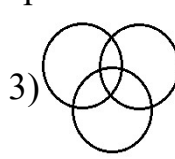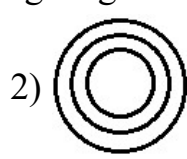
50. Find the missing number, if same rule is followed either row wise (or) column wise

18	24	32
12	14	16
3	?	4
72	112	128

    1) 2   2) 3   3) 4   4) 5

GENERAL SCIENCE

51. The density of silver is 10.3g cm^{-3}. Find the mass of a silver block of volume 200cm^3.
    1) 2.06kg   2) 1.06kg   3) 22.06kg   4) 20.06kg

52. A boy walks a distance of 30m in 1 minute and another 30m in 1.5minute. Describe the type of motion of the boy and find his average speed in ms^{-1}
    1) Uniform 0.4ms^{-1} 2) Non - Uniform 0.4ms^{-1}
    3) Uniform 4.0ms^{-1} 4) Non- Uniform 4.0ms^{-1}

53. Identify the type of motion of the wheel in given figure.
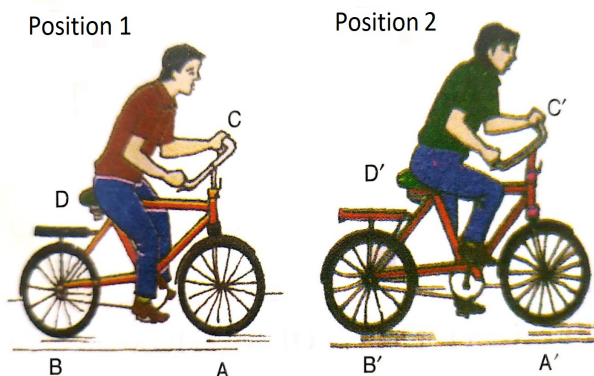
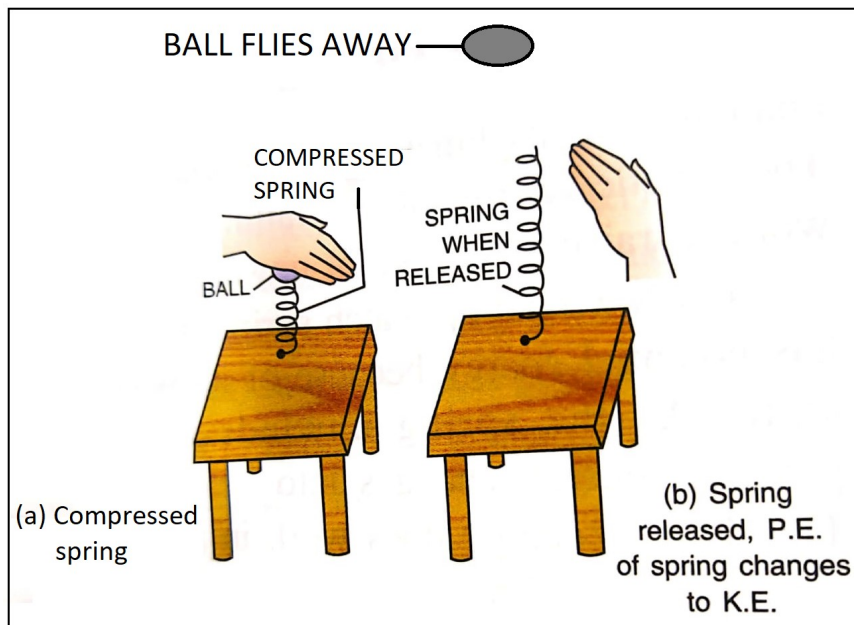
    1) Rectilinear motion   2) Circular motion
    3) oscillatory motion   4) Translatory, Rotatory motion

54. Example of transformation of energy for biogas
    1) Chemical energy to heat energy
    2) Heat energy to mechanical energy
    3) Mechanical energy to electrical energy
    4) Electrical energy to mechanical energy

55. Observe the given figure.

BALL FLIES AWAY

COMPRESSED SPRING

SPRING WHEN RELEASED

BALL

(a) Compressed spring

(b) Spring released, P.E. of spring changes to K.E.

