CLASS-VI

Sample Paper-1

ENTRANCE TEST CUM SCHOLARSHIP TEST

FS/P1 Date : ...../...../.....

[Time: 3 Hours] [Max Marks: 270]

A. General:

1. This booklet is a Question Paper containing 90 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: Mathematic).
2. Each Question carries +3 marks for correct answer and -1 mark for incorrect answer.

MAT

1. On a shelf are placed six volumes side by side labelled A, B, C, D, E and F; B, C, E and F have green covers while others have yellow covers. A, D, Bare new volumes while the rest are old volumes. A, C, B, are law reports while the rest are medical extracts. Which two volumes are old medical extracts and have green covers?

(a) B, C (b) C, D (c) C, E (d) E, F

2. Mr. A, Miss. B, Mr. Cand Miss. Dare sitting around a table and discussing their trades

(i) Mr. A sits opposite to cook

(ii) Miss B sits right to the barber

(iii) The washerman is on the left of the tailor

(iv) Miss D sits opposite Mr. C

What are the trades of A and B?

(a) Tailor and Barber (b) Tailor and cook

(c) Barber and cook (d) Washerman and cook

3. A worker may claim Rs. 15 for each km which he travels by taxi and Rs. 5 for each km when he drives his own car If in one week he claimed Rs. 500 for travelling 80 kms, how many kms did he travel by taxi?

(a) 10 (b) 20 (c) 30 (d) 40

4. In the series given below, how many 8s are there each of which is exactly divisible by its immediate preceding as well as succeeding numbers?

283824824868282483828 6

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

5. How many 7s are there in the following number series which are preceded by 9 and also followed by 6?

7897653428972459297647

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

6. What would be the value of the code 'A: where A + 1 = 2.

(a) 1 (b) 2 (c) 0 (d) 3

7. What would be the value of 'L' where L + M = 3

(a) 1 (b) 2 (c) 6 (d) either 1 or 2

8.

11	3	49
5	19	?
7	13	100

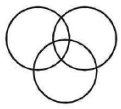
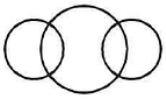
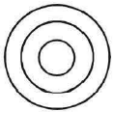
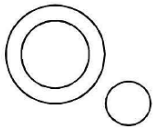
(a) 96 (b) 120 (c) 144 (d) 100

9.

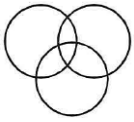
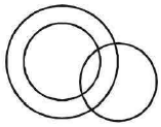
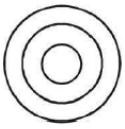
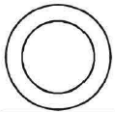
1	4	9	?
1	2	3	4
2	4	6	?

(a) 16, 8 (b) 49, 7 (c) 36, 4 (d) 25, 5

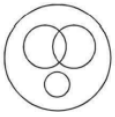
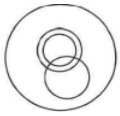
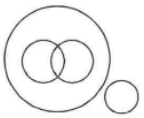
10. Which of the following diagrams correctly represents the relationship among Tennis fans, Cricket fans and students.

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

11. Which of the following diagrams correctly represents the relationship among smokers, bidi smokers, cancer patients.

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

12. In a dinner party both fish and meat were served. Some took only fish and some only meat. There were some vegetarians who did not accept either. The rest accepted both fish and meat. Which of the following logic diagrams correctly reflects this situations

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

DIRECTIONS (13-15): Read the information given below to answer these questions. a, b, c, d, e, f, g, hand i are nine houses. c is 2 km east of b. a is 1 km north of band h is 2 km south of a, g is 1 km west of h while d is 3 km east of g and f is 2 km north of g. i is situated just in the middle of band C while e is just in middle of hand d.

13. Distance between e and g is:

(a) 2 km (b) 1 km (c) 5 km (d) 1.5 km

14. Distance between a and f is:

(a) 1.41 km (b) 3 km (c) 2 km (d) 1 km

15. Distance between e and i is :

(a) 4 km (b) 2 km (c) 1 km (d) 3 km

16. If L stands for +,M stands for —, N stands for x, P stands for ÷ , then 14 N 10 L 42 P 2M8 = ?

(a) 153 (b) 216 (c) 248 (d) 251

DIRECTIONS (17): In each of the following examples which one of the four interchanges in signs and numbers would make the given equation correct?

