

# FIITJEE ADMISSION TEST- 2019

for students of  
**Class 10**  
**Paper 1**

Time: 3 Hours (9:30 am – 12:30 pm)

**Code** | **1000**

Maximum Marks: 210

## **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 60 Minutes on Section-I, 60 Minutes on Section-II and 60 Minutes on Section-III.
2. This Question paper consists of 3 sections. Marking scheme is given in table below:

Section	Subject	Question no.	Marking Scheme for each question	
			correct answer	wrong answer
SECTION – I	APTITUDE	1 to 30	+3	0
SECTION – II	PHYSICS (PART-A)	31 to 39	+2	0
	CHEMISTRY (PART-B)	40 to 48	+2	0
	MATHEMATICS (PART-C)	49 to 57	+2	0
	BIOLOGY (PART-D)	58 to 66	+2	0
SECTION – III	PHYSICS (PART-A)	67 to 78	+1	0
	CHEMISTRY (PART-B)	79 to 90	+1	0
	MATHEMATICS (PART-C)	91 to 102	+1	0
	BIOLOGY (PART-D)	103 to 114	+1	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.

**Note:** Please check this Question Paper contains all **114** 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 : \_\_\_\_\_

## Recommended Time: 60 Minutes for Section – I

### Section – I

## APTITUDE TEST

*This section contains 30 Multiple Choice Questions number 1 to 30. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

**Directions (Q. 1 to 6):** In each of the following questions, a number/letter 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. AN, CP, FS, ?  
(A) IV (B) JW  
(C) KX (D) LW
2. MYZ, LWX, ?, JST  
(A) KUV (B) IQR  
(C) HOP (D) GMN
3. 8, 27, 64, ?, 216, 343.  
(A) 125 (B) 81  
(C) 100 (D) 196
4. 5, 11, 19, ?, 41  
(A) 28 (B) 29  
(C) 30 (D) 35
5. 120, ?, 24, 6, 0.  
(A) 100 (B) 70  
(C) 60 (D) 20

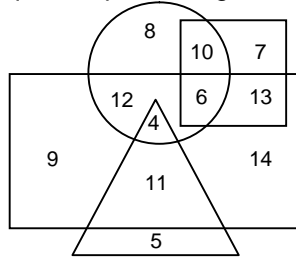
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6. 729, 81, 9, 1,  $\frac{1}{9}$ , ?,  $\frac{1}{729}$ .
- (A)  $\frac{1}{27}$  (B)  $\frac{1}{81}$   
 (C)  $\frac{1}{243}$  (D)  $\frac{1}{486}$
7. If in a coded language the word 'REKHA' is written as 'AHKER' then in the same code language 'HEMA' will be written as
- (A) AMEH (B) EMAH  
 (C) MAHE (D) EAMH
8. If in a coded language the word CHILDREN is written as EJKNFTGP then TEACHER will be written as
- (A) VGCEJTG (B) VGCEJGT  
 (C) VGCJEGT (D) VGCGEJT
9. A is paternal uncle of B, B is daughter of C, C is the wife of D's son. Then how is A related to D?
- (A) Son (B) Brother  
 (C) Father (D) Maternal uncle
10. Ram travels 8 km to south, then moves to right and travels 6 km and at the end he again moves right and travels 8 km. Then finally how much shortest distance of Ram from initial point is
- (A) 6 km (B) 8 km  
 (C) 10 km (D) 14 km
11. If  $A = x\%$  of  $y$  and  $B = y\%$  of  $x$ , then which of the following is true?
- (A)  $A = B$  (B)  $A < B$   
 (C)  $A > B$  (D) None of these
12. If 'A3P' means 'A is the mother of P', 'A4P' means 'A is the brother of P', 'A9P' means 'A is the husband of P' and 'A5P' means 'A is the daughter of P', then which of the following means that K is the mother-in-law of M?
- (A) M9N3K4J (B) M9N5K3J  
 (C) K5J9M3N (D) K3J9N4M

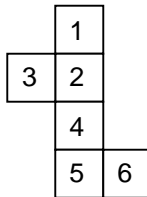
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**Directions (Q. 13 to 14):** In the following diagram rectangle represents men, triangle represents educated, circle represents urban and square represents government employees.