What happens when the spring is stretched?
    1) Electric energy converts into mechanical energy
    2) Electric energy converts into heat and light energy
    3) Kinetic energy converts into potential energy
    4) Potential energy converts into kinetic energy

56. Match the following column:

Column A	Column B
(a) Running water	(i) Heat energy
(b) Burning	(ii) Vibrations
(c) Energy	(iii) Atom bomb
(d) Sound energy	(iv) Kinetic energy
(e) Nuclear energy	(v) Joule

    1) (a) – (iv), (b) – (i), (c) – (v), (d) – (ii), (e) – (iii)
    2) (a) – (iv), (b) – (i), (c) – (ii), (d) – (v), (e) – (iii)
    3) (a) – (i), (b) – (v), (c) – (ii), (d) – (iv), (e) – (iii)
    4) (a) – (i), (b) – (ii), (c) – (v), (d) – (iv), (e) – (iii)

57. The boundary line of an irregular lamina on a graph paper is shown in figure. Find the approximate area of the lamina

1 cm

1 cm
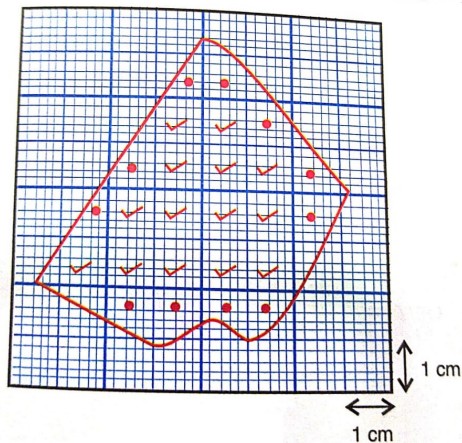
1) $15cm^2$ 2) $25cm^2$ 3) $35cm^2$ 4) $45cm^2$

58. Study the displacement –time graph of a toy car given here and select the incorrect statement
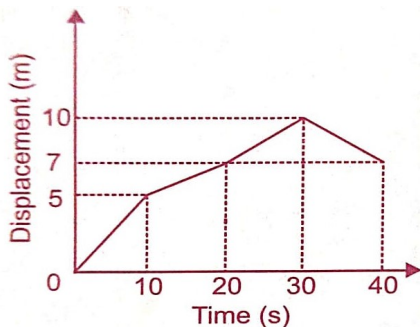
1) The toy car is fastest during first 10 seconds
2) The toy car is slowest in between 10 and 20 seconds
3) Distance travelled during last 10 seconds is 3m
4) Total distance covered by the toy car is 10m

59. One square centimeter is equal to
1) $10^{-2} m^2$ 2) $10^{-1} m^2$ 3) $10^4 m^2$ 4) $10^{-4} m^2$

60. How many bottles of 300ml capacity will be filled from a pot which contain $2.85m^3$ oil?
1) 950   2) 9050   3) 9500   4) 9550

61. The process by which a substance in its liquid state changes into its solid state is called _____
1) Freezing   2) condensation   3) Vaporisation   4) Lique faction

62. Which of the following is not a chemical change characteristic?
1) Change in colour   2) Change in state
3) Production of sound   4) Change in smell

63. Which of the following is not a required condition for rusting to occur?
1) Presence of oxygen   2) Presence of CO_2
3) Presence of water vapour   4) Presence of water

64. Which of the following is an example of exothermic change?
   1) Melting ice cube
   2) Lightening of candle
   3) Evaporating liquid water
   4) All the above

65. The gas which is used for cooking at our home is _____
   1) Oxygen
   2) Nitrogen
   3) L.P.G
   4) C.N.G

66. Which of the following is the symbol of helium
   1) H
   2) He
   3) H_2
   4) N_2

67. Which of the following order is true about the force of attraction between particles of states of matter?
   1) Gas > Solid > Liquid
   2) Solid > Liquid > Gas
   3) Gas > Liquid > Solid
   4) Liquid > Gas > Solid

68. What will be the density if a substance mass is lowered?
   1) Same
   2) Decreased
   3) Increased
   4) Constant

69. Study the given Venn diagram carefully.
   Identify 1, 2 and 3

	1	2	3
1)	Melting of ice	Rusting of iron	Cutting a log of wood
2)	Glowing of bulb	Bursting of tyre	Crystallisation
3)	Stitching of garments	Burning a matchstick	Melting of a candle
4)	Melting of ice	Decomposition of sugar	Sublimation

70. Vishakha took few wire pieces made up of different metals and placed them in blue solution of copper sulphate. What will be the colour of the solutions present in beakers I, II and III after half an hour?