17. 6×4+2=16

(a) + and ×,2 and 4 (b) + and ×,2 and 6

(c) + and ×,4 and 6 (d) None of these

DIRECTIONS (18-20): Abra is Rambo's daughter. Shintu is Rambo's sister. Shintu's daughter is called Cabra and son is called Dabra. Limba is Cabra's maternal Aunt.

18. Abra is Limba's

(a) Aunt (b) Nephew

(c) Uncle (d) None of these

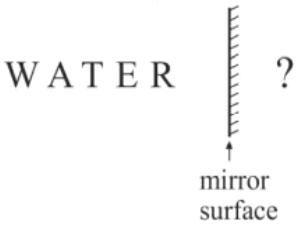
19. Cabra is Rambo's;

(a) Nephew (b) Niece (c) Uncle (d) Cannot say

20. By looking in a mirror, it appears that it is 6 : 30 in the clock. What is the real time?

(a) 6 :30 (b) 5 :30 (c) 6 : 00 (d) 4 :30

21. Find the correct option for the mirror image for the following examples

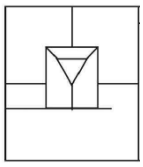
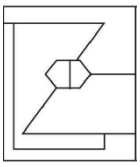
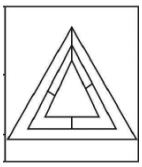
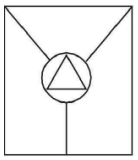


(a) W A T Ǝ Я (b) Я Ǝ T Ǝ W (c) W A Я Ǝ T (d) Я Ǝ T A W

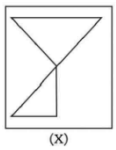
DIRECTIONS (22-23): In each of the following examples, fig (X) is embedded in anyone of the four alternative figures (1), (2), (3) or (4). Find the alternative which contains fig. (X) as its part.

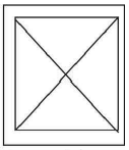
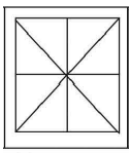
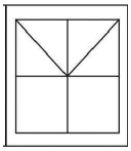
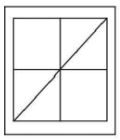
22.


(X)

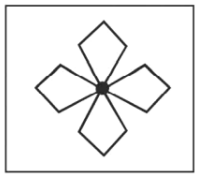
(a)  (b)  (c)  (d) 

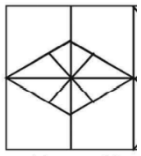
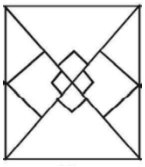
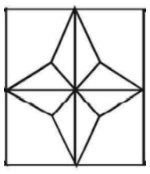
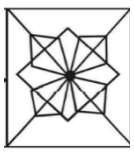
23.


(X)

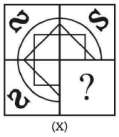
(a)  (b)  (c)  (d) 

24. Find amongst the four alternatives (1), (2), (3) and (4), the figure which most nearly contains the figure (X)


(X)

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

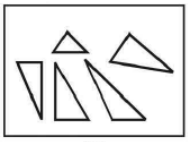
25. Select a figure from the four alternatives, which when placed in the blank space of figure (X) would complete the pattern.



(X)

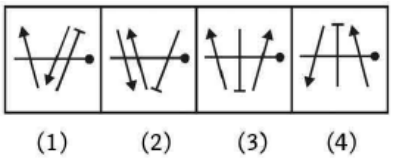
(a)  (b)  (c)  (d) 

26. Find out which of the figures (1), (2), (3) and (4) can be formed from the pieces given in figure (X)


(X)

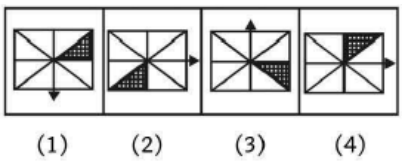
(a)  (b)  (c)  (d) 

27. Choose the figure which is different from the others.


(1) (2) (3) (4)

(a) (1) (b) (2) (c) (3) (d) (4)

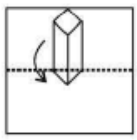
28. Choose the figure which is different from the others.


