



Class – VII

School Integrated Program

ENTRANCE TEST CUM SCHOLARSHIP TEST

[Time: 3 Hours]

[Max Marks: 300]

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 +3 marks for correct answer and -1 mark for incorrect answer.*

MAT

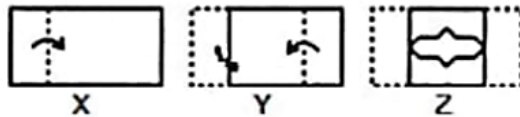
Direction (Q.1-3): In each of the following questions, a number series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

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).



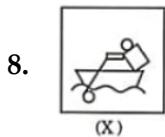
- (a) (b) (c) (d)

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

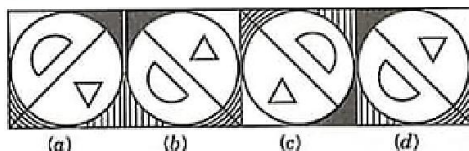
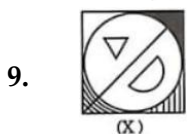


- (a) (b) (c) (d)

Direction (Q.8-9): 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.

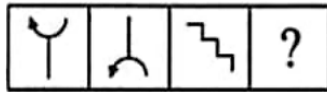


- (a) (b) (c) (d)



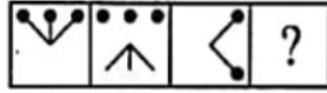
- (a) a (b) b (c) c (d) d

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 X, Y)



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

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



- (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 nephew/ neice 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.

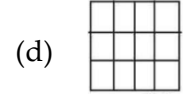
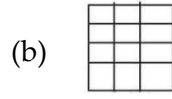
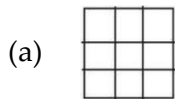
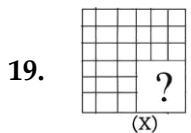
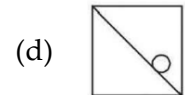
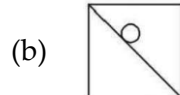
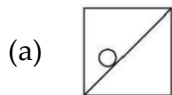
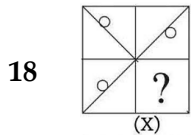
(a) Only I is true

(b) Only II is true

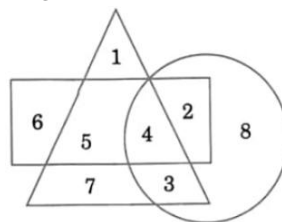
(c) Both are true

(d) Both are false

Direction (Q.18-19): 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.



20. Which number is in all the geometrical figures?



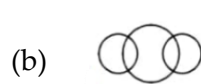
(a) 3

(b) 4

(c) 5

(d) 8

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



22. Danish starts walking straight towards East. After walking 75m, 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 of these

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

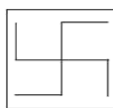
(b) Two

(c) Three

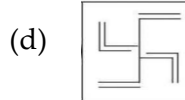
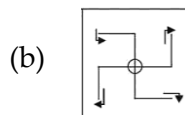
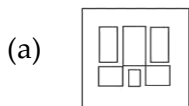
(d) Four

Direction (Q.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.

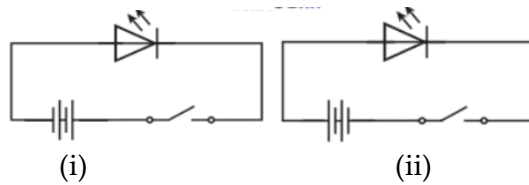


(X)



PHYSICS

31. The device used to measure the electric current flowing in the circuit.
(a) Voltmeter (b) Coil (c) Bulb (d) Ammeter
32. A man runs 10km in 30min . What is his speed?
(a) $\frac{5\text{km}}{\text{h}}$ (b) $\frac{10\text{km}}{\text{h}}$ (c) $\frac{15\text{km}}{\text{h}}$ (d) $\frac{20\text{km}}{\text{h}}$
33. A battery of 10V is used in a circuit. then which of the following statement in correct
(a) 10 Joules energy is given to 1 coulomb charge
(b) 20 Joules energy is given to 1 coulomb charge
(c) 20 Joules energy is given to 2 coulomb charges
(d) Both 'a' and 'c' option are correct
34. A boy cycles a distance of 640 m in 2 minutes 40 seconds. What is the speed of the cycle?
(a) 4m/s (b) 8m/s (c) 12m/s (d) 16m/s
35. 5 cells of 5V each are connected in such a way that the negative of one cell is connected to the positive of second cell and vice versa. Then the total voltage of the battery formed
(a) 13V (b) 35V (c) 20V (d) 25V
36. The device that is used to measure speed of a vehicle is :
(a) Speedometer (b) Odometer
(c) Anemometer (d) Thermometer
37. A boy running at an average speed of 4 km/hr reaches school from his home in 0.5hr. The distance of the school from his home is
(a) 2km (b) 8km (c) 4km (d) 6km
38. In the circuit (i and ii) below a battery made up of two cell (each having same voltage) is connect to a LED. Now the switch of both circuit is closed. Out of the following statement given below which of the statements are incorrect



