STUDY VAULT
committed to excellence

Class – VII

School Accelerated Program

ENTRANCE TEST CUM SCHOLARSHIP TEST (Sample Paper-2)

[Time: 1 Hour 50 Min] **[Max Marks: 400]**

A. *General:*

1. *This booklet is a Question Paper containing 100 questions.*
2. ***Blank Papers, Clipboards, Log Tables, slide rules, calculators, cellular phones, pagers and electronic gadgets*** *in any form are not allowed to be carried inside the examination hall.*
3. *The answer sheet, a machine-readable optical mark recognition sheet (OMR Sheet), is provided separately.*
4. *DO NOT TAMPER WITH THE OMR OR THE BOOKLET.*
5. *Please fill your roll number correctly in the OMR sheet (answer sheet).*
6. *Both Question Paper and OMR Answer Sheet will be submitted after completion of this examination.*

B. *Question Paper Format and marking scheme:*

1. *The Question Paper consists of five parts (Part I: MAT, Part II: Physics, Part III: Chemistry, Part IV: Biology, Part V: Mathematics).*
2. ***Each Question carries +4 marks for correct answer and -1 mark for incorrect answer.***

MAT

Direction (Q. 1 to 3) In each of the following questions, a number series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

1. $10,9,17,-10,54,?$

(a) -82 (b) -71 (c) -67 (d) -103 .

2. $169,319,519,769,1069,?$

(a) 1401 (b) 1391 (c) 1411 (d) 1419

3. $141,145,118,134,?,45$

(a) 9 (b) 81 (c) 63 (d) 36 .

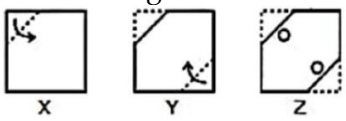
4. If GOLD is coded as HOME, COME is coded as DONE and CORD is coded as DOSE, how would you code SONS?

(a) TPOT (b) TOOT (c) TOOS (d) TONT

5. In a certain code 'LIMCA' is written as 'HJLDZ'. Which of the following words is written as 'IFWJBP'?

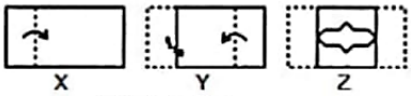
(a) MEXICO (b) MERCURY (c) JAPAN (d) MIDNIGHT

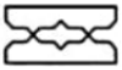
6. Choose a figure which would most closely resemble the unfolded form of Figure (Z).

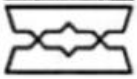


(a)  (b)  (c)  (d) 

7. Choose a figure which would most closely resemble the unfolded form of Figure (Z).



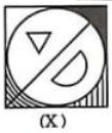
(a)  (b) 

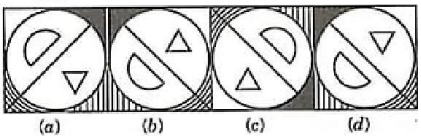
(c)  (d) 

Direction (Q. 8 to 9) In each of the following questions, choose the correct mirror-image of the Fig. (X) from amongst the four alternatives (a), (b), (c) and (d) given along with it.

8. 

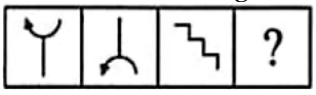
(a)  (b)  (c)  (d) 

9. 



(a) a (b) b (c) c (d) d

10. Select a suitable figure from the Answer Figures that would replace the question mark (?).



(a)  (b)  (c)  (d) 

11. Select a suitable figure from the Answer Figures that would replace the question mark (?).

(a)  (b)  (c)  (d) 

12. Choose the correct water image of the question figure, from the given answer figures (assume that water is along XY)

(a)  (b)  (c)  (d) 

13. Choose the correct water image of the question figure, from the given answer figures (assume that water is along XY)

(a)  (b)  (c)  (d) 

14. A man pointing to a photograph says, "The lady in the photograph is my nephew's maternal grandmother." How is the lady in the photograph related to the man's sister who has no other sister?

