## FIITJEE Talent Reward Exam - 2018

for students presently in

## Class 6 Paper 1

Time: 3 Hours (9:30 am - 12:30 pm)

**Code** 6000

Maximum Marks: 240

#### Instructions:

Caution: Class, Paper, Code as given above MUST be correctly marked on the answer OMR sheet before attempting the paper. Wrong Class, Paper or Code will give wrong results.

- 1. You are advised to devote 35 Minutes on Section-I, 35 Minutes on Section-II, 50 Minutes on Section-III, 30 Minutes on Section-IV and 30 Minutes on Section-V.
- 2. This Question paper consists of 5 sections. Marking scheme is given in table below:

| Section       | Subject              | Question no. | Marking Scheme for each question |              |
|---------------|----------------------|--------------|----------------------------------|--------------|
| Section       | Subject              | Question no. | correct answer                   | wrong answer |
| SECTION - I   | APTITUDE             | 1 to 12      | +3                               | 0            |
| SECTION -1    | AFIIIODE             | 13 to 18     | +4                               | 0            |
|               | PHYSICS (PART-A)     | 19 to 22     | +2                               | 0            |
| OFOTION II    | CHEMISTRY (PART-B)   | 23 to 26     | +2                               | 0            |
| SECTION – II  | MATHEMATICS (PART-C) | 27 to 31     | +2                               | 0            |
|               | BIOLOGY (PART-D)     | 32 to 36     | +2                               | 0            |
|               | PHYSICS (PART-A)     | 37 to 48     | +1.5                             | 0            |
| 25251211 111  | CHEMISTRY (PART-B)   | 49 to 60     | +1.5                             | 0            |
| SECTION - III | MATHEMATICS (PART-C) | 61 to 72     | +1.5                             | 0            |
|               | BIOLOGY (PART-D)     | 73 to 84     | +1.5                             | 0            |
|               | PHYSICS (PART-A)     | 85 to 87     | +3                               | 0            |
|               | CHEMISTRY (PART-B)   | 88 to 90     | +3                               | 0            |
| SECTION - IV  | MATHEMATICS (PART-C) | 91 to 93     | +3                               | 0            |
|               | BIOLOGY (PART-D)     | 94 to 96     | +3                               | 0            |
| OFOTION V     | MATHEMATICS (PART-A) | 97 to 102    | +3                               | 0            |
| SECTION - V   | MATHEMATICS (PART-B) | 103 to 108   | +3                               | 0            |

- 3. Answers have to be marked on the OMR sheet. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
- 4. Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
- 5. Before attempting paper write your OMR Answer Sheet No., Registration Number, Name and Test Centre in the space provided at the bottom of this sheet.
- 6. See method of marking of bubbles at the back of cover page for question no. 103 to 108.

Note: Please check this Question Paper contains all 108 questions in serial order. If not so, exchange for the correct Question Paper.

| OMR Answer Sheet No.  | : |
|-----------------------|---|
| Registration Number   | : |
| Name of the Candidate | : |
| Test Centre           | : |

For questions 103 to 108 Numerical based questions single digit answer 0 to 9 Example 1: If answer is 6. Correct method: 0 1 2 3 4 5 6 7 8 9 Example 2: If answer is 2. Correct method: 0 1 2 3 4 5 6 7 8 9

#### Recommended Time: 35 Minutes for Section - I

#### Section - I

#### **APTITUDE TEST**

This section contains 18 Multiple Choice Questions number 1 to 18. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

**Directions (1 to 5):** In each of the following questions, a number/alphabet series is given with one term is missing. Choose the correct alternative that will continue the same pattern and replace the question mark (?) in the given series.

| 1. | 16, 36, 64, 100, ?<br>(A) 121<br>(C) 169 | (B) 144<br>(D) 225 |
|----|--|--------------------|
| 2. | 29, 33, 37, 41, ?<br>(A) 46<br>(C) 43    | (B) 45<br>(D) 42   |
| 3. | 96, 48, 24, 12, ?<br>(A) 6<br>(C) 2      | (B) 4<br>(D) 5     |
| 4. | D, H, L, P, ?<br>(A) S<br>(C) T          | (B) U<br>(D) Z     |
| 5. | AZ, BY, CX, DW, ?<br>(A) FE<br>(C) EG    | (B) FG<br>(D) EV   |

