FIITJEE ADMISSION TEST- 2019

for students of

Class 7

Paper 1

Time: 3 Hours (9:30 am – 12:30 pm)

Code | 7000 |

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.

Section	Subject		Question no	Marking Scheme f	or each question
Section	Subject		Question no.	correct answer	wrong answer
SECTION			1 to 12	+3	0
SECTION -1	AFITTODE		13 to 18	+4	0
	PHYSICS	(PART-A)	19 to 22	+2	0
	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
	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
	MATHEMATICS	(PART-A)	97 to 102	+3	0
SECTION - V	MATHEMATICS	(PART-B)	103 to 108	+3	0

2. This Question paper consists of 5 sections. Marking scheme is given in table below:

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	:

	questions single digit answer 0 to 9
vomnlo 1	
answer is 6	
correct method	
(
xample 2:	
answer is 2.	
correct method:	
() 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, ? (A) 121 (C) 169	(B) 144 (D) 225
2.	29, 33, 37, 41, ? (A) 46 (C) 43	(B) 45 (D) 42
3.	96, 48, 24, 12, ? (A) 6 (C) 2	(B) 4 (D) 5
4.	D, H, L, P, ? (A) S (C) T	(B) U (D) Z
5.	AZ, BY, CX, DW, ? (A) FE (C) EG	(B) FG (D) EV

AT-1920-(SAMPLE PAPER)-C-VII-(Paper-1)-AT+S&M-4

- 6. 'Taka' is related to 'Bangladesh', similarly 'Pound sterling' is related with ?
 - (A) Russia
 - (C) England (UK)

- (B) Pakistan (D) Bhutan
- 7. 'Wicket' is related to 'Cricket', similarly 'Checkmate' is related to?
 (A) Tennis
 (B) Football
 (C) Chess
 (D) None of these
- 8. If Modi is brother of Savi, Savi is sister of Kavi and Kavi is father of Ravi, how Modi is related to Ravi?
 (A) Uncle
 (B) Father
 (C) Grandfather
 (D) Mother
- 9. If '+' is called 'x', '−' is called '+', '+' is called '−' and 'x' is called '+', then 20 + 10 5 ÷ 5 × 15 = ?
 (A) 40
 (B) 50
 (C) 60
 (D) 35

10. Find the number of triangles in the given figure. (A) 5 (B) 4 (C) 6 (D) 1

Directions (Q. 11 to 12): 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 : ? (A) 121 (C) 343	(B) 216 (D) 125
12.	3 : 16 and 7 : ? (A) 34 (C) 43	(B) 29 (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.



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,

(B) 402

(D) 220

What is the position of E? 16. (A) To the immediate right of C (B) To the immediate left of A (D) To the immediate right of A (C) To the immediate left of B 17. Which of the following is a right statement? (A) A sits between C and D (B) C sits between B and E (C) A is second to the left of B (D) C is second to the right of D 18. Which of the following is false statement? (A) A is immediate right of D (B) A is second to the left of C (C) B is immediate left of C (D) B is immediate right of C Space for Rough Work

(A) 42

(C) 420

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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 between P and Q is as shown below. If the actua between P and Q is 3 km, and between P and R of the line PR in the diagram is (A) 2 cm (C) 4 cm	the distance al distance t is 4 km; the length (B) 1 cm (D) 8 cm P 6 cm Q
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 t executes?(A) Rotatory motion(C) Translatory motion	type of motion will the propeller of a helicopter (B) Oscillatory 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 (D) 30 m/s
	Space for Roug	gh 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 of(A) They are made up of a synthetic fibre(C) They keep us cool during summer	cotton clothes? (B) They do not absorb water (D) They do not get wrinkled easily
24.	Which of the following materials is lustrous? (A) Oxygen (C) Nitrogen	(B) Gold (D) None of these
25.	Which of the following is a physical change? (A) Burning of coal (C) Baking a cake	(B) Cooking of egg(D) Boiling of water
26.	Which pair of liquids are miscible?(A) Water & Petrol(C) Water & Alcohol	(B) Water & Coconut Oil(D) Water & Kerosene
	Space for Roug	gh Work

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. E answer?	By how much was his answer greater than correct		
	(A) 28764	(B) 26874		
	(C) 27684	(D) 27846		
28.	Estimate the sum 4832 + 886 + 68 (rounding off (A) 5790 (C) 5700	to nearest tens) (B) 5900 (D) 6000		
29.	Raman had some toffees. He gave away ℓ toffe him. How many toffees did Raman have?	ees to his friends and still left with 6 toffees with $(B) \ell + 6$		
	(n) $\iota = 0$			
	(C) 6 ℓ	(D) $\frac{\ell}{6}$		
20	Two digit pumber where averages is three digit	t number		
30.	Two-digit number whose successor is three-digi			
	(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		
	Space for Rough Work			

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)
Which	of the following is an edible fu	ngus?		
(A) M	ushroom		(B) Cabbage	A CONTRACTOR
(C) Pe	ea		(D) Rhizobium	
The p	lants having leaves with retic	ulate v	enation have(i)root	s and are (ii)

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

- (B) Respiration
- (D) Transpiration

36. Match the following:

33.