(a) Cousin (b) Sister-in-law
(c) Mother (d) Mother-in-law

15. Q is the brother of R; P is the sister of Q; T is the brother of S; S is the daughter of R . Who are the cousins of Q ?

(a) R and P (b) P and T (c) Q and T (d) S and T

16. If $A + B$ means A is the mother of B; $A - B$ means A is the brother B; $A\%B$ means A is the father of B and $A \times B$ means A is the sister of B, which of the following shows that P is the maternal uncle of Q ?

(a) $Q - N + M \times P$ (b) $P + S \times N - Q$
(c) $P - M + N \times Q$ (d) $Q - S\%P$

17. In the given question there are two statements followed by two conclusions numbers I & II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts.

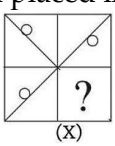
Statements: All pens are roads. All roads are houses.

Conclusions:

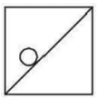
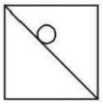
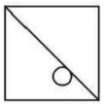
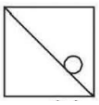
I. All houses are pens. II. Some houses are pens.
(a) Only I is true (b) Only II is true
(c) Both are true (d) Both are false

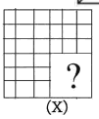
Direction (Qs. 18 to 19) : In each of the following questions, select a figure from the four alternatives, which when placed in the space where the question mark is shown in figure (X) would complete the figure.

18



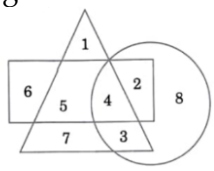
(X)

(a)  (b)  (c)  (d) 

19. 

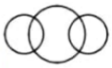
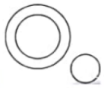
(a)  (b)  (c)  (d) 

20. Which number is in all the geometrical figures?



(a) 3 (b) 4 (c) 5 (d) 8

21. Which of the following diagrams correctly represents the relationship among Tennis fans, Cricket players and students.

(a)  (b)  (c)  (d) 

22. Danish starts walking straight towards East. After walking 75 m , he turns to the left and walks 25 m straight. Again he turns to the left, walks a distance of 40 m straight again he turns to the left and walks a distance of 25 m. How far is he from starting point

(a) 30 m (b) 35 m (c) 40 m (d) 50 m

23. In a row of boys facing the North, A is sixteenth from the left end and C is sixteenth from the right end. B , who is fourth to the right of A , is fifth to the left of C in the row. How many boys are there in the row ?

(a) 39 (b) 40 (c) 41 (d) 42

24. Ram and Sham are ranked 13th and 14th respectively in a class of 23. What are their ranks from the last respectively?

(a) 10th: 11th (b) 11th; 12th (c) 11th ; 10th (d) None

25. How many 5 s are there in the following sequence which are immediately followed by 3 but not immediately preceded by 7 ?

8 9 5 3 2 5 3 8 5 5 6 8 7 3 3 5 7 7 5 3 6 5 3 3 5 7 3 8

(a) One (b) Two (c) Three (d) Four

DIRECTIONS (Qs. 26-27) : In each of the following questions, four terms/words have been given, out of which three are alike in some manner and one is different. Choose the odd one out.

26. (a) Broad: Wide (b) Light : Heavy
(c) Tiny: Small (d) Big : Large

27. (a) VWY (b) QRT (c) LMO (d) JKL

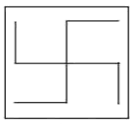
28. If the first three letters of the word COMPREHENSION are reversed, then the last three letters are added and then the remaining letters are reversed and added, then which letter will be exactly in the middle. ?

