

FIITJEE Admission Test

for students presently in **Class 8 (Paper 1)**

Time: 3 Hours (9:00 am – 12:00 pm)

CODE: 89-1

Maximum Marks: 266

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, 45 Minutes on Section-II, 30 Minutes on Section-III and 45 Minutes on Section-IV.
2. This Question paper consists of 4 sections. Marking scheme is given in table below:

Section	Subject	Question no.	Marking Scheme for each question	
			Correct answer	Wrong answer
SECTION – I	APTITUDE TEST	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 72	+1	0
	CHEMISTRY (PART-B)	73 to 78	+1	0
	MATHEMATICS (PART-C)	79 to 84	+1	0
	BIOLOGY (PART-D)	85 to 90	+1	0
SECTION – IV	PHYSICS (PART-A)	91 to 94	+4	–1
	CHEMISTRY (PART-B)	95 to 98	+4	–1
	MATHEMATICS (PART-C)	99 to 102	+4	–1
	BIOLOGY (PART-D)	103 to 110	+4	–1

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 below.

Note: Please check this Question Paper contains all 110 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.

- Find the next term in the sequence 7G, 11K, 13M, _____.
(A) 15Q (B) 17Q (C) 15P (D) 17P
- In the following question, find the word which holds same relation with the third word as there is between the first two words.
Cap : Head :: specs : ?
(A) Eye (B) Cloth (C) Hair (D) Face
- If '+' means '-', '-' means 'x', '÷' means 'x', 'x' means '÷', then what will be the value of following equation ?
(10 \times 5 \div 3 - 2 + 3) = ?
(A) $\frac{53}{3}$ (B) 21 (C) 36 (D) 5
- In the following questions, four alternatives are given in which one is odd, from the rest alternatives, you have to choose that alternative.
Find the odd one out from the given options.
(A) Mile (B) Centimetre (C) Litre (D) Yard
- A person completes 68 km in 50 minutes via Jeep. Starting 20 minutes, he travels by x km/hr and next 25 minutes by 2x km/hr and rest time by 3x km/hr. What is the value of x ?
(A) 64 (B) 36 (C) 49 (D) 48
- Saturday was a holiday for republic day. 14th