Statement 1: The LED in first circuit will not glow

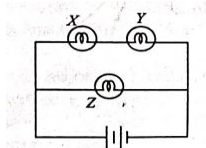
Statement 2: The LED of second circuit will start glowing

Statement 3: If the terminal of first cell in reversed in first circuit, then LED will start glowing

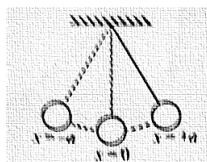
Statement 4: If the terminal of first cell in reversed in second circuit, then LED will not glow

- (a) Only statement 1 is wrong (b) Only statement 2 is wrong
(c) Only statement 3 is wrong (d) Only statement 4 is wrong

39. Sohan connects three identical bulbs X, Y and Z as shown in the figure. Which of the following statements is correct?



- (a) If bulb X is fused, then bulbs Y and Z will glow.
(b) If bulb Y is fused, then bulb X will glow.
(c) If bulb Z is fused, then bulbs X and Y will glow.
(d) None of these
40. Which one of the following is travelling with the fastest speed?
- (a) An athlete running with a speed of 10 m/s
(b) A bicycle moving with a speed of 200 m/min
(c) A tortoise covering 100 metres in 15 minutes
(d) A motorcycle moving with a speed one km/h
41. Match column I with column II and select the correct option from the given codes.
- | Column I | Column II |
|----------------|-----------|
| P. Bulb | (i) _____ |
| Q. Cell | (ii) |
| R. Battery | (iii) |
| S. Wire | (iv) |
| T. Open switch | (v) |
- (a) P – (ii), Q – (iii), R – (v), S – (i), T – (iv)
(b) P – (v), Q – (iv), R – (ii), S – (i), T – (iii)
(c) P – (v), Q – (ii), R – (iv), S – (i), T – (iii)
(d) P – (i), Q – (ii), R – (iii), S – (iv), T – (v)
42. How many seconds are there in 12 hours?
- (a) 12 seconds (b) 720 seconds
(c) 43200 seconds (d) None of these
43. Calculate the distance travelled by a man walking at a speed of 5km/hr in 36minutes.
- (a) 3 km (b) 4 km (c) 5 km (d) 6 km
44. A simple pendulum takes $\frac{1}{3}$ seconds to move from extreme position to mean position. Find out the number of oscillations it will complete in 1 minute
- (a) 40 (b) 35 (c) 50 (d) 45
45. A Pendulum moves back and forth under the influence of gravity with a time period 12 seconds. How much time the pendulum takes to move from one extreme position to the other extreme position