(a) H (b) N (c) R (d) *S*

29. Arrange the given words in alphabetical order and choose the one that comes in the 2nd position.

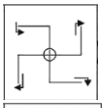
(a) Restrict (b) Rocket (c) Robber (d) Random

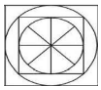
30. In the following question, you are given a figure (*X*) followed by four alternative figures (a), (b), (c) and (d) such that fig. (*X*) is embeded in one of them. Trace out the alternative figure which contains fig. (*X*) as its part.

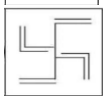


(x)

(a) 

(b) 

(c) 

(d) 

PHYSICS

31. Statement 1: The battery is combination of cell
Statement 2: The small and dark line in the symbol of cell is positive terminal.
(a) Both statement correct (b) Both statement incorrect
(c) Statement 1 correct; Statement 2 incorrect (d) Statement 1 incorrect; statement 2 correct

32. Which of the following is not a circuit element?
(a) Battery (b) Potential Difference (c) Voltmeter (d) Resistor

33. What is difference between ammeter and voltmeter?
(a) Ammeter measures current while voltmeter measures voltage
(b) Ammeter measures voltage while voltmeter measures current
(c) Ammeter measures time while voltmeter measures voltage
(d) Ammeter measures distance while voltmeter measures current

34. When current is passed through a conductor, the heat produced in it depends upon:
(i) The material of conductor
(ii) The current flowing through the conductor
(iii) The time for which the current flows
(a) i and ii only (b) i and iii only (c) ii and iii only (d) All i ,ii and iii

35. Copper wire are used as connecting wires because _____.
(a) Copper has very high melting point (b) Copper has very thick wires
(c) Copper offers a lower resistance (d) None

36. Identify the element used in filament of electric bulb
(a) Tungsten (b) Copper (c) Aluminium (d) Silver

37. Observe figure:

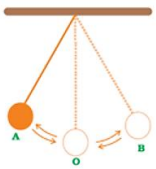
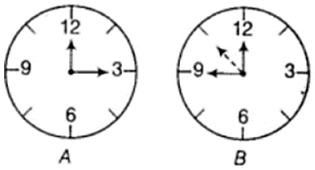


Fig.

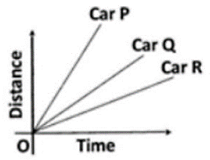
The time period of a simple pendulum is the time taken by it to travel from
(a) A to B and back to A. (b) O to A, A to B and B to A.
(c) B to A, A to B and B to O. (d) A to B .

38. Two clocks A and B are shown in figure. Clock A has an hour and a minute hand whereas clock B has an hour hand, minute hand as well as a second hand. Which of the following statement is correct for these clocks?



(a) A time interval of 30 seconds can be measured by clock A
(b) A time interval of 30 seconds cannot be measured by clock B
(c) Time interval of 5 minutes can be measured by both A and B
(d) Time interval of 4 minutes 10 seconds can be measured by clock A

39. P, Q and R are three cars in a race competition. Which of the three cars win the race?



(a) P (b) Q
(c) R (d) Cannot be determine

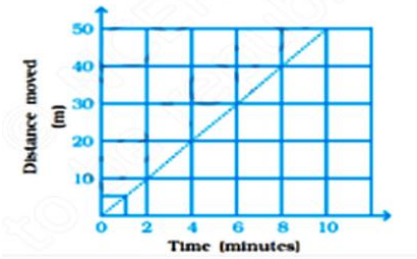
40. Two students were asked to plot a distance-time graph for the motion described in Table A and Table B. The graph given in figure is true for:-

Table A

Distance moved (m)	0	10	20	30	40	50
Time (minutes)	0	2	4	6	8	10

Table B

Distance moved (m)	0	5	10	15	20	25
Time (minutes)	0	1	2	3	4	5



(a) Both A and B. (b) A only. (c) B only. (d) Neither A nor B

41. The ratio of the unit of acceleration and velocity gives the unit of the physical quantity _____
(a) Time (b) Frequency (c) Amplitude (d) Speed