13. Which one of the following number represents the educated men but not urban?  
 (A) 9 (B) 5  
 (C) 4 (D) 11
14. Which one of the following represents men who are urban as well as government employees?  
 (A) 7 (B) 13  
 (C) 10 (D) 6
15. Pointing to a lady, a man said "The son of her only brother is the brother of my wife". How is the lady related to the man?  
 (A) Mother's sister (B) Grandmother  
 (C) Sister of father-in-law (D) Maternal aunt
16. When the following figure is folded to form a cube, which number is opposite to the face 3?



- (A) 1 (B) 4  
 (C) 5 (D) 6

*Space for Rough Work*

17. Sara is older than Mala. Gopal is older than Mala but younger than Sara. Kapil is younger than Ram and Mala. Mala is older than Ram. Who is the eldest?  
 (A) Sara (B) Mala  
 (C) Kapil (D) Gopal
18. In a coded language 'RUSTY' is written as 96872. Then in the same coded language 'ZXWV' will be written as  
 (A) 1354 (B) 1543  
 (C) 1345 (D) 1534
19. Arrange the given words in the sequence in which they occur in the dictionary and then choose the correct sequence.  
 1. Spruce 2. Spume 3. Spree 4. Spurt 5. Sprawl  
 (A) 5, 3, 1, 2, 4 (B) 1, 2, 3, 4, 5  
 (C) 3, 5, 1, 4, 2 (D) 5, 4, 3, 2, 1

**Directions (Q. 20 to 21):** Study the following arrangement of the English alphabet and answer the questions given below:

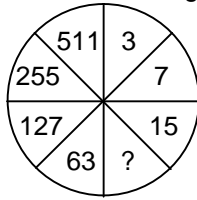
**F J M P O W R N B E Y C K A V L D G X U H Q I S Z T**

20. Which letter is tenth to the right of the letter which is exactly the middle letter between F and D?  
 (A) D (B) G  
 (C) H (D) X
21. **FJM** is related to **TZS** in the same way as **JMP** is related to  
 (A) IZS (B) ZSI  
 (C) ZIS (D) ISZ

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*Space for Rough Work*

22. Find the missing term in the following figures.



- (A) 30 (B) 31  
(C) 32 (D) 33
23. If every letter of English Alphabets beginning from 'B' is replaced by consecutive odd number beginning with 3, which number will be 3<sup>rd</sup> to the right of the 10<sup>th</sup> letter counting from the right end?  
(A) 17 (B) 33  
(C) 23 (D) 39
24. If '-' stands for addition, '+' stands for subtraction, '÷' stands for multiplication and 'x' stands for division, then which one of the following equations is correct?  
(A)  $25 \times 5 \div 20 - 27 + 7 = 120$  (B)  $25 + 5 \times 20 - 27 \div 7 = 128$   
(C)  $25 + 5 - 20 \div 27 \times 7 = 95$  (D)  $25 - 5 + 20 \times 27 \div 7 = 100$

**Directions (Q. 25 to 27):** Study the following information carefully and answer the questions given below: Eight friends A, B, C, D, E, F, G and H are sitting around a circular table facing the centre, not necessarily in the same order. C is third to the left of E, B is not an immediate neighbour of either E or C. H is not an immediate neighbour of E. D is third to the right of B, H is second to the left of A. F is not immediate neighbour of H.

25. Who is sitting third to the left of B?  
(A) E (B) A  
(C) G (D) B
26. Which of the following pairs of people correctly represents the pair of people who are immediate neighbour of H?  
(A) DG (B) GA  
(C) AD (D) BG
27. Who is sitting between B and C?  
(A) H (B) F  
(C) A (D) G

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*Space for Rough Work*

**Directions (Q. 28 to 30):** In each question below is given a group of letter followed by found combination of digits/symbol numbered (A), (B), (C) and (D). You have to find out which of the four combination correct represents combination as your answers.

<b>Letter</b>	R	E	A	U	M	D	F	P	Q	I	O	H	N	W	Z	B
<b>Symbol</b>	7	#	\$	6	%	8	5	*	4	9	@	©	3	β	1	2

- (i) If first letter is a consonant and the third letter is a vowel, their codes are to be interchanged.  
(ii) If the first letter is a vowel and the fourth letter is a consonant, both are to be coded as the code for the vowel.  
(iii) If the second and the third letters are consonant both are to be coded as the code for the third letter.