- (a) 3s (b) 6s
(c) 8s (d) None of these

CHEMISTRY

46. Which of the following acids is primarily present in tamarind?
(a) Citric acid (b) Ascorbic acid (c) Tartaric acid (d) Oxalic acid
47. During a neutralisation reaction, which of the following are ALWAYS produced?
(a) Acid and base (b) Salt and water
(c) Salt, water, and heat (d) Gas and water
48. If a farmer's soil is determined to be highly acidic due to excessive use of chemical fertilizers, what is the best treatment to restore its fertility?
(a) Adding organic manure (b) Adding lime
(c) Irrigating with salt water (d) Adding vinegar
49. A mixture of hydrochloric acid and sodium hydroxide is allowed to react completely. The water is then evaporated. The resulting solid is subjected to a conductivity test in its solid state and fails to conduct electricity. Why?
(a) The reaction produced a covalent compound.
(b) The resulting salt (NaCl) consists of ions locked in a rigid crystal lattice, preventing the flow of charge.
(c) The neutralization process destroys the electrical properties of the atoms.
(d) The solid formed is unreactive metal
50. Which of the following correctly pairs an edible substance with its prominent acid?
(a) Curd - Tartaric acid (b) Tomato - Citric acid and Oxalic acid
(c) Amla - Ascorbic acid only (d) Lemon - Lactic acid
51. You have two colourless solutions, X and Y. X turns red cabbage juice pink (indicating acid), and Y turns it green (indicating base). When equal volumes of equimolar X and Y are mixed, the resulting solution does not change the colour of blue or red litmus. What can be deduced about the reaction?
(a) It is a precipitation reaction forming an insoluble hydroxide.
(b) It is a complete neutralisation reaction yielding a neutral salt and water.
(c) The acid is stronger than the base.
(d) The base completely vaporizes the acid.
52. A student observes that a drop of an unknown liquid turns blue litmus red. To confirm if it's a strong acid or just a mildly acidic substance, they drop it on a piece of marble (calcium carbonate) and observe vigorous effervescence. What is the gas evolved, and what does this indicate?
(a) Oxygen; indicates a strong oxidizing agent.
(b) Hydrogen; indicates the presence of a reactive metal.
(c) Carbon dioxide; confirms the acidic nature reacting with a carbonate.
(d) Chlorine; indicates the breakdown of the acid.
53. During a science fair, a secret message written with phenolphthalein is revealed by spraying a solution. The solution sprayed must be:
(a) Vinegar (b) Lemon juice
(c) Dilute ammonia or baking soda solution (d) Salt water
54. A researcher is studying two unknown elements, X and Y. X is a solid that conducts electricity, can be hammered into sheets, and its oxide turns red litmus blue. Y is a dull solid that shatters when hammered, and its oxide turns blue litmus red. What are X and Y likely to be?
(a) X is a non-metal; Y is a metal. (b) X is a metal; Y is a non-metal.
(c) Both are metals. (d) Both are non-metals.

55. The Iron Pillar in Delhi resists rusting remarkably well. If a modern scientist were to replicate this resistance in a new iron structure without using modern coatings like zinc or paint, which metallurgical technique observed in the Pillar might they employ?
- Alloying the iron with high amounts of phosphorus to create a protective passive layer of 'misawite'.
 - Magnetizing the iron to repel oxygen molecules.
 - Immersing the pillar constantly in distilled water.
 - Bombarding the iron with radioactive isotopes.
56. Galvanisation is a process used to protect iron from rusting. It involves coating iron with a thin layer of zinc. Why does zinc protect iron even if the zinc coating is scratched?
- Zinc acts as an insulator, preventing electron flow.
 - Zinc is less reactive than iron and acts as a physical barrier.
 - Zinc is more reactive than iron and oxidizes preferentially, acting as a 'sacrificial anode'.
 - Zinc chemically alters the iron into a non-metal
57. Sulfur dioxide (SO_2) dissolves in water. In an industrial area with heavy sulfur emissions, how does this process impact the local environment during a rainstorm?
- It neutralizes acidic soils, promoting plant growth.
 - It causes 'acid rain', which lowers the pH of water bodies, harming aquatic life and accelerating the corrosion of metal and stone structures.
 - It produces a protective smog layer that shields against UV radiation.
 - It turns local water bodies highly basic.
58. When a magnesium ribbon burns in air, it produces a dazzling white flame and leaves a white ash. The ash is:
- Magnesium carbonate
 - Magnesium oxide
 - Magnesium hydroxide
 - Magnesium sulfate
59. Suspension bridges use steel ropes primarily because steel exhibits high:
- Malleability
 - Ductility and tensile strength
 - Sonority
 - Electrical conductivity
60. Phosphorus is a highly reactive non-metal that catches fire when exposed to air. How is it typically stored to prevent this?
- In kerosene
 - In water
 - In a vacuum desiccator
 - In absolute alcohol

BIOLOGY

61. A scientist finds fossils of a fern-like plant in coal mines of Nagpur and also in similar coal layers of Australia. What does this BEST prove?
- Ferns evolved independently in both places
 - Nagpur and Australia were once connected as part of original land
 - Ferns travelled through ocean water
 - Coal was transported from Australia to India
62. An experiment shows a potted plant covered with a polythene bag, kept in sun. After 2 hours, droplets appear inside the bag. what will happen?
- transpiration
 - photosynthesis
 - respiration
 - None of above
63. Which of the following is NOT a correct difference between photosynthesis and respiration in plants?
- Photosynthesis uses CO_2 , Respiration uses O_2
 - Photosynthesis occurs in chloroplast, Respiration in mitochondria
 - Photosynthesis occurs only at day, Respiration only at night
 - Photosynthesis stores energy, Respiration releases energy