42. A standard laboratory thermometer works based on which physical principle of matter when exposed to thermal energy?
(a) Chemical decomposition of mercury atoms
(b) Convection currents forming inside the glass stem
(c) Uniform thermal expansion of liquids (like mercury or alcohol) with a rise in temperature
(d) Total internal reflection of light through the scale

43. Why is a small gap purposefully left between consecutive rails on a railway track line?
(a) To save structural steel material costs during layout.
(b) To allow for the physical expansion of the metallic rails during hot summer months without causing buckling.
(c) To assist the train wheels in maintaining traction alignment.
(d) To allow rainwater to drain down into groundwater tables.

44. Which of the following processes represents a direct transformation from the gaseous phase back into the liquid phase within the atmospheric water cycle?
(a) Condensation (b) Evaporation (c) Transpiration (d) Infiltration

45. Which of the following surfaces acts as the most effective emitter and absorber of thermal radiant heat energy?

(a) A highly polished, shiny silver mirror surface
(b) A smooth, glossy white glazed porcelain face
(c) A clear, transparent plate of quartz glass
(d) A rough, dull matte black surface

CHEMISTRY

46. Consider the following statements (I-IV) and fill in the blanks by choosing the appropriate option.

I. An antacid such as $\underline{P}$ is used to cure indigestion.
II. Lime water contains $\underline{Q}$, which turns milky with carbon dioxide.
III. Soap solution is basic due to presence of $\underline{R}$. It turns turmeric stain of shirt to red.
IV. Baking soda is $\underline{S}$ which reacts with vinegar to evolve carbon dioxide gas.

	P	Q	R	S
(a)	Milk of magnesia	Calcium hydroxide	Sodium hydroxide	Sodium hydrogen carbonate
(b)	Calcium hydroxide	Milk of Magnesia	Sodium hydroxide	Sodium Hydrogen Carbonate
(c)	Sodium hydroxide	Sodium hydrogen carbonate	Calcium hydroxide	Milk of magnesia
(d)	Sodium hydrogen carbonate	Calcium hydroxide	Milk of magnesia	Sodium Hydroxide

47. Which of the following substance is basic in nature

(a) Baking soda (b) Curd (c) Lemon (d) Orange

48. Calamine solution is applied on the area of ant bite. Calamine solution contains

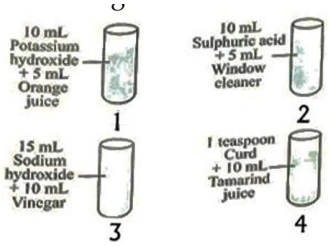
(a) Sodium carbonate (b) Sodium Hydrogen carbonate
(c) Zinc carbonate (d) Sodium chloride.

49. A boy was given two test tubes, one containing water and another containing sodium hydroxide. To identify the solutions which of the following indicators can be used by him?

(i) Blue litmus (ii) Turmeric indicator (iii) Phenolphthalein (iv) Red litmus

(a) (i) and (iv) (b) (ii), (iii) and (iv) (c) only (iv) (d) only (iii)

50. A class 7 science teacher arranged the following set of test tubes.
Which of the following observations is correct when these solutions were tested with different indicators?



(a) In test tubes 1 and 3 , turmeric solution remains yellow.
(b) In test tubes 2 and 4 , China rose indicator turns magenta.
(c) Methyl orange turns red in test tubes 1 and 3.
(d) Phenolphthalein turns pink in test tubes 2 and 4

51. A milkman added a small pinch of baking soda to fresh milk which had pH close to 6 . As a result, pH of the medium

(a) Became close to 2 (b) Became close to 4
(c) Did not undergo any change (d) Became close to 8

52. When CO_2 is passed through lime water, it turns milky. Identify the cause for the milkiness.
(a) Formation of $CaCO_3$ (b) Formation of $Ca(OH)_2$
(c) Formation of H_2O (d) Formation of H_2