#### FTRE-2018-C-VI-(Paper-1)-AT+S&M-4

| 6.  | 'Taka' is related to 'Bangladesh', similarly 'Poun<br>(A) Russia<br>(C) England (UK) | d sterling' is related with ?<br>(B) Pakistan<br>(D) Bhutan                                 |  |  |
|---|--|---|--|--|
| 7.  | 'Wicket' is related to 'Cricket', similarly 'Checkman' (A) Tennis (C) Chess          | ate' is related to? (B) Football (D) None of these  |  |  |
| 8.  | If Modi is brother of Savi, Savi is sister of Kavi Ravi?                             | and Kavi is father of Ravi, how Modi is related to  |  |  |
|   | (A) Uncle<br>(C) Grandfather   | (B) Father (D) Mother   |  |  |
| 9.  | If '+' is called 'x', '-' is called '÷', '÷' is called '-' a<br>(A) 40<br>(C) 60     | and ' <b>x</b> ' is called ' <b>+</b> ', then 20 + 10 - 5 ÷ 5 <b>x</b> 15 = ? (B) 50 (D) 35 |  |  |
| 10.   | Find the number of triangles in the given figure (A) 5 (C) 6                         | (B) 4<br>(D) 1  |  |  |
| <b>Directions (Q. 11 to 12):</b> In each of the following questions choose appropriate option from given alternatives such that the relationship defined by ':' is preserved. |  |   |  |  |
| 11.   | 8 : 27 and 64 : ?<br>(A) 121<br>(C) 343  | (B) 216<br>(D) 125  |  |  |
| 12.   | 3:16 and 7:?<br>(A) 34<br>(C) 43   | (B) 29<br>(D) 36  |  |  |

**Directions (Q. 13 to 14):** In each of the following questions, select a figure from amongst the four alternatives, which when placed in the blank space of figure (X) would complete the pattern.

13.









14.

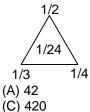








15. Find the missing number that comes in the place of question mark (?).



40



(B) 402 (D) 220

**Directions (Q. 16 to 18):** Study the following information to answer the questions given below: Five people A, B, C, D and E are sitting along a circle facing the centre. C is second to the right of A and D is second to the right of C. E is not neighbour of D then,

- 16. What is the position of E?
  - (A) To the immediate right of C
  - (C) To the immediate left of B

- (B) To the immediate left of A
- (D) To the immediate right of A
- 17. Which of the following is a right statement?
  - (A) A sits between C and D
  - (C) A is second to the left of B

- (B) C sits between B and E
- (D) C is second to the right of D
- 18. Which of the following is false statement?
  - (A) A is immediate right of D
  - (C) B is immediate left of C

- (B) A is second to the left of C
- (D) B is immediate right of C

#### Recommended Time: 35 Minutes for Section - II

#### Section - II

### PHYSICS - (PART - A)

This part contains 4 Multiple Choice Questions number 19 to 22. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

| 19. | A triangle drawn to a reduced scale to measure the distance between P and Q is as shown below. If the actual distance between P and Q is 3 km, and between P and R is 4 km; the length of the line PR in the diagram is |   |  |
|-----|---|---|--|
|     | (A) 2 cm  | (B) 1 cm  |  |
|     | (C) 4 cm  | (D) 8 cm P Q  |  |
|     |   | OGIII   |  |
| 20. | Which among the following is the fastest? (A) A bus covering 10 km in 10 minutes (C) A bus covering 2 m in 1 s  | (B) A car covering 40 km in 1 h (D) A car covering in 200 km in 6 h |  |
| 21. | A helicopter is moving in a straight path. Which executes?  | type of motion will the propeller of a helicopter                   |  |
|     | (A) Rotatory motion   | (B) Oscillatory motion  |  |
|     | (C) Translatory motion  | (D) Both (A) and (C)  |  |
| 22. | Convert 72 km/h into m/s (A) 10 m/s (C) 0 m/s   | (B) 20 m/s<br>(D) 30 m/s  |  |
|     | (6) 0 11/3  | (D) 30 H/3  |  |