34.

	iutori t	no ronowing.				
	(Column – A 🛛 📈		Column – B		
	(a)	Vitamin A	(i)	Fat soluble		
	(b)	Vitamin C	(ii)	Haemoglobin		
	(C)	Iron	(iii)	Bones and teet	th	
	(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 – ii	i)	(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 ²	(B) m ³ (D) litre
38.	What is the S.I unit of gravitational force? (A) Newton (C) Joule	(B) Dyne (D) m
39.	What is the value of prefix gega (G)? (A) 10 ⁶ (C) 10 ⁹	(B) 10 ³ (D) 10 ¹¹
40.	One gram is equal to (A) 10 ³ kg (C) 10 ⁻⁸ mg	(B) 10 ³ mg (D) 10 ⁻³ cg
41.	The ratio of displacement to distance has (A) m (C) No	unit (B) m ² (D) m ³
42.	Choose the wrong statement among the followin(A) To describe speed, direction is necessary(B) The magnitude of distance covered and mag body travels along a straight line(C) Time is a scalar quantity	ng Initude of displacement are the same when a

(D) Both (B) and (C)

43. Which of the following graph is not possible? [Y = Position, X = Time]



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.

	(A) Platinum (C) Magnesium	(B) Iron (D) Mercury
53.	Which among the following is an anima (A) Cotton (C) Silk	al protein fibre? (B) Jute (D) Flax
54.	Which of the following involves a fast c (A) The burning of matchstick (C) Germination of seed	hemical 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

Space for Rough Work			
	?(B) Burning of fire crackers(D) Curdling of milk	h one of the following is a reversible chang Aelting of chocolate Digestion of food	60.
6	ood conductors of electricity? (B) Air (D) Glass	h of the following materials are generally go Aetals Plastic	59.
	ter? (B) Ice (D) All of the above	h of the following substances will sink in wa Dry wood Silver coin	58.
	s/are : (B) Charkha (D) None of these	nand operated device(s) used for spinning i ⁻ akli Both (A) & (B)	57.
	i is called : (B) Ginning (D) Knitting	separation of fibres from the seeds of cottor Retting Veaving	56.

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 (C) natural number	(B) fraction (D) integer	
62.	The expression $(3 \times 49)(3 \times 49)^3$ (C) $(3 \times 49)^3$	3×49) (3 × 49) can be expressed a (B) $3^7 \times 49^7$ (D) $3^6 \times 49^5$	as
63.	 (i) If the product of two whole numbers is zero th (ii) If product of two whole numbers is zero, then (A) only (i) can be true (C) both can be true 	en one number will be zero. both numbers will be zero. (B) only (ii) can be true (D) both are false	
64.	In a game, Raj hits a balloon. He gets 300 point hits 15 balloons and misses 40 balloons. Find hi (A) 400 (C) 500	rs, if he hits and lose 100 points, if s net score (B) 300 (D) 200	he misses. Raj
65.	The perimeter of following figure iscm (A) 540 (C) 450	(B) 210 (D) 860 90 32/ 32/ 32/	3)) 32
		120	7



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) A fat, B carbohydrate, 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	(B) Vitamin D (D) Vitamin B		
78.	The androecium ispart of flowe	er whereas gynoecium ispart of flower,		
	(A) male, female(C) fruit, ovary	(B) female, male(D) ovary, fruit		
79.	White part of egg contains a protein(X)	where as milk contains a protein(Y)		
	 (A) X – Albumin, Y – Casein (C) X – Keratin, Y – Casein 	(B) X – Casein, Y – Albumin(D) None of the above		
80.	Which among the following does have all modifi(A) Potato, carrot, onion(C) Onion, ginger, sweet potato	ed stems: (B) Onion, garlic, ginger (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 	re is light		
82.	After fertilization, ovary transform into(A) (A) (A) – Pistil, (B) – Pollen (C) (A) – Seed, (B) – Fruit	 (B) (A) – Pollen, (B) – Pistil (D) (A) – Fruit, (B) – Seed 		
83.	Given below are the names of some animals 1. Goat 2. Human being 3. Cockroach 4. Eagle Which of the above animals form a pair of Omni (A) (1) and (2) (C) (3) and (4)	vores? (B) (2) and (3) (D) (2) and (4)		
84.	Stilt root is found in			
	(A) <i>Rhizophora</i>(C) Mango	(B) Sugarcane(D) Both (A) and (B)		
Space for Rough Work				