64. In the diagram of cross-section of a leaf, 'X' is a pore surrounded by two kidney-shaped cells. If the plant is kept in dark for 24 hours, what happens to X?
- X opens wide to take CO₂
 - X closes to prevent water loss, guarded cells become flaccid
 - X remains same as guard cells are dead
 - X bursts due to pressure
65. A farmer adds excessive fertilizers to his field. After 2 days, plants start wilting even though soil is wet. This is due to:
- Exosmosis, water moves out of root hairs
 - Endosmosis failure
 - Lack of transpiration pull
 - Photosynthesis stops
66. Which set correctly shows the path of water in a plant?
- Root hair → Xylem → Leaf → Stomata
 - Root hair → Phloem → Xylem → Stomata
 - Soil → Phloem → Leaf → Xylem
 - Xylem → Root hair → Phloem → Stomata
67. Insectivorous plants like *Nepenthes* (pitcher plant) are green and can photosynthesize, yet they trap insects. Why?
- To get CO₂ for photosynthesis
 - To get nitrogen compounds as they grow in nitrogen-deficient soil
 - To get water
 - To get oxygen for respiration
68. Iodine test: Leaf A was variegated (green and white patches). Leaf B was completely green kept in dark for 3 days. Both are tested with iodine after keeping in sun for 6 hours. Result will be:
- Both turn blue-black completely
 - Leaf A - only green part blue-black, Leaf B - no blue-black
 - Leaf A - white part blue-black, Leaf B - blue-black
 - Both remain brown
69. Human digestive system. Part X is a 'J' shaped organ with pH ~2. Part Y is 6m long coiled tube with pH ~7.5. Which enzyme works in X but NOT in Y?
- Pepsin
 - Trypsin
 - Lipase
 - Amylase
70. If a person's diaphragm is punctured in an accident, what process will be MOST affected?
- Digestion
 - Breathing - inhalation becomes difficult
 - Blood circulation
 - Excretion
71. Why does the wall of the small intestine have millions of finger-like villi?
- To secrete more bile
 - To increase surface area for absorption, each villus has blood capillaries.
 - To kill bacteria
 - To produce more enzymes
72. Human heart - Blood from chamber A goes to lungs, blood from chamber B goes to body. A and B are:
- A - Right ventricle, B - Left ventricle
 - A - Left atrium, B - Right atrium
 - A - Left ventricle, B - Right ventricle
 - A - Right atrium, B - Left atrium
73. A drop of blood is observed under microscope. Cells without nucleus, biconcave, red in colour are seen. If their count falls drastically, person will suffer from:
- Clotting failure
 - Reduced oxygen transport, fatigue
 - Reduced immunity
 - Diabetes
74. In human excretory system, what is the correct order?
- Kidney → Ureter → Urinary bladder → Urethra
 - Kidney → Urethra → Bladder → Ureter
 - Ureter → Kidney → Bladder → Urethra
 - Bladder → Kidney → Ureter → Urethra

75. Ruminants like cows have 4-chambered stomach and chew cud. Humans cannot digest cellulose but cows can. Reason is:
- Cows produce more HCl than humans
 - Cows have symbiotic cellulose-digesting bacteria in rumen
 - Cows have longer small intestine
 - Cows have bile in 4 chambers