Space for Rough Work

#### CHEMISTRY - (PART - B)

This part contains **4 Multiple Choice Questions** number **23 to 26**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

23. Which of the following statements is true about cotton clothes? (A) They are made up of a synthetic fibre (B) They do not absorb water (C) They keep us cool during summer (D) They do not get wrinkled easily 24. Which of the following materials is lustrous? (A) Oxygen (B) Gold (C) Nitrogen (D) None of these 25. Which of the following is a physical change? (A) Burning of coal (B) Cooking of egg (C) Baking a cake (D) Boiling of water Which pair of liquids are miscible? 26. (A) Water & Petrol (B) Water & Coconut Oil (C) Water & Alcohol (D) Water & Kerosene

### MATHEMATICS - (PART - C)

This part contains **5** Multiple Choice Questions number **27** to **31**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

| 27. | A student multiplied 1538 by 86 instead of 68. answer?                                 | By how much was his answer greater than correct       |
|-----|--|---|
|     | (A) 28764  | (B) 26874   |
|     | (C) 27684  | (D) 27846   |
|     | (0) 21 004   | (B) 21040   |
| 28. | Estimate the sum 4832 + 886 + 68 (rounding of  | ff to nearest tens)                                   |
|     | (A) 5790   | (B) 5900  |
|     | (C) 5700   | (D) 6000  |
|     | (=) ====   | (=)   |
| 29. | Raman had some toffees. He gave away $\ell$ toff him. How many toffees did Raman have? | ees to his friends and still left with 6 toffees with |
|     | (A) ℓ − 6  | (B) ℓ + 6   |
|     | (0)  | - · · ·   |
|     | (C) 6 ℓ  | (D) $\frac{6}{6}$                                     |
|     |  |   |
| 00  | + P 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |   |
| 30. | Two-digit number whose successor is three-dig  |   |
|     | (A) 98   | (B) 100   |
|     | (C) 9  | (D) 99  |
|     |  |   |
| 31. | Number of multiples of 6 upto 100 is   |   |
|     | (A) 8  | (B) 12  |
|     | (C) 16   | (D) 14  |
|     | •  | • ,   |

#### BIOLOGY - (PART - D)

This part contains **5 Multiple Choice Questions** number **32 to 36**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

32. Match the item given in column in A with those given in column B:

| Column – A |                              |       | Column – B             |
|------------|------------------------------|-------|------------------------|
| (a)        | Milk, curd, cheese, ghee     | (i)   | Eat other animals      |
| (b)        | Spinach, cauliflower, carrot | (ii)  | Eat plants             |
| (c)        | Lions and tigers             | (iii) | Are vegetables         |
| (d)        | Herbivores                   | (iv)  | Are all animal product |

- (A) (a iv), (b iii), (c i), (d ii)
- (B) (a iii), (b iv), (c ii), (d i)
- (C) (a i), (b ii), (c iii), (d iv)
- (D) (a iii), (b i), (c iv), (d ii)
- 33. Which of the following is an edible fungus?
  - (A) Mushroom

(B) Cabbage

(C) Pea

- (D) Rhizobium
- - (A) (i) Tap root (ii) Monocot

- (B) (i) Tap root (ii) Dicot
- (C) (i) Fibrous root (ii) Monocot
- (D) (i) Fibrous root (ii) Dicot
- 35. The loss of water from leaves of a plant is called
  - (A) Evaporation

(B) Respiration

(C) Transportation

(D) Transpiration

36. Match the following:

| ·   | Column – A |       | Column – B      |
|-----|------------|-------|-----------------|
| (a) | Vitamin A  | (i)   | Fat soluble     |
| (b) | Vitamin C  | (ii)  | Haemoglobin     |
| (c) | Iron       | (iii) | Bones and teeth |
| (d) | Phosphorus | (iv)  | Water soluble   |

- (A) (a i), (b ii), (c iii), (d iv)
- (B) (a ii), (b iii), (c i), (d iv)
- (C) (a i), (b iv), (c ii), (d iii)
- (D) (a i), (b iv), (c iii), (d ii)