28. NABAQE  
(A) 2\$3\$4# (B) 32\$\$4#  
(C) 3\$2\$4# (D) 3\$2\$3#
29. FWZERA  
(A) 5β#7\$ (B) 5ββ#7\$  
(C) β17#\$ (D) 511#7\$
30. EMIRDP  
(A) #%978\* (B) #9#8\*  
(C) 7%9#8\* (D) #9%78\*

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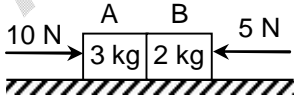
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## Recommended Time: 60 Minutes for Section – II

### Section – II

## PHYSICS – (PART – A)

*This part contains 9 Multiple Choice Questions number 31 to 39. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

31. The S.I. unit of acceleration is :-  
 (A) meter (B) second  
 (C) m/sec (D) m/sec<sup>2</sup>
32. Which of the following is a scalar quantity?  
 (A) Displacement (B) Velocity  
 (C) Acceleration (D) Distance
33. Slope of velocity – time graph at an instant will give us :-  
 (A) Acceleration (B) Distance  
 (C) Displacement (D) None of these
34. Find the force applied by block A on block B. (All the surfaces are smooth)  
 (A) 10 N (B) 5 N  
 (C) 7 N (D) 15 N
- 
35. Inertia of a body depends on :-  
 (A) Velocity (B) Mass  
 (C) Acceleration (D) Speed
36. If a resultant force of 30 N acts on a body of mass 6 kg. What is the acceleration of the body?  
 (A) 20 m / sec<sup>2</sup> (B) 12 m / sec<sup>2</sup>  
 (C) 5 m / sec<sup>2</sup> (D) 8 m / sec<sup>2</sup>
37. Gravitational force between two spherical bodies is directly proportional to which of the following quantity?  
 (A) Distance between the bodies (B) Velocities of the bodies  
 (C) Speed of the bodies (D) Masses of the bodies
38. If a planet moves around the star in circular orbit then which quantity does not change with time?  
 (A) Speed (B) Momentum  
 (C) Velocity (D) None of these
39. What is the value of gravitational acceleration at the center of the earth?  
 (A) 10 m / sec<sup>2</sup> (B) 0 m / sec<sup>2</sup>  
 (C) Infinite( $\infty$ ) (D) 5 m / sec<sup>2</sup>

**Space for Rough Work**



## CHEMISTRY – (PART – B)

This part contains **9 Multiple Choice Questions** number **40 to 48**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

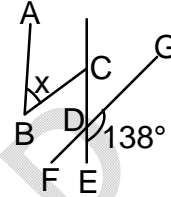
40. The increasing order of forces of attraction is :  
(A) Water < air < rubber (B) Wind < sugar < oil  
(C) Hydrogen < wood < juice (D) Air < juice < salt
41. Which of the following behave like fluids?  
(A) Only gases (B) Gases and liquids  
(C) Only liquids (D) Gases, solids and liquids
42. Which of the following compound will undergo sublimation?  
(A) Sugar (B) Salt  
(C) Camphor (D) None of these
43. At what temperature, does ice and water co-exist together at 1 atmospheric pressure?  
(A) 298 K (B) 273 K  
(C) 300 K (D) All of these
44. What is the SI unit of temperature?  
(A) Celsius (B) Fahrenheit  
(C) Kelvin (D) None of these
45. Solubility of solids in liquids increase with:  
(A) Decrease in temperature (B) Increase in pressure  
(C) Increase in temperature (D) Decrease in pressure
46. A non-metal which has lustre is:  
(A) Mercury (B) Iodine  
(C) Copper (D) Nitrogen
47. Common salt obtained from sea water is impure. It is purified by :  
(A) Evaporation (B) Fractional distillation  
(C) Crystallization (D) Distillation
48. At 100°C steam has more heat energy than the energy of boiling water because  
(A) Steam has lesser kinetic energy than boiling water  
(B) Steam has latent heat of vapourization  
(C) Steam has lesser potential energy than boiling water  
(D) All of the above

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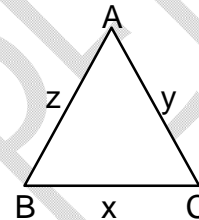
## MATHEMATICS – (PART – C)

This part contains **9 Multiple Choice Questions** number **49 to 57**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

49. In the given figure,  $AB \parallel CE$  and  $BC \parallel FG$ . Find the value of  $x$
- (A)  $52^\circ$  (B)  $32^\circ$   
 (C)  $42^\circ$  (D)  $36^\circ$