(1) (2) (3) (4)

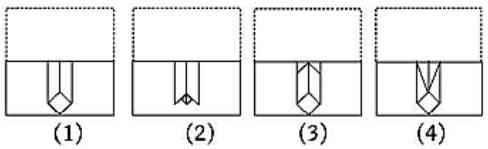
(a) (1) (b) (2) (c) (3) (d) (4)

DIRECTION (29-30): In each one of the following examples, find from amongst the four response figures, the one which resembles the pattern formed when the transparent sheet, carrying a design, is folded along the dotted line.

29. Transparent Sheet

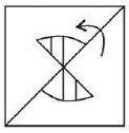


Response Figures

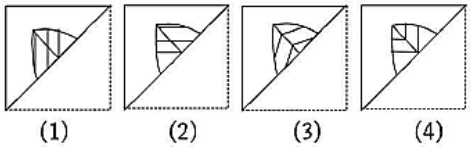

(1) (2) (3) (4)

(a) (1) (b) (2) (c) (3) (d) (4)

30. Transparent Sheet



Response Figures



(a) (1) (b) (2) (c) (3) (d) (4)

PHYSICS

31. The movement of water being heated in a pot on a stove is an example of

(a) conduction (b) Convection. (c) Radiation (d) condensation

32. Heat is a form of

(a) electricity (b) energy (c) friction (d) none of these

33. Which of the following is a vector physical quantity?

(a) distance covered (b) time interval (c) average velocity (d) mass

34 Which of these is not a unit of time?

(a) second (b) hour (c) light year (d) year

35. Tornado is a form of

(a) wind (b) thunderstorm (c) cyclone (d) None of these

36. Air has

(a) only volume (b) only mass (c) both mass and volume (d) None of these

37. The device used to close or open an electric circuit is

(a) ammeter (b) resistance (c) switch (d) cell

38 The direction of magnetic field produced by a linear current carrying conductor is given by:

(a) Right hand thumb rule (b) Ampere's law (c) Flemings left hand rule (d) Joule's law

39. The image of an object formed by a device is always virtual and small. The device may be

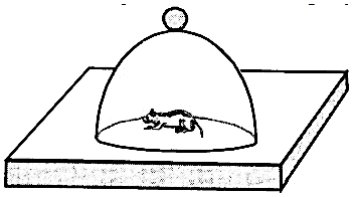
(a) a glass plate (b) a concave mirror (c) a convex lens. (d) a concave lens

40. A plane mirror gives a real image when the incident beam is

(a) wide (b) narrow (c) divergent (d) convergent

CHEMISTRY

41. An animal placed in an air tight jar is kept in sunlight as shown in the figure.



How can the animal be helped to survive for a longer time?

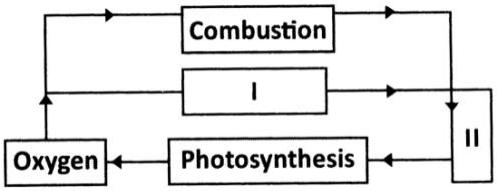
(a) By placing another mouse in it

(b) By placing a green plant in it

(c) By removing all the air through a vacuum pump

(d) By placing a burning candle in it

42. Which of the choices can best fill in the boxes I and II given below?



(a) I-carbon dioxide, II-oxygen (b) I-oxygen, II-respiration

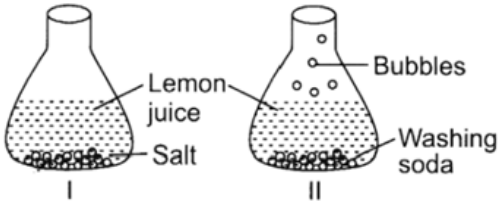
(c) I-respiration, II-carbon dioxide (d) I-respiration, II-oxygen

43. Rohan tore a sheet of paper into pieces and then burnt them. Identify the irreversible change taking place in the process.

(a) Tearing the sheet into pieces. (b) Burning the pieces

(c) Both tearing and burning the pieces (d) None of these.

44. Sudha took lemon juice in two flasks. She put salt in flask I and washing soda in flask II. She observed lots of bubbles in flask II but nothing in flask I. What could be the reason for this?



(a) In flask I, a chemical change takes place.

(b) In flask II, a chemical change takes place and bubbles of carbon dioxide are seen.

(c) In flask II, a physical change takes place producing lots of bubbles.

(d) In flask I, salt reacts with lemon juice and forms a new compound.

45. Water scarcity is a problem in our country.

What are the ways by which we can conserve water?