#### Recommended Time: 50 Minutes for Section - III

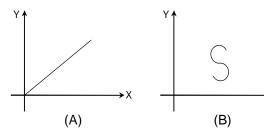
#### Section - III

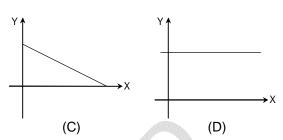
#### PHYSICS - (PART - A)

This part contains 12 Multiple Choice Questions number 37 to 48. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

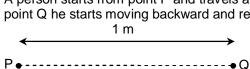
| 37. | What is the S.I. unit of area? (A) cm (C) m <sup>2</sup>   | (B) m <sup>3</sup> (D) litre                      |
|-----|--|---|
| 38. | What is the S.I unit of gravitational force? (A) Newton (C) Joule  | (B) Dyne<br>(D) m                                 |
| 39. | What is the value of prefix gega (G)? (A) 10 <sup>6</sup> (C) 10 <sup>9</sup>  | (B) 10 <sup>3</sup> (D) 10 <sup>11</sup>          |
| 40. | One gram is equal to  (A) 10 <sup>3</sup> kg (C) 10 <sup>-8</sup> mg   | (B) 10 <sup>3</sup> mg<br>(D) 10 <sup>-3</sup> cg |
| 41. | The ratio of displacement to distance has(A) m (C) No  | unit<br>(B) m <sup>2</sup><br>(D) m <sup>3</sup>  |
| 42. | Choose the wrong statement among the followir  (A) To describe speed, direction is necessary  (B) The magnitude of distance covered and magnitude of distance covered and magnitude travels along a straight line  (C) Time is a scalar quantity  (D) Both (B) and (C) |   |

43. Which of the following graph is not possible? IY = Position. X = Time!





44. A person starts from point P and travels along a straight line path of length 1 m, after reaching at point Q he starts moving backward and reaches the same point P.

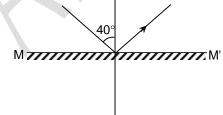


Find the distance travelled by a person

- (A) 2 m
- (C) zero

- (B) 1 m
- (D) 0.5 m
- 45. A light ray is incident on a reflecting surface as shown in the below figure. What is the angle of deviation?
  - (A) 100°
  - (A) 100°

- (B) 120°
- (D) 180°



- 46. Choose the correct statement from the following:
  - (A) Cement wall is an opaque medium
- (B) Distillated water is a transparent medium
- (C) Oiled paper is a translucent medium
- (D) All of the above
- 47. Among the following, identify the odd one out.
  - (A) Sun
  - (C) Burning candle

- (B) Stars
- (D) Glow worm

- 48. Pinhole camera produces :-
  - (A) An erect and small image
  - (C) An inverted and enlarged image
- (B) An inverted and small image
- (D) An erect and enlarged image

#### CHEMISTRY - (PART - B)

This part contains 12 Multiple Choice Questions number 49 to 60. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

| 49. | Which of the following phenomena does not abs (A) Boiling (C) Evaporation   | orb heat? (B) Melting (D) Freezing                    |
|-----|---|---|
| 50. | A mixture of iron fillings and sand can be separa<br>(A) Threshing<br>(C) Winnowing   | ated by :  (B) Magnetic separation  (D) None of these |
| 51. | Out of the following, which statement is true?  (A) A mixture of powdered salt and sugar can b  (B) Butter is separated from milk by sieving  (C) Salt can be separated from its solution in wa  (D) Separating funnel is used to separate two materials. | ater by evaporation                                   |
| 52. | The metal which exists as liquid at room temper (A) Platinum (C) Magnesium  | ature is : (B) Iron (D) Mercury                       |
| 53. | Which among the following is an animal protein (A) Cotton (C) Silk  | fibre?<br>(B) Jute<br>(D) Flax                        |
| 54. | Which of the following involves a fast chemical of (A) The burning of matchstick (C) Germination of seed  | change? (B) Rusting of iron (D) Growth of a plant     |
| 55. | Which of the following is an alloy? (A) Iron (C) Stainless steel  | (B) Aluminium (D) Copper                              |