53. Neutralization reaction always result in
(a) Absorption of heat (b) Evolution of heat
(c) Absorption of light (d) Both (a) and (b)

54. Match column I with column II and select the correct option from the codes given below.

Column I		Column II	
(P)	Expansion of metals on heating	(i)	Neither physical nor chemical change
(Q)	A stone kept in the sunlight	(ii)	Chemical change
(R)	Burning of a candle	(iii)	Combination of physical and chemical changes
(S)	Curdling of milk	(iv)	Physical change

(a) (P) - (iv), (Q) - (i), (R) - (iii), (S) - (ii) (b) (P) - (iv), (Q) - (iii), (R) - (ii), (S) - (i)
(c) (P) - (i), (Q) - (ii), (R) - (iii), (S) - (iv) (d) (P) - (i), (Q) - (iv), (R) - (ii), (S) - (iii)

55. Kunal took few iron turnings and mixed them well with sulphur powder. He could separate the iron turnings with the help of a magnet. He heated the mixture for some time and tried to separate the iron turnings with the magnet but he could not. Why?
(a) On heating, a chemical change takes place and a new compound is formed.
(b) On heating, iron becomes non-magnetic hence, it is not attracted by magnet.
(c) On heating, a physical change takes place hence iron and sulphur gets mixed up.
(d) On heating, iron evaporates and only sulphur is left behind.

56. Which of the following is/are true when milk changes into curd?
(i) Its state is changed from liquid to semi solid.
(ii) It changes colour.
(iii) It changes taste.
(iv) The change cannot be reversed.
Choose the correct option from below :
(a) (i) and (ii) are correct (b) (ii) and (iii) are correct
(c) (i), (iii) and (iv) are correct (d) (i) to (iv) are correct

57. Two drops of dilute sulphuric acid were added to 1 g of copper sulphate powder and then small amount of hot water was added to dissolve it (step I). On cooling, beautiful blue colored crystals got separated (step II). Step I and step II are:
(a) Physical and chemical changes respectively.
(b) Chemical and physical changes respectively
(c) Both physical change
(d) Both chemical change.

58. Which of the following does not classify as a chemical change
i. Switching on a fan ii. Cooking food
iii. Depletion of ozone layer iv. Making of paneer
(a) ii and iii (b) ii and iv (c) ii, iii and iv (d) Only ii

59. Boiling of egg is
(a) Only physical change (b) Only physical change
(c) Can be physical or chemical change (d) Both physical and chemical change

60. Which of the following is not required for the combustion process to occur
(a) Carbon dioxide (b) Oxygen (c) Fuel (d) Heat

BIOLOGY

61. Why is the dream of human flight conceptually tied to observing birds? What biological structure inspired early aircraft wings?
(a) Streamlined body profiles and aerodynamic curved wing structures.
(b) Smooth scales reducing friction metrics.
(c) Heavy bone marrow configurations providing inertia.
(d) Exoskeleton protection layers adjusting to atmospheric moisture.

62. What happens to the shadow cast by a vertical stick on a sundial from early morning until exactly local noon?
(a) The shadow steadily lengthens and moves westward.
(b) The shadow maintains a perfectly uniform length but flips orientation.
(c) The shadow progressively shortens, reaching its minimum length at local noon.
(d) The shadow disappears entirely immediately after sunrise.

63. Identify the primary source of operational energy that drives the global water cycle, causing evaporation from oceanic surfaces:
(a) Geothermal heat from deep volcanic vents
(b) Solar energy from the Sun
(c) Gravitational kinetic forces of the Moon
(d) Kinetic wind friction from polar atmospheric currents

64. Unscramble the core cognitive value that drives scientific discovery hidden in this jumbled text block: 'Y T I S O I R U C'.
(a) CELERITY (b) CREATIVITY (c) CAPACITY (d) CURIOSITY

65. Which of the following processes represents an interconnected pathway where a product of an animal life process is directly utilized as a reactant by a plant process?
(a) Animals release oxygen during respiration, which plants absorb to perform transpiration.
(b) Animals exhale carbon dioxide during respiration, which green plants capture as a raw material for photosynthesis.
(c) Animals release nitrogen gas, which plant leaves absorb directly without soil microbial assistance.
(d) Animals generate chemical hormones that evaporate to trigger plant seed germination.