MATHEMATICS

76. A 7-digit number is formed using the digits 1, 2, 3, 4, 5, 6, 7 exactly once each. If the number is rounded off to the nearest ten-thousand, the resulting number is 5,430,000. What is the largest possible original number?
- 5, 432, 761
 - 5, 434, 762
 - 5,434,761
 - 5, 429, 763
77. How many 6 -digit numbers exist in which the sum of the digits is equal to 3 ?
- 15
 - 21
 - 28
 - 18
78. The product of the place value and face value of the digit 7 in the numeral 87, 42, 109 (in the Indian System) is divided by 10^5 . What is the result?
- 4, 900
 - 49,000
 - 70,000
 - 49
79. A warehouse stores wheat in bags weighing 45 kg 750 g each. A container truck has a maximum load capacity of 11 metric tonnes. What is the maximum number of such bags that can be safely loaded onto the truck?
- 240
 - 241
 - 242
 - 243
80. Evaluate the value of the following arithmetic expression:
- $$120 \div [45 - \{7 + (32 - \overline{14 - 6}) \div 3\} \times 2]$$
- 5
 - 8
 - 12
 - 15
81. By inserting a single pair of parentheses into the expression $48 \div 4 + 2 \times 5 - 3$, what is the maximum positive integer value obtainable?
- 37
 - 42
 - 76
 - 117
82. If $a \star b = (a \times b) - (a + b)$ and $a \circ b = (a + b) \times (a - b)$, find the value of $(5 \star 3) \circ (4 \star 2)$.
- 45
 - 35
 - 27
 - 63
83. Find the value of:
- $$2026 \times 20252025 - 2025 \times 20262026$$
- 0
 - 2025
 - 2026
 - 10001
84. Three bells toll together at intervals of 9, 12, and 15 minutes respectively. If they toll together at 6 : 00 AM, how many times will they toll together between 6 : 01 AM and 11 : 59 PM on the same day?
- 5
 - 6
 - 7
 - 8
85. What is the least number which when divided by 12, 16, 24, and 36 leaves remainders 7,11,19, and 31 respectively?
- 139
 - 144
 - 283
 - 288
86. The HCF and LCM of two 2-digit numbers are 16 and 480 respectively. What is the sum of the two numbers?
- 160
 - 176
 - 192
 - 208
87. If $N = 2^3 \times 3^2 \times 5 \times 7$, what is the smallest positive integer k such that $N \times k$ is a multiple of 840 and a perfect square?
- 105
 - 210
 - 35
 - 70
88. What is the value of the alternating sum:
- $$S = 1 - 2 + 3 - 4 + 5 - 6 + \dots + 99 - 100 + 101?$$
- 50
 - 50
 - 51
 - 51
89. The temperature at a research station at 8 AM was -14°C . The temperature rose at a uniform rate of 2.5°C per hour until 2 PM, and then dropped at a uniform rate of 3°C per hour until 7 PM. What was the temperature at 7 PM?
- -14°C
 - -12°C
 - -10°C
 - -16°C

90. If x, y, z are three distinct integers such that $x \cdot y \cdot z = -12$, what is the minimum possible value of $x + y + z$?
 (a) -12 (b) -10 (c) -8 (d) -14
91. An elevator starts at the 12 th floor above ground level (+12). It goes down 17 floors, goes up 8 floors, goes down 5 floors, and finally goes down 2 floors into the basement. What is its final position relative to the ground floor?
 (a) -4 (b) -3 (c) -2 (d) $+1$
92. If $\frac{3x-5}{4} - \frac{2x-3}{3} = \frac{1}{12}$, find the value of $x^2 - 2x + 5$.
 (a) 13 (b) 20 (c) 29 (d) 38
93. A father is currently four times as old as his son. Twelve years hence, the father's age will be twice the age of his son. What is the sum of their present ages?
 (a) 30 years (b) 35 years (c) 40 years (d) 45 years
94. In a two-digit number, the tens digit is twice the units digit. If the digits are reversed, the new number is 27 less than the original number. What is the product of the digits?
 (a) 12 (b) 18 (c) 24 (d) 32
95. A test has 50 questions. Each correct answer awards 4 marks, while each incorrect answer deducts 1 mark. A student answered all questions and scored 135 marks. How many questions did the student answer correctly?
 (a) 35 (b) 37 (c) 39 (d) 41
96. What is the simplified value of the continued fraction:

$$2 + \frac{1}{1 + \frac{1}{3 + \frac{1}{4}}}$$

 (a) $\frac{37}{17}$ (b) $\frac{47}{17}$ (c) $\frac{45}{19}$ (d) $\frac{51}{17}$
97. A fraction is such that if 3 is added to both numerator and denominator, it becomes $\frac{7}{9}$, and if 3 is subtracted from both numerator and denominator, it becomes $\frac{2}{3}$. What is the difference between the denominator and numerator?
 (a) 2 (b) 3 (c) 4 (d) 5
98. If $2^{x+3} = 32$ and $3^{x+y} = 243$, what is the value of $(x - y)^2$?
 (a) 1 (b) 4 (c) 9 (d) 16
99. Simplify the algebraic product:

$$(x - y)(x + y)(x^2 + y^2)(x^4 + y^4)$$

 (a) $x^8 + y^8$ (b) $x^8 - y^8$ (c) $x^{16} - y^{16}$ (d) $(x - y)^8$
100. In a plane, lines $AB \parallel CD$. A point P lies between the two parallel lines such that $\angle PAB = 130^\circ$ and $\angle PCD = 140^\circ$ (both being interior-facing angles). What is the reflex angle $\angle APC$?
 (a) 90° (b) 270° (c) 110° (d) 250°