| 56. | The separation of fibres from the seeds of cotton  | n is called :                  |  |  |
|-----|--|--------------------------------|--|--|
|     | (A) Retting  | (B) Ginning                    |  |  |
|     | (C) Weaving  | (D) Knitting                   |  |  |
| 57. | The hand operated device(s) used for spinning i    | s/are:                         |  |  |
|     | (A) Takli  | (B) Charkha                    |  |  |
|     | (C) Both (A) & (B)                                 | (D) None of these              |  |  |
| 58. | Which of the following substances will sink in wa  | ater?                          |  |  |
|     | (A) Dry wood                                       | (B) Ice                        |  |  |
|     | (C) Silver coin                                    | (D) All of the above           |  |  |
|     | (0) 0  | (=) 3 3 3 3                    |  |  |
| 59. | Which of the following materials are generally go  | ood conductors of electricity? |  |  |
|     | (A) Metals   | (B) Air                        |  |  |
|     | (C) Plastic  | (D) Glass                      |  |  |
|     |  |                                |  |  |
| 60. | Which one of the following is a reversible change? |                                |  |  |
|     | (A) Melting of chocolate                           | (B) Burning of fire crackers   |  |  |
|     | (C) Digestion of food                              | (D) Curdling of milk           |  |  |

#### MATHEMATICS - (PART - C)

This part contains 12 Multiple Choice Questions number 61 to 72. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

- 61. If a and b are integers then (a b) is
  - (A) even number

(B) fraction

(C) natural number

- (D) integer
- 62. The expression  $(3 \times 49)(3 \times 49)(3 \times 49)(3 \times 49)(3 \times 49)$  can be expressed as
  - (A)  $3^6 \times 49^6$

(B)  $3^7 \times 49^7$ 

(C)  $(3 \times 49)^3$ 

- (D)  $3^6 \times 49^5$
- 63. (i) If the product of two whole numbers is zero then one number will be zero.
  - (ii) If product of two whole numbers is zero, then both numbers will be zero.
  - (A) only (i) can be true

(B) only (ii) can be true

(C) both can be true

- (D) both are false
- 64. In a game, Raj hits a balloon. He gets 300 points, if he hits and lose 100 points, if he misses. Raj hits 15 balloons and misses 40 balloons. Find his net score
  - (A) 400

(B) 300

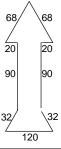
(C) 500

- (D) 200
- 65. The perimeter of following figure is \_\_\_\_\_cm
  - (A) 540

(B) 210

(C) 450

(D) 860



66. The missing number is



- (A) 1 (C) 3

- (B) 2 (D) 4
- 67. A line segment with its end points lying on a circle is called
  - (A) semi-circle
- (C) chord

- (B) sector
- (D) segment
  - The length of boundary of a circle is called its (A) circumference
- (B) radius

(C) diameter

- (D) chord
- 69. In the figure  $\angle Q = 2\angle S$  and  $\angle QPR = 2\angle RPS$ . Find  $\angle RPS +$



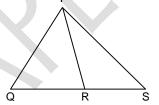
68.

(A) 60°

(B) 45°

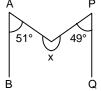
(C) 72°

(D) 54°



- 70. Find the smallest number which is divisible by 6, 8, 9
  - (A) 2012
  - (C) 2160

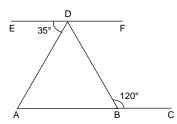
- (B) 2088 (D) 2016
- 71. AB and PQ are parallel, the value of x is
  - (A) 260°
  - (B) 129°
  - (C) 131°
  - (D) 200°



72. If AC and EF are parallel, ∠ADB =



- (B) 95°
- (C) 60°
- (D) 85°



#### BIOLOGY - (PART - D)

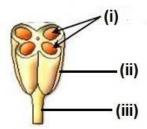
This part contains 12 Multiple Choice Questions number 73 to 84. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

- 73. From the following group of diseases identify the vitamin deficiency diseases:
  - (A) Scurvy, goitre, anaemia

(B) Kwashiorkor, marasmus, rickets

(C) Goitre, rickets, beri-beri

- (D) Scurvy, rickets, beri-beri
- 74. In a given food there are three components **A**, **B** and **C**. **A** provide twice as much energy as **B**, where as component **C** has no food value but it provide bulk to food. Identify **A**, **B** and **C**.
  - (A)  $\mathbf{A}$  fat,  $\mathbf{B}$  carbohydrate,  $\mathbf{C}$  roughage
- (B) **A** protein, **B** fat, **C** roughage
- (C) **A** roughage, **B** fat, **C** carbohydrate
- (D) **A** fat, **B** roughage, **C** carbohydrate
- 75. In the given figure identify (i), (ii) and (iii).