	I	II	III
1)	Green	Blue	Green
2)	Blue	Green	Green
3)	Green	Blue	Blue
4)	Blue	Blue	Blue

71. Which of the following tendons connect?
   1) Muscles to bones
   2) Muscle to muscle
   3) Bone to skin
   4) Muscle to skin

72. Which of the following is not lined by the columnar epithelium?
    1) Gall bladder   2) Intestine   3) Alveoli   4) Stomach

73. Fluid connective tissue of humans is
    1) Blood and cartilage   2) Lymph and cytoplasm
    3) Blood and lymph   4) Stroma and matrix

74. Fill in the blanks by selecting suitable words from the list given below:

    | Collenchyma, Vascular, Tissues, Conducting |

    i)   A group of different _____ working together to perform a function is called an organ.
    ii) Xylem and phloem form the _____ tissue.
    iii) Cells are elongated and thick at the corners in _____ tissue.
    iv) Conducting tissue also called _____ tissue.

    1) i – tissues, ii – conducting, iii – collenchyma, iv – vascular
    2) i – conducting, ii – collenchyma, iii – tissues, iv – vascular
    3) i – collenchyma, ii – tissues, iii – conducting, iv - vascular
    4) i – vascular, ii – collenchyma, iii – tissues, iv – conducting

75. Identify the labelling part "A"
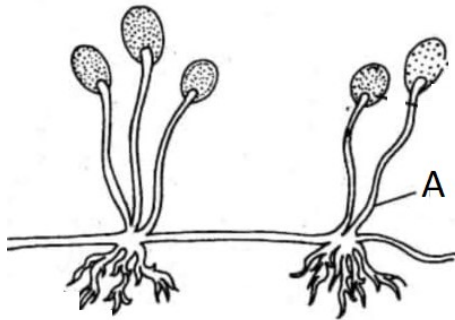
    1) Hypha   2) Rhizoids   3) Sporangium   4) sporangiophore

76. Identify the birds which cannot fly _____
    1) Peacock   2) House sparrow   3) Ostrich   4) Penguin

77. Which phylum contains animals such as snails, oysters, octopus etc
   1) Mollusca   2) Annelida   3) Echinodermata   4) Chordata

78. Which of these ground tissue are nonliving?
    1) Parenchyma   2) Sclerenchyma   3) Collen chyma   4) Xylem

79. Identify the given figure

    1) Striated muscles   2) Non-striated muscles
    3) Ciliated epithelium   4) Cardiac muscles

80. Excess of water from the body of the amoeba is collected in the _____
   1) Food vacuole   2) Contractile vacuole
   3) Cytoplasm   4) Nucleus

81. A plant that has seeds but no flower and fruits?
   1) Bryophytes   2) Gymnosperms   3) Mosses   4) Pteridophytes

82. Which one of the following is the immediate end – product of photosynthesis?
   1) Fructose   2) Glucose   3) Cellulose   4) Lactose

83. Refer to the given Venn diagram and select the correct statement regarding X and Y
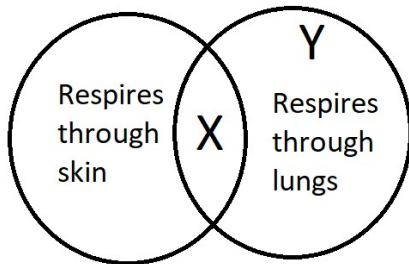
   1) X could be crocodile whereas Y could be whale
   2) X could be dolphin whereas Y could be rohu
   3) X could be frog whereas Y could be crow
   4) X could be whale whereas Y could be salmon