(i) Rain water harvesting (ii) Drip irrigation (iii) Deforestation

(a) Only (i) and (ii) (b) Only (ii) and (iii) (c) Only (i) and (iii) (d) (i), (ii) and (iii)

46. A gas is colourless, odourless, heavier then air and extinguishes fire, name the gas

(a) Oxygen (b) Carbon dioxide (c) Nitrogen (d) Water

47. A brief information about three substances is given:

X: Transparent, smooth to touch and insulator.

Y: Yellow in colour, good conductor of heat and electricity, lustrous.

Z: Man made material, an insulator, used to make switches and handles of cooking utensils.

X, Y and Z could be respectively

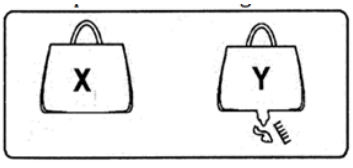
(a) Water, copper, aluminium (b) Glass, gold, plastic

(c) Paper, aluminium, copper (d) Silver, gold, copper.

48. If opacity is the distinct feature of wood, then what is glass known for in the same way?

(a) Its transparency (b) Its magnetic nature (c) Its conductivity to heat (d) Its lustrous nature

49. Suresh put the same things in two different bags X and Y. However bag Y could not hold all the items and got torn.

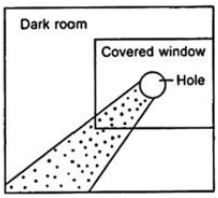


What did Suresh conclude?

(a) Bag ' X ' is more flexible than bag Y. (b) Bag Y is lighter than bag X

(c) Bag Y is softer than bag 'XZ. (d) Bag ' X is stronger than bag Y.

50. The given picture shown that air



(a) Has mass (b) Occupies space (c) Contains dust (d) Gives shape to things

BIOLOGY

51. The ovary contains female sex cells inside

(a) stigma (b) style (c) anther (d) ovules

52. Fishes move about in the water with the help of their

(a) mouths and gills (b) legs and scale (c) wings and tails (d) fins and tails

53. Name plants which have roots outside the soil

(a) Mango (b) Apple (c) Banyan (d) Rose

54. Yaks have one of the following on their bodies to keep them warm. This one is

(a) feathers (b) hair (c) scales (d) shells

55. Which of the following has fibrous root?

(a) Peas (b) Wheat (c) Radish (d) Neem

56. Which is a correct set of parts of a pistil?

(a) Ovary, style and filament (b) Ovary style and stigma

(c) Ovary, anther and filament (d) Filament and anther

57. The leaves of which of the following plants fold up on being touched?

(a) Mango plant (b) Money plant (c) Mustard plant (d) Mimosa plant

58. Plants that live in ponds are

(a) Hydrilla, lotus (b) cactus, Acacia (c) pine, deodar (d) none of these

59. Consider the following statements and choose the incorrect one:

(a) Living things have a definite life-span after which they die.

(b) Living things can reproduce and they can have young ones.

(c) Living things excrete or get rid of waste materials from their body.

(d) Living things cannot respond to stimuli.

60. Rearing and management of fishes in large scale is called

(a) agriculture (b) apiculture (c) pisciculture (d) horticulture

MATHEMATICS

61. 1 billion is equal to

(a) 100 million (b) 10 million (c) 1000 lakhs (d) 10000 lakhs

62. The product of a non-zero whole number and its successor is always divisible by

(a) 2 (b) 3 (c) 4 (d) 5

63. The number of factors of 36 is

(a) 6 (b) 7 (c) 8 (d) 9

64. The product of digits of the sum of first three common multiples of 3, 4 and 9 is

(a) 0 (b) 16 (c) 20 (d) 12

65. The additive inverse of a negative integer

(a) is always negative (b) is always positive

(c) is the same integer (d) zero

66. Number of lines passing through five points such that no three of them are collinear is

(a) 10 (b) 5 (c) 20 (d) 8

67. Amulya and Amar visited two places A and B respectively in Kashmir and recorded the minimum temperatures on a particular day as $-4°C$ at A and $-1°C$ at B. Which of the following statement is true

(a) A is cooler than B

(b) B is cooler than A

(c) There is a difference of $2°C$ in the temperature

(d) The temperature at A is $4°C$ higher than that at B.