66. What happens when an individual falls into a repetitive cycle of regularly consuming addictive chemical agents (such as tobacco, gutka, alcohol, or illegal drugs)?
(a) Their metabolic immunity rises permanently.
(b) They develop a strong psychological and physical urge to take them repeatedly, leading to substance abuse.
(c) The body quickly cleanses the toxic materials without any physiological damage.
(d) Their short-term memory capacity increases.

67. Prolonged exposure to beedi or cigarette smoke severely compromises health. specifically contrasts the physiological condition of which vital organ system before and after smoke damage?
(a) The digestive tract and liver walls (b) The structural chambers of the heart
(c) The lungs (d) The skeletal vertebral column

68. The strategic social welfare campaign launched by the Ministry of Social Justice and Empowerment (Government of India) to raise massive public awareness against the dangers of substance abuse is named:
(a) Swachh Bharat Abhiyaan (b) Nasha Mukt Bharat Abhiyaan
(c) Beti Bachao Beti Padhao Initiative (d) Fit India Movement

69. To provide immediate support and counseling for individuals struggling with drug addition, the Indian Government has set up a dedicated National De-addiction Helpline. What is the toll-free number?
(a) 100 (b) 1098 (c) 14446 (d) 18000

70. Consider the following analogy based on text concepts:
Sapling maturation : Flower & Fruit development :: Adolescent maturation : _____
(a) Immediate loss of biological immunity
(b) Complete arrest of hormonal activity
(c) Development of secondary sexual characteristics and reproductive capability
(d) Immediate transition into old age

71. An 11-year-old boy named Ramesh notices multiple pimples appearing on his facial skin. His mother correctly references biological changes. Which specific internal factor triggered this event?
(a) Excessive consumption of calcium-rich dairy foods
(b) Blockage of blood circulation due to rapid bone elongation
(c) Structural growth of the Adam's apple pushing against skin layers
(d) An increase in hormonal activity causing high oily secretions from skin glands

72. Unscramble the biological milestone hidden in the following jumbled letters: 'U R T Y P E B'. This milestone marks the stage where an individual becomes biologically capable of reproduction.
(a) PUBERTY (b) PURBETY (c) BUYPERT (d) REPUTBY

73. Which of the following physical developments is strictly categorized as a secondary sexual characteristic found exclusively in biological adolescent males?
(a) Sudden growth of facial hair into a moustache and beard
(b) Rapid linear elongation of total body height
(c) High accumulation of adipose fat tissues near hips
(d) Growth of hair patches in the armpit regions

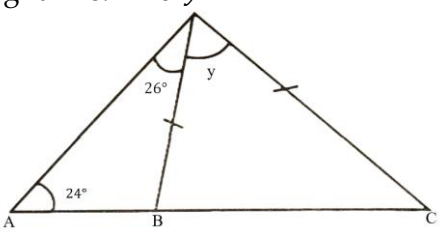
74. Mary, an 11-year-old girl, develops a structural bulge on the front part of her neck. The medical practitioner prescribes an iodine-rich diet. This indicates an issue with her thyroid health. Conversely, her classmate Manoj develops a neck bump at 12 but is told it is simply a normal sign of growing up. What is Manoj's neck bump
(a) The normal physiological enlargement of the voice box (Adam's apple)
(b) A severe iodine deficiency goiter swelling
(c) A malfunctioning salivary gland inflammation
(d) A congenital muscular deformity unique to early childhood

75. A student states: 'Adolescence brings about exclusively physical changes, such as growing taller or gaining muscle mass.' How should this scientific description be corrected based on the complete text?
(a) The student is entirely correct; mental attributes remain perfectly static.
(b) Adolescence encompasses physical alterations along with deep biological, emotional, and behavioral shifts.
(c) Adolescence is limited purely to changes in voice modulation.
(d) Physical growth does not happen during adolescence; it only occurs in early infancy.