50. If  $x^2 + y^2 + z^2 = xy + yz + zx$ , then the triangle is:
- (A) isosceles  
 (B) right angled  
 (C) equilateral  
 (D) scalene



51. If  $27^r = 81$ , find the value of  $\frac{27}{4} \times r^{\frac{3r}{4}}$
- (A) 3 (B)  $3^2$   
 (C)  $3^3$  (D)  $\sqrt[3]{3}$
52. The continued product of  $(1 - x)$ ,  $(1 + x)$ ,  $(1 + x^2)$ ,  $(1 + x^4)$  and  $(1 + x^8)$  is
- (A)  $(1 - x^8 + x^{16})$  (B)  $(x^8 + x^{16})$   
 (C)  $(1 - x^{16})$  (D)  $(x^{16} - 1)$

Space for Rough Work

53. Determine the ratio in which  $y - x + 2 = 0$  divides the line joining  $(3, -1)$  and  $(8, 9)$   
(A) 3 : 5 (B) 4 : 3  
(C) 2 : 3 (D) none of these
54. Find the value of  $k$ , if the points  $(-2, 5)$ ,  $(-5, -10)$  and  $(k, -13)$  are collinear  
(A)  $\frac{5}{28}$  (B)  $-\frac{28}{5}$   
(C) 28 (D) 5
55. The expression  $(x + y)^{-1}(x^{-1} + y^{-1})$  is equivalent to  
(A) 1 (B)  $(xy)^{-1}$   
(C)  $x^y$  (D)  $xy^{-1} + x^{-1}y$
56. The sides of a triangle are 25m, 39m and 56m respectively. Find the length of the altitude on the side 56m.  
(A) 15 m (B) 16.5 m  
(C) 18.6 m (D) 21 m
57. If  $x^{\frac{3}{x^2}} = \left(x^{\frac{3}{2}}\right)^x$ , then the value of  $x$  can be  
(A)  $\frac{3}{2}$  (B)  $\frac{9}{4}$   
(C)  $\frac{16}{25}$  (D)  $\frac{8}{27}$

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Space for Rough Work

## BIOLOGY – (PART – D)

This part contains **9 Multiple Choice Questions** number **58 to 66**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

58. Which of the following is not included in “organic farming”?  
(A) Compost (B) Green manure  
(C) Crop rotation (D) Synthetic fertilizers
59. Red Sindhi, Sahiwal, Jersey and Brown Swiss are breeds of  
(A) Goat (B) Buffalo  
(C) Cow (D) Poultry
60. When fluoride concentration in water exceeds 1.5 mg/lit, the disease that may be caused is:  
(A) Itai-Itai (B) Polio  
(C) Blue baby syndrome (D) Fluorosis
61. Which of the following statements about forest is/are incorrect?  
(I) Forest provides recreational opportunities.  
(II) Forest helps in economic development.  
(III) Forest reduces soil erosion  
(A) (I) and (II) only (B) (II) and (III) only  
(C) (III) only (D) None of the above
62. Phagocytosed food is digested with the help of enzymes which are present in  
(A) Ribosomes (B) Lysosomes  
(C) Mitochondria (D) Golgi complex
63. The cell theory is not applicable to  
(A) Bacteria (B) Algae  
(C) Virus (D) Fungi
64. A plant tissue whose cells are capable of dividing and redividing is called  
(A) Complex tissue (B) Connective tissue  
(C) Permanent tissue (D) Meristematic tissue
65. Parenchyma : Simple :: Phloem : .....  
(A) Simple (B) Collenchyma  
(C) Complex (D) Xylem
66. Statement I: The cells of parenchyma are dead and have thick deposition of lignin on their walls.  
Statement II: Lignin makes the walls of cork impervious to gases and water.  
(A) If both statement I and II are true  
(B) If both statement I and II are false  
(C) If statement I is true, statement II is false  
(D) If statement I is false, statement II is true

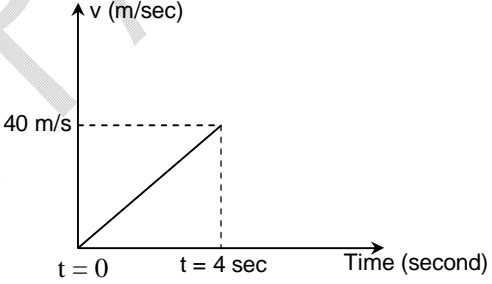
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## Recommended Time: 60 Minutes for Section – III