68. When a negative integer is subtracted from another negative integer, the sign of the result

(a) is always negative

(b) is always positive

(c) is never negative

(d) depends on the numerical value of the integers

69. The statement "When an integer is added to itself, the sum is less than the integer" is

(a) always true (b) never true

(c) true only when the integer is positive (d) true for negative integers only

70. The greatest integer lying between -11 and -16 is

(a) —11 (b) -12 (c) -14 (d) -15

71. Which of the following fractions is the greatest?

(a) $\frac{5}{7}$ (b) $\frac{5}{6}$ (c) $\frac{10}{14}$ (d) $\frac{2}{3}$

72. The number of two wheelers owned individually by each of 50 families are listed below.

4, 5, 2, 1, 0, 0, 2, 1, 2, 1, 0, 1, 1, 2, 3, 1, 2, 1, 1, 2, 1, 2, 3, 1, 0, 2, 1, 0, 2, 1, 2, 1, 2, 1, 1, 4, 1, 3, 1, 1, 2, 1, 1, 1, 1,2, 3, 2, 1, 1

Find the number of families having two or more, two wheelers.

(a) 21 (b) 19 (c) 18 (d) 15

73. Which of the following shows the maximum rise in temperature?

(a) $0°C$ to $10°C$ (b) $-4°C$ to $8°C$

(c) $-15°C$ to $-8°C$ (d) $-7°C$ to $0°C$

74. The number of digits in the successor of the greatest 5-digit number is

(a) 4 (b) 6 (c) 3 (d) 5

75. The sum of the digits of the smallest number which when divided by 18, 15 and 12 leaves remainder 3.

(a) 10 (b) 15 (c) 12 (d) 9

76. Which of the following properties are true?

(A) $— \big(— 14\big) \div — (— (-2)) = 7$

(B) $— 14 \div — (— 2) = -7$

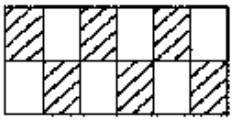
(C) $(-14) \div (-2) = 7$

(a) A,B (b) B,C(c) A,C (d) A,B,C

77. Modulus of a number x is denoted as |x| and it gives the magnitude of a number.
For example, |-1| = 1 and |1| = 1.
Then, |—8|—|—16|+|7| =
(a) —15 (b) —1 (c) 1 (d) +15

78. Which of the following is a composite number?
(a) 37 (b) 47 (c) 57 (d) 67

79. What part of the given figure is shaded?



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

80. The greatest number which on rounding off to nearest thousands gives 5000 is
(a) 5001 (b) 5559 (c) 5999 (d) 5499

81. In the product 3759 × 9573, the sum of ten's digit and unit's digit is
(a) 7 (b) 9 (c) 16 (d) 0

82. When the remainder obtained on dividing 80808 by 108 is divided by the remainder obtained on dividing 90909 by 109, then the quotient is
(a) 12 (b) 3 (c) 6 (d) 8

83. A number is smaller than half of one hundred and lies between 4 tens and 5 tens. Ones digit is one less than tens digit. If the sum of digits is 7, then the product of the digits in the number is
(a) 24 (b) 12 (c) 16 (d) 20

84. If 1 orange costs `5.50 and 1 kg apples cost `80. Then, the total cost of $1\frac{1}{2}$ dozen of oranges and $1\frac{3}{4}$ kg of apples is *n* and sum of digits of *n* is *m.* The number of natural numbers less than *m* that are co-prime to *m* is
(a) 4 (b) 5 (c) 6 (d) 7

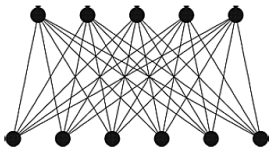
85. The number of seconds in 6 h equals the number of minutes in
(a) 4 days (b) 10 days (c) 15 days (d) 2 days

86. Keeping the place of 6 in the number 6350947 same, the smallest number obtained by rearranging other digits is
(a) 6975430 (b) 6043579 (c) 6034579 (d) 6034759

87. If [x] denotes the greatest integer less than or equal to x, then [−1.4] ?
(a) −2 (b) −1.5 (c) −1 (d) 0

88. The largest 5-digit number having three different digits is
(a) 98978 (b) 99897 (c) 99987 (d) 98799

89. Priya has connected all the upper and lower points with straight lines. How many lines has she drawn?



(a) 20 (b) 25 (c) 30 (d) 35

90. The number of integer that are their own multiplicative inverses is
(a) 0 (b) 1 (c) 2 (d) 3