84. Tanmay took a potted, well watered plant and set-up an experiment as shown in figure. Then, she put it in the sunlight for few hours.
   Which of the following statements is correct regarding his observation?
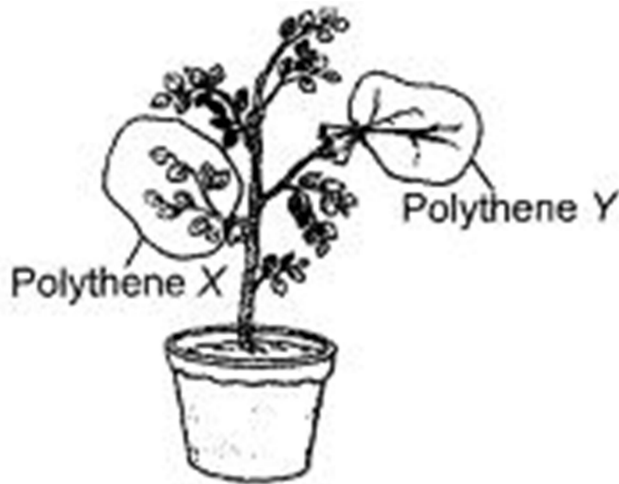
   1) More water droplets are visible in polythene X as transpiration takes place through leaves.

   2) More water droplets are visible in polythene Y as transpiration takes place through stems

   3) Water droplets are visible in polythene X as photosynthesis occurs in leaves

   4) Water droplets are visible in polythene Y as photosynthesis occurs in stem.

85. Refer to the given statements
    (i), (ii), (iii) and select the option that correctly fills the blanks.
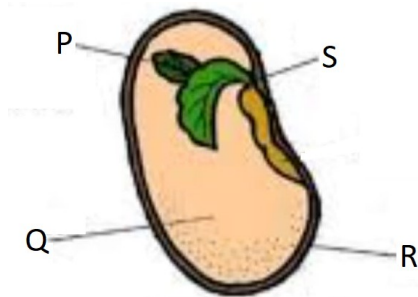   i) _____ is a monocot plant with fibrous root system.
    ii) Leaves of banana plant have _____ venation.
    (iii) _____ root of radish is modified to store food.

	(i)	(ii)	(iii)
1)	Mustard	Parallel	Tap
2)	Grass	Reticulate	Tap
3)	Wheat	Parallel	Tap
4)	Barley	Reticulate	Fibrous

86. Refer to the given figure and select the correct option regarding function of its labelled parts P-S.

    1) P-It is the soft covering that protects the embryo
    2) Q-It have reserve food material for the embryo.
    3) R-It gives rise to the root system
    4) S- It gives rise to the shoot system

87. 'S' shaped nucleus is present in _____
    1) Monocytes   2) Neutrophils   3) Eosinophils   4) Basophils

88. Which of these tissues has lacunae?

    1) Tendons , ligaments   2) Cartilage, Adipose tissue

    3) Bone, cartilage   4) Cartilage, Areolar tissue

89. What are spores found on ?
    1) Ferns   2) Mosses   3) Bread mould   4) All the above

90. Which of the following is a common name for Ascaris lumbricoides?
    1) Round worm   2) Hook worm   3) Seat worm   4) Pin worm

ENGLISH

91. Identify the tense of the underlined verb.
    We are good friends.
    1) Simple present   2) Simple present
    3) Present continuous   4) Past continuous

92. He was born_____17 March 1999.
   1) in   2) at   3) on   4) into

93. Identify the indirect speech of the given sentence.
   Renu said to her, "You are my good friend."
   1) Renu told her that he was her good friend.
   2) Renu told her that she was her good friend.
   3) Renu said that she is her good friend.
   4) Renu told her that she is her good friend.

94. She _____(do) the work just now.
   1) has done   2) did   3) does   4) had done

95. Identify the part of speech of the underlined word.
   She is a <u>good</u> girl.
   1) noun   2) pronoun   3) adjective   4) adverb

96. Name the opposite gender of the word 'lion'.
   1) bee   2) duck   3) lioness   4) vixen

97. Milk is sold by _____ litre.
   1) a   2) an   3) the   4) no article

98. Identify the passive voice of the given sentence.
   She has washed the clothes.
   1) The clothes are washed by her.
   2) The clothes have been washed by her.
   3) The clothes had been washed by her.
   4) The clothes were washed by her.

99. Name the plural form of the word 'sheep'.
   1) sheeps   2) sheep   3) both (1) & (2)   4) none

100. Identify the negative form of the given sentence.
   We finished our project.
   1) We do not finish our project.   2) We did not finish our project.
   3) We can't finish our project.   4) We have not finished our project.

THE END