MATHEMATICS

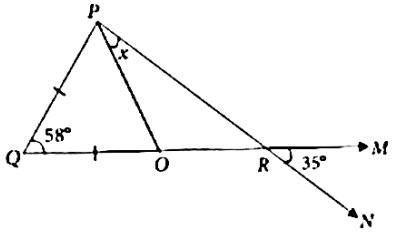
76. In a triangle ABC, if $AB + BC = 10$ cm, $BC + CA = 12$ cm, $CA + AB = 16$ cm, Find the perimeter of the triangle?
(a) 19 (b) 30 (c) 17 (d) 38

77. In the below figure ABC is a straight line. Find y.



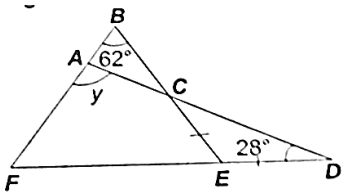
(a) 100° (b) 80° (c) 130° (d) 50°

78. In the adjoining figure, $QORM$ is a straight line and $PQ = OQ$. Find the value of x.



(a) 32° (b) 26° (c) 29° (d) 31°

79. In the adjoining figure (not drawn to scale). ADF and BEF are triangles and $EC = ED$, find the value of y.



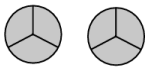
(a) 90° (b) 93° (c) 91° (d) 92°

80. If we multiply a fraction by itself, the fraction thus obtained is $\frac{16}{81}$. The original fraction is _____ .

(a) $\frac{8}{27}$ (b) $2\frac{2}{3}$ (c) $1\frac{1}{3}$ (d) $\frac{4}{9}$

81. Pictorial representation of $3 \times \frac{2}{3}$ is:

(a)  (b) 

(c)  (d) 

82. Sneha and Sidak have ₹ 41 altogether. $\frac{1}{4}$ of Sneha's money is ₹ 2 more than $\frac{1}{7}$ of Sidak's money. How much money Sneha has?

(a) ₹ 27.5 (b) ₹ 20 (c) ₹ 30.50 (d) ₹ 29

83. Which of the following statements is CORRECT?

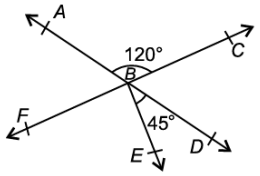
(a) The products of fractions are expressed as $\frac{\text{Product of the numerators}}{\text{Product of the denominators}}$

(b) The product of two proper fractions is greater than the individual fractions involved in the operation.

(c) The product of a proper and an improper fraction is less than the proper fraction.

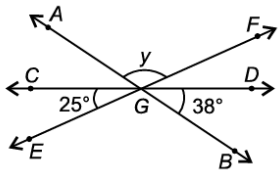
(d) When a decimal number is to be divided by 10,100 or 1000 , the decimal in the decimal number is shifted to the right.