- (A) (i) pollen sac, (ii) anther, (iii) filament
- (B) (i) filament, (ii) anther, (iii) pollen sac
- (C) (i) filament, (ii) anther, (iii) stamen
- (D) (i) anther, (ii) filament, (iii) pollen sac
- 76. Which of the following test describes the test for glucose (carbohydrate)?
  - (A) Mix the test sample with Benedict's solution and heat it
  - (B) Mix the test sample with Benedict's solution and do not heat it
  - (C) Mix the test sample with Biuret solution and heat it
  - (D) Mix the test sample with Biuret solution and do not heat it

| 77. | Excessive bleeding from injury is due to lack of (A) Vitamin A (C) Vitamin K   | :<br>(B) Vitamin D<br>(D) Vitamin B   |  |  |
|-----|--|---|--|--|
| 78. | respectively.  | er whereas gynoecium ispart of flower                                       |  |  |
|     | <ul><li>(A) male, female</li><li>(C) fruit, ovary</li></ul>  | (B) female, male<br>(D) ovary, fruit  |  |  |
| 79. | White part of egg contains a protein(X) respectively.  | where as milk contains a protein(Y)   |  |  |
|     | <ul><li>(A) X – Albumin, Y – Casein</li><li>(C) X – Keratin, Y – Casein</li></ul>  | <ul><li>(B) X - Casein, Y - Albumin</li><li>(D) None of the above</li></ul> |  |  |
| 80. | Which among the following does have all modif  | fied stems:   |  |  |
|     | (A) Potato, carrot, onion  | (B) Onion, garlic, ginger   |  |  |
|     | (C) Onion, ginger, sweet potato  | (D) Radish, onion, ginger   |  |  |
| 81. | Which of the following statements is incorrect?  (A) Green leaves can only make food when the (B) Male part of flower develops into fruits  (C) Roots hold the plants firmly to the ground |   |  |  |
|     | (D) Plants need air, water and sunlight to grow  |   |  |  |
| 82. |  | ) and ovule develop into(B)   |  |  |
|     | (A) (A) – Pistil, (B) – Pollen   | (B) (A) – Pollen, (B) – Pistil  |  |  |
|     | (C) (A) – Seed, (B) – Fruit  | (D) (A) – Fruit, (B) – Seed   |  |  |
| 83. | Given below are the names of some animals  |   |  |  |
|     | 1. Goat  |   |  |  |
|     | <ul><li>2. Human being</li><li>3. Cockroach</li></ul>  |   |  |  |
|     | 4. Eagle   |   |  |  |
|     | Which of the above animals form a pair of Omnivores?   |   |  |  |
|     | (A) (1) and (2)  | (B) (2) and (3)   |  |  |
|     | (C) (3) and (4)  | (D) (2) and (4)   |  |  |
| 84. | Stilt root is found in   |   |  |  |
|     | (A) Rhizophora   | (B) Sugarcane   |  |  |
|     | (C) Mango  | (D) Both (A) and (B)  |  |  |

# Recommended Time: 30 Minutes for Section – IV Section – IV

## PHYSICS - (PART - A)

This part contains **3 Multiple Choice Questions** number **85 to 87**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

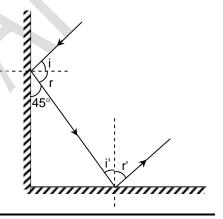
- 85. What is the nature of the image of an object formed on the inner surface of a spoon?
  - (A) Magnified and virtual
  - (C) Both (A) and (B)

- (B) Magnified and real
- (D) Diminished and virtual
- 86. The direction of light can be changed by
  - (A) Reflection
  - (C) Both (A) and (B)

- (B) Refraction
- (D) Neither (A) nor (B)
- 87. Choose the correct value of 2i+i'-r' from the following:
  - (A) 90°
  - (C) 30°