### Section – III

## PHYSICS – (PART – A)

*This part contains 12 Multiple Choice Questions number 67 to 78. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

67. A body starts from rest with an acceleration of  $2 \text{ m/sec}^2$ . Find the displacement of the body in 5 second from the start.  
 (A) 25 meter (B) 50 meter  
 (C) 10 meter (D) 10 meter
68. A body is thrown vertically upwards with an initial velocity of  $20 \text{ m/sec}$  from the ground. Find the speed of the ball when it reaches half of the maximum height. (Take  $g = 10 \text{ m/sec}^2$ ).  
 (A)  $2 \text{ m/s}$  (B)  $200 \text{ m/s}$   
 (C)  $10\sqrt{2} \text{ m/s}$  (D)  $30 \text{ m/s}$
69. A particle starts from rest and moves in a straight line, its velocity – time graph is shown in figure. Find the acceleration of the body  
 (A)  $80 \text{ m/sec}^2$   
 (B)  $10 \text{ m/sec}^2$   
 (C)  $36 \text{ m/sec}^2$   
 (D)  $44 \text{ m/sec}^2$
- 
70. If a body is just released from a height 80 meter above the ground. What time it will take to reach the ground. (Take  $g = 10 \text{ m/sec}^2$ )  
 (A)  $2\sqrt{2}$  seconds (B) 8 seconds  
 (C) 2 seconds (D) 4 seconds

**Space for Rough Work**

71. A resultant force of 40 N acts for 4 seconds on a body of mass 2 kg initially at rest. What is the momentum of the body at 4 seconds?  
(A) 80 kg m/sec (B) 20 kg m/sec  
(C) 160 kg m/sec (D) 22 kg m/sec
72. According to Newton's second law, rate of change of momentum is equal to which physical quantity?  
(A) Acceleration (B) Force  
(C) Velocity (D) Mass
73. If a body is thrown vertically upwards with a velocity of 90 m/sec from the ground. The momentum of the body when it reaches its maximum height is.  
(A) Zero (B) 90 kg m/sec  
(C) 9 kg m/sec (D) 100 kg m/sec
74. Two forces of 4 N and 3 N are acting perpendicular to each other on a body. What is the resultant force acting on the body?  
(A) 7 N (B) 1 N  
(C) 12 N (D) 5 N
75. Value of gravitational acceleration on the earth surface depends on which factor?  
(A) Mass of earth (B) Friction on the earth surface  
(C) Time on the earth surface (D) None of these
76. Value of gravitational acceleration at a depth equal to half of the radius of the earth will be :-  
(Take  $g = 10 \text{ m/s}^2$  at the surface of the earth).  
(A)  $9.8 \text{ m/sec}^2$  (B)  $5 \text{ m/sec}^2$   
(C)  $10 \text{ m/sec}^2$  (D)  $2 \text{ m/sec}^2$
77. As we move above the surface of the earth. How the value of  $g$  varies with height?  
(A) It remain same (B) It increases  
(C) It decreases (D) None of these
78. A body starts from rest and moves with an acceleration of  $6 \text{ m/sec}^2$ . Find the displacement of the body in 6<sup>th</sup> second of its motion.  
(A) 30 meter (B) 36 meter  
(C) 22 meter (D) 33 meter

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**Space for Rough Work**

## CHEMISTRY – (PART – B)

This part contains **12 Multiple Choice Questions** number **79 to 90**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

79. Tyndall effect in colloids is due to :  
(A) Absorption of light  
(B) Merging of light rays  
(C) Scattering of light  
(D) Convergence of light rays
80. Which of the following statement is true  
(A) Brass is an element  
(B) Dry ice is a mixture  
(C) Fog is a gel  
(D) Gunpowder is a mixture
81. Highest energy state of matter among the following is  
(A) Plasma  
(B) BEC  
(C) Gas  
(D) Solid
82. Which of the following statement is NOT correct?  
(A) Milk is an example of colloidal solution  
(B) Colloidal solution shows electrophoresis  
(C) Colloidal solution is a homogenous mixture  
(D) Sky appears blue due to Tyndall effect.
83. A mixture of blue ink and red ink can be separated by  
(A) Evaporation  
(B) Distillation  
(C) Chromatography  
(D) Filtration
84. At 20°C the solubility of salt X is 34.7 g in 100 g of water. If the density of saturated solution is 1.3 g/ml, the weight/volume (w/v) percentage of solution is  
(A) 25.76  
(B) 32.98  
(C) 33.49  
(D) 22.56