84. In the figure, AD and CF are straight lines. Find $\angle EBF$.



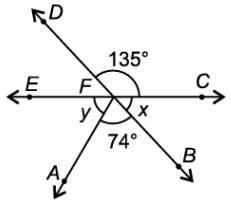
(a) 70° (b) 120° (c) 75° (d) 95°

85. In the figure, (not drawn to scale), AGB, CGD and EGF are straight lines. Find $\angle y$



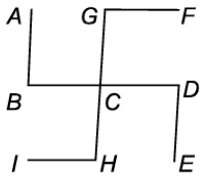
(a) 97° (b) 127° (c) 100° (d) 117°

86. In the figure, (not drawn to scale), EFC and DFB are straight lines. Find ∠x and ∠y respectively.



(a) $40°, 62°$ (b) $45°, 61°$ (c) $47°, 54°$ (d) $40°, 60°$

87. In the given figure, $AB \| GH \| DE$, $GF \| BD \| HI$ and ∠FGC = 80°. Find the value of ∠CHI.



(a) $80°$ (b) $120°$ (c) $100°$ (d) $160°$

88. The perimeter of a regular pentagon having side length y units is:

(a) $5y$ units (b) $10y$ units (c) $6y$ units (d) $4y$ units

89. If Riya has 3 notes of ₹ 200, 4 notes of ₹ 50, and 5 notes of ₹ 10, then the correct expression representing her total amount is:

(a) $200 \times 4 + 50 \times 3 + 10 \times 5$ (b) $3 \times 200 + 4 \times 50 + 5 \times 10$

(c) $200 + 50 + 10$ (d) $5 \times 200 + 50 \times 4 + 3 \times 10$

90. The subtraction of 4 times of b from a is:

(a) $4a - b$ (b) $b - 4a$ (c) $a - 4b$ (d) $4b - a$

91. Simplify the expression: $4(x + 2) - 3(x - 1)$

(a) $x + 10$ (b) $x + 11$ (c) $x + 5$ (d) $7x + 5$

92. Temperature of a place at 12:00 noon was 5°C. Temperature increased by 3°C in first hour and decreased by 1°C in the second hour. What was the temperature at 2:00 pm?

(a) $5°C$ (b) $7°C$ (c) $8°C$ (d) $6°C$

93. Which of the following options hold with respect to given below statements?

Statement 1: Value of $(-85) \times 43 - 43\,(-15) = (-85 + (-15)) \times 43 = 4300$

Statement 2: If * is a multiply operation for integers p, q and r, then we have p*(q+r) = (p*q) + (p*r)

(a) Statement 1 is true and statement 2 is false.

(b) Statement 1 is false and statement 2 is true.

(c) Both statements 1 and 2 are true.

(d) Both statements 1 and 2 are false.

94. Simplify: $[15 \div 3 + 10\{60 - 8 \div 4 + 3(5 \text{ of } \overline{3 - 7})\}]$

(a) -20 (b) -15 (c) 12 (d) 16

95. In the given calculation the answer 11418 is incorrect due to a mistake in one of the digits. The incorrect digit is

$$\begin{array}{r} 267 \\ \times\ 54 \\ \hline 1068 - \text{Step} - 1 \\ +\ 10350\ -\ \text{Step}\ -2 \\ \hline 11418\ -\ \text{Step} - 3 \end{array}$$

(a) 0 in step -1 (b) 1 in step-1 (c) 0 in step-2 (d) 1 in step -2

96. If you add zeroes to the right of the decimal part of a number (for example 5.2 → 5.200) what happens?

(a) The number becomes larger (b) The number becomes smaller

(c) The number stays the same (d) It depends on how many zeros you add

97. Which of these shows two numbers whose sum is exactly 1.5?

(a) 0.75 +0.79 (b) 0.9+0.6

(c) 1.1+0.4 (d) Both (b) and (c)

98. What is the result of 0.25 + 0.05 ?

(a) 0.5 (b) 1.25 (c) 3 (d) 0.05

99. Which pair of decimals are closest in value?

(a) 0.76 and 0.7 (b) 0.91 and 0.98 (c) 0.54 and 0.53 (d) 0.89 and 0.79

100. Aarav owns a spice grinder. It takes 15 seconds for the machine to warm up. Once it is running, it takes 12 seconds to grind 1 kg of spices. What is the arithmetic expression that describes the total time taken to grind 5 kg of spices, assuming the machine is off initially?

(a) $12 \times 15 + 5$ (b) $15 + 12 \times 5$ (c) $5 + 15 \times 12$ (d) $15 \times 5 + 12$