(B) 60°





### CHEMISTRY - (PART - B)

| This p  | part contains <b>3 muitipie Choice Questio</b> i                     | <b>ns</b> number <b>88 to 90.</b> Each question has 4 choices |  |  |  |
|---------|--|---|--|--|--|
| (A), (B | B), (C) and (D), out of which <b>ONLY ONE</b> is a                   | correct.  |  |  |  |
| 88.     | In sedimentation, the upper clear liquid is o                        | called & the heavier particles that settle at the             |  |  |  |
|         | bottom are called  |   |  |  |  |
|         | (A) Sediments, filtrate  | (B) Filtrate, supernatant                                     |  |  |  |
|         | (C) Supernatant, sediments   | (D) None of these   |  |  |  |
| 89.     | Lemon juice +Baking soda + Water ——→ Carbon dioxide + Other products |   |  |  |  |
|         | What type of change is it?   |   |  |  |  |
|         | (A) Physical   | (B) Chemical  |  |  |  |
|         | (C) Reversible   | (D) Both (A) & (C)  |  |  |  |
| 90.     | The interparticle spaces are least in :                              |   |  |  |  |
|         | (A) Solids   | (B) Liquids   |  |  |  |
|         | (C) Gases  | (D) Equal in all the three states of matter                   |  |  |  |

#### MATHEMATICS - (PART - C)

This part contains **3 Multiple Choice Questions** number **91 to 93**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

- 91. Simplify  $9pq + 6p 8q [4pq + 2p {9pq q 6}]$ 
  - (A) 14pq + 4p 9q 6

(B) 14pq + 4p - 9q + 6

(C) - 14pq + 4p - 9q - 6

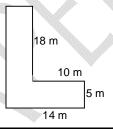
- (D) 14pq + 4p + 9q 6
- 92. The dimensions of rectangular field are 23x 10 and 14x + 8 units. The value of x for which it would be square is
  - (A) 7

(B) 1

(C) 2

- (D) none of these
- 93. Area of the given figure is\_\_\_\_\_ m<sup>2</sup>
  - (A) 50
  - (C) 142

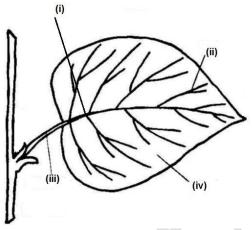
- (B) 72
- (D) 140



#### BIOLOGY - (PART - D)

This part contains **3 Multiple Choice Questions** number **94 to 96**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

94. In the following figure identify (i), (ii), (iii) and (iv)



- (A) (i) midrib, (ii) vein, (iii) pedicle, (iv) lamina
- (B) (i) midrib, (ii) vein, (iii) petiole, (iv) lamina
- (C) (i) vein, (ii) midrib, (iii) pedicle, (iv) lamina
- (D) (i) midrib, (ii) lamina, (iii) vein, (iv) Pedicle
- 95. In green plants, leaves perform photosynthesis with the help of green colour pigment:
  - (A) Lycopene

(B) Chlorophyll

(C) Bile

- (D) Haemoglobin
- 96. Deficiency of .....leads to goiter.
  - (A) Iron

(B) Milk

(C) Meat

(D) lodine

LCM of  $4\frac{1}{2}$ , 3 and  $10\frac{1}{2}$  is

102.

(A) 36

(C) 63

# Recommended Time: 30 Minutes for Section – V Section – V

#### MATHEMATICS - (PART - A)

This part contains 6 Multiple Choice Questions number 97 to 102. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