*Space for Rough Work*

85. \_\_\_\_\_ is an example of solid in solid solution.  
(A) Cold drinks (B) German silver  
(C) Dust particles in air (D) Fog
86. The process which is responsible for the formation of delta at a place where river meets the sea is :  
(A) Coagulation (B) Colloid formation  
(C) Emulsification (D) All of these
87. A gas can be liquefied  
(A) Above its critical temperature (B) At any temperature  
(C) Below its critical temperature (D) None of these
88. In paints dispersed phase and dispersion medium are respectively  
(A) Solid and liquid (B) Liquid and solid  
(C) Liquid and liquid (D) Gas and liquid
89. The highest temperature among the following is  
(A) 200°F (B) 273 K  
(C) 105°C (D) 295 K
90. Which of the following solutions shows Tyndall effect?  
(A) Milk (B) Salt solution  
(C) Sugar solution (D) Copper sulphate solution

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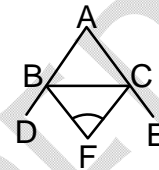
## MATHEMATICS – (PART – C)

This part contains **12 Multiple Choice Questions** number **91 to 102**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

91. The ratio of two numbers is 15 : 11. If their HCF be 13 then these numbers will be  
(A) 15, 11 (B) 75, 55  
(C) 105, 77 (D) 195, 143
92. If two angles are complementary to each other, then each angle is  
(A) a right angle (B) a supplementary angle  
(C) an obtuse angle (D) an acute angle
93. A (– 3, 2) and B(5, 4) are the end points of a line segment. Find the co-ordinates of the mid point of the line segment.  
(A) (1, 3) (B) (2, 3)  
(C) (3, 2) (D) (4, 3)
94. In a triangle ABC, if AB, BC and AC are the three sides of the triangle, then which of the following statements is necessarily true?  
(A)  $AB + BC < AC$  (B)  $AB + BC > AC$   
(C)  $AB + BC = AC$  (D)  $AB^2 + BC^2 = AC^2$
95. If  $x$  and  $y$  are positive real numbers, then  
(A)  $x > y \Rightarrow -x > -y$  (B)  $x > y \Rightarrow -x < -y$   
(C)  $x > y \Rightarrow \frac{1}{x} > \frac{1}{y}$  (D)  $x > y \Rightarrow -\frac{1}{x} < -\frac{1}{y}$
96. The remainder when  $x^4 - y^4$  is divided by  $x - y$  is  
(A) 0 (B)  $x + y$   
(C)  $x^2 - y^2$  (D)  $2y^4$

*Space for Rough Work*

97. If in a  $\triangle ABC$ , 'S' is the circumcentre, then  
 (A) S is equidistant from all the vertices of the triangle  
 (B) S is equidistant from all the sides of the triangle  
 (C) AS, BS and CS are angle bisectors  
 (D) AS, BS and CS produced are the altitudes on the opposite sides
98. Find the number of numbers lying between 1 and 1000 which are divisible by each of 6, 7 and 15.  
 (A) 6 (B) 5  
 (C) 4 (D) 3
99. In the given diagram of  $\triangle ABC$ ,  $\angle B = 80^\circ$ ,  $\angle C = 30^\circ$ . BF and CF are the angle bisectors of  $\angle CBD$  and  $\angle BCE$  respectively. Find the value of  $\angle BFC$   
 (A)  $110^\circ$  (B)  $50^\circ$   
 (C)  $125^\circ$  (D)  $55^\circ$
100. The unit digit of every prime number (other than 2 and 5) must be necessarily.  
 (A) 1, 3 or 5 (B) 1, 3, 7 or 9  
 (C) 7 or 9 (D) 1 or 7
101. The value of  $\left[ \frac{1}{\sqrt{5}-2} + \frac{1}{\sqrt{5}+2} \right]^2$  is  
 (A)  $10\sqrt{5}$  (B)  $2\sqrt{5}$   
 (C) 10 (D) 20
102. If  $a^{1/m} = b^{1/n} = c^{1/p}$  and  $abc = 1$  then  $m + n + p$  is equal to  
 (A) 0 (B) 2  
 (C) 1 (D) -2