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 (B) Magnified and real (C) Both (A) and (B) (D) Diminished and virtual 86. The direction of light can be changed by (B) Refraction (A) Reflection (C) Both (A) and (B) (D) Neither (A) nor (B) 87. Choose the correct value of 2i + i' - r' from the following: (A) 90° (B) 60° (C) 30° (D) 0° 11111111

CHEMISTRY - (PART - B)

This part contains **3 Multiple Choice Questions** number **88 to 90**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

88.	In sedimentation, the upper clear liquid is calle bottom are called	4 & the heavier particles that settle at the			
	(A) Sediments, filtrate	(B) Filtrate, supernatant			
	(C) Supernatant, sediments	(D) None of these			
89.	Lemon juice $+$ Baking soda $+$ Water \longrightarrow 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 $9pq + 6p - 8q - [4pq + 2p - {9pq - q - (A) 14pq + 4p - 9q - 6}(C) - 14pq + 4p - 9q - 6$	6}] (B) 14pq + 4p – 9q + 6 (D) 14pq + 4p + 9q - 6				
92.	The dimensions of rectangular field are $23x - would$ be square is (A) 7 (C) 2	10 and 14x + 8 units. The value of x for which (B) 1 (D) none of these	it			
93.	Area of the given figure is m ² (A) 50 (C) 142	(B) 72 (D) 140 18 m 10 m 5 m 14 m				
	Space for Bough Work					



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)



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.

97.	Three schools take part in a campaign to raise 9326, school II raises Rs 8140 and school III schools is Rs	funds for eradicating hunger. School I raises Rs raises Rs 1099. Total amount raised by all three		
	(A) 18565 (C) 18540	(B) 18853 (D) 18088		
98.	Sachin takes 10 rounds of rectangular park, 5 covered by him.	Om long and 20 m wide. Find the total distance		
	(A) 140 m (C) 700 m	(B) 14000 m (D) 1400 m		
99.	The product of two two- digit numbers is 4514. If the product of their unit digits is 4 and tens digit is 42 then numbers are			
	(A) 64, 74 (C) 61, 71	(B) 61, 74 (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. (B) 15 (D) 18		
101.	In the figure, PQRS is a square of side 14 cm and two semi-circles are drawn with PQ and SR as diameter. Find the area of shaded			
	$(A)49 \text{ cm}^2$	(B) 42 cm^2		
	(C) 154 cm ²	(D) 196 cm ² P 14 cm Q		
102.	LCM of $4\frac{1}{2}$, 3 and $10\frac{1}{2}$ is			
	(A) 36	(B) 18		
	(C) 63	(D) $\frac{63}{2}$		
Space for Rough Work				

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

45

D

FIITJEE ADMISSION TEST

CLASS – VII (PAPER – 1) ANSWERS

1		В	2.	В	3.	Α	4.	С
5		D	6.	С	7.	c	8.	Α
9		В	10.	С	11.	D	12.	D
1	3.	С	14.	D	15.	C	16.	D
1	7.	В	18.	С	19.	D	20.	Α
2	1.	D	22.	В	23.	C	24.	В
2	5.	D	26.	C	27.	c	28.	Α
2	9.	В	30.	D	31.	c	32.	Α
3	3.	Α	34.	В	35.	D	36.	С
3	7.	С	38.	Α	39.	с	40.	В
4	1.	С	42.	Α	43.	В	44.	Α
4	5.	Α	46.	D	47.	С	48.	В
4	9.	D	50.	В	51.	С	52.	D
5	3.	c	54.	Α	55.	С	56.	В
5	7.	С	58.	c	59.	Α	60.	Α
6	1.	D	62.	Α	63.	С	64.	С
6	5.	Α	66.	В	67.	С	68.	Α
6	9.	Α	70.	D	71.	Α	72.	D
7	3.	D	74.	Α	75.	Α	76.	Α
7	7.	C	78.	Α	79.	Α	80.	В
8	1.	В	82.	D	83.	В	84.	D
8	5.	Α	86.	С	87.	Α	88.	С
8	9.	В	90.	Α	91.	Α	92.	С
9	3.	С	94.	В	95.	В	96.	D
9	7.	Α	98.	D	99.	В	100.	D
1	01.	В	102.	C	103.	5	104.	4
1	05.	9	106.	7	107.	4	108.	8