| cnoice. | S (A), (B), (C) and (D), out of which <b>ONLY ONE</b>   | is correct.  |  |  |  |  |
|---------|---|--|--|--|--|--|
| 97.     |   | funds for eradicating hunger. School I raises Rs raises Rs 1099. Total amount raised by all three  (B) 18853 (D) 18088 |  |  |  |  |
| 98.     | Sachin takes 10 rounds of rectangular park, 50m long and 20 m wide. Find the total distance covered by him. |  |  |  |  |  |
|         | (A) 140 m<br>(C) 700 m  | (B) 14000 m<br>(D) 1400 m  |  |  |  |  |
| 99.     | The product of two two- digit numbers is 4514. is 42, then numbers are (A) 64, 74                           | If the product of their unit digits is 4 and tens digit (B) 61, 74   |  |  |  |  |
|         | (C) 61, 71  | (D) 71, 74   |  |  |  |  |
| 100.    | Given a, b, c, d and e are consecutive numbers (A) 16 (C) 17  | and $a + b + c + d + e = 90$ , find the value of c.<br>(B) 15<br>(D) 18  |  |  |  |  |
| 101.    |   | e, PQRS is a square of side 14 cm and two semi-circles swith PQ and SR as diameter. Find the area of shaded            |  |  |  |  |
|         | (A)49 cm <sup>2</sup>   | (B) 42 cm <sup>2</sup>   |  |  |  |  |
|         | (C) 154 cm <sup>2</sup>   | (D) 196 cm <sup>2</sup>  |  |  |  |  |

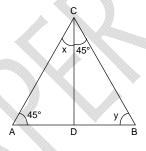
Space for Rough Work

(B) 18

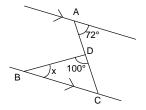
#### MATHEMATICS - (PART - B)

This part contains 6 Numerical Based Questions number 103 to 108. Each question has Single Digit Answer 0 to 9.

- 103. If  $-6z \frac{1}{4} = \frac{119}{4}$ , then -z is
- 104. LCM of two numbers 20 and 16 is 80. Then the HCF of two numbers is
- 105. If  $\angle ADC$  and  $\angle BDC$  are right angles, then  $\frac{1}{10}(x + y)$  is



- 106. Number of integers that lie between 5 and 3 are \_\_\_\_\_.
- 107. A rectangle has its length 4 times its breadth. A square is made taking length of rectangle as side. Area of square is N times that of rectangle. Then N is
- 108. In the adjoining figure the arrowed lines are parallel. Find x



## FIITJEE TALENT REWARD EXAM

## CLASS – VI (PAPER – 1) ANSWERS

| 1.   | В | 2.   | В | 3.   | A | 4.   | C  |
|------|---|------|---|------|---|------|----|
| 5.   | D | 6.   | С | 7.   | C | 8.   | Α  |
| 9.   | В | 10.  | С | 11.  | D | 12.  | D  |
| 13.  | С | 14.  | D | 15.  | C | 16.  | D, |
| 17.  | В | 18.  | С | 19.  | D | 20.  | Α  |
| 21.  | D | 22.  | В | 23.  | C | 24.  | В  |
| 25.  | D | 26.  | C | 27.  | C | 28.  | Α  |
| 29.  | В | 30.  | D | 31.  | C | 32.  | Α  |
| 33.  | Α | 34.  | В | 35.  | D | 36.  | С  |
| 37.  | С | 38.  | A | 39.  | С | 40.  | В  |
| 41.  | С | 42.  | A | 43.  | В | 44.  | Α  |
| 45.  | Α | 46.  | D | 47.  | С | 48.  | В  |
| 49.  | D | 50.  | В | 51.  | С | 52.  | D  |
| 53.  | C | 54.  | A | 55.  | С | 56.  | В  |
| 57.  | C | 58.  | C | 59.  | Α | 60.  | Α  |
| 61.  | D | 62.  | A | 63.  | С | 64.  | С  |
| 65.  | A | 66.  | В | 67.  | С | 68.  | Α  |
| 69.  | A | 70.  | D | 71.  | Α | 72.  | D  |
| 73.  | D | 74.  | Α | 75.  | Α | 76.  | Α  |
| 77.  | C | 78.  | Α | 79.  | Α | 80.  | В  |
| 81.  | В | 82.  | D | 83.  | В | 84.  | D  |
| 85.  | A | 86.  | С | 87.  | Α | 88.  | С  |
| 89.  | В | 90.  | Α | 91.  | Α | 92.  | С  |
| 93.  | С | 94.  | В | 95.  | В | 96.  | D  |
| 97.  | Α | 98.  | D | 99.  | В | 100. | D  |
| 101. | В | 102. | С | 103. | 5 | 104. | 4  |
| 105. | 9 | 106. | 7 | 107. | 4 | 108. | 8  |