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**Space for Rough Work**

## BIOLOGY – (PART – D)

This part contains **12 Multiple Choice Questions** number **103 to 114**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

103. ....and .....consists of agro forestry.  
(A) Fodder crops, fibre crops (B) Food crops, fibre crops  
(C) Fodder crops, grasses (D) Food crops, tree crops
104. Which of the following are sensitive to SO<sub>2</sub> pollution?  
(A) Mosses (B) Lichens  
(C) Algae (D) Ferns
105. Which of the following will be harmed most in a food chain due to the presence of harmful pesticide in water?  
(A) Phytoplankton (B) Zooplankton  
(C) Small fishes (D) Kingfisher
106. Which of the following is associated with the structure of mitochondria?  
(A) Cristae (B) Cisternae  
(C) Grana (D) Quantasomes
107. Which among the following are functions of centrosomes?  
(I) Cell wall formation  
(II) Osmoregulation  
(III) Formation of spindle fibres  
(A) (I) and (II) only (B) (II) and (III) only  
(C) (III) only (D) (II) only
108. The tissue that helps in the movement of our body are  
(A) Muscular tissue (B) Skeletal tissue  
(C) Nervous tissue (D) All of the above

*Space for Rough Work*

109. Apiculture and Sericulture deals with.....and.....respectively  
(A) Honeybee, Silkworm (B) Silkworm, Honeybee  
(C) Honeybee, Lac insect (D) Lac insect, Honeybee
110. To solve the food problem of the country, which among the following is not completely necessary?  
(A) To improve the variety of crops  
(B) To increase the production of crops  
(C) To protect the crops from diseases and pests  
(D) To adapt organic farming
111. The pollutant 'A' can contaminate the water bodies making the fishes, shrimps and crabs highly poisonous. The accumulated pollutant in the sea food intoxicates people who feed upon these sea foods. It causes severe neurological problems. Identify the pollutant 'A'.  
(A) Fluorine (B) Mercury  
(C) Nitrates (D) Cadmium
112. Pancreatic cells help in the secretion of proteinaceous hormones. Which of the following should be higher in number in pancreatic cells?  
(A) RER (B) SER  
(C) Lysosome (D) Centrosome
113. The complex tissues among the following are:  
(A) Xylem and Phloem (B) Idioblasts and Chlorenchyma  
(C) Parenchyma and Collenchyma (D) Stone cells and Sclerenchyma fibres
114. Which of the following are the cells of connective tissue?  
(I) Neutrophils  
(II) Plasma cells  
(III) Adipocytes  
(IV) Myofibrils  
(A) (I), (II) and (III) only (B) (II), (III) and (IV) only  
(C) (I), (III) and (IV) only (D) (I), (II) and (IV) only

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**Space for Rough Work**

# FIITJEE ADMISSION TEST

## CLASS – X (PAPER – 1) ANSWERS

1.	B	2.	A	3.	A	4.	B
5.	C	6.	B	7.	A	8.	B
9.	A	10.	A	11.	A	12.	B
13.	D	14.	D	15.	C	16.	D
17.	A	18.	C	19.	A	20.	D
21.	B	22.	B	23.	D	24.	A
25.	A	26.	D	27.	C	28.	C
29.	D	30.	B	31.	D	32.	D
33.	A	34.	C	35.	B	36.	C
37.	D	38.	A	39.	B	40.	D
41.	B	42.	C	43.	B	44.	C
45.	C	46.	B	47.	C	48.	B
49.	C	50.	C	51.	B	52.	C
53.	C	54.	B	55.	B	56.	A
57.	B	58.	D	59.	C	60.	D
61.	D	62.	B	63.	C	64.	D
65.	C	66.	B	67.	A	68.	C
69.	B	70.	D	71.	C	72.	B
73.	A	74.	D	75.	A	76.	B
77.	C	78.	D	79.	C	80.	D
81.	A	82.	C	83.	C	84.	C
85.	B	86.	A	87.	C	88.	A
89.	C	90.	A	91.	D	92.	D
93.	A	94.	B	95.	B	96.	A
97.	A	98.	C	99.	D	100.	B
101.	D	102.	A	103.	D	104.	B
105.	D	106.	A	107.	C	108.	D
109.	A	110.	D	111.	B	112.	A
113.	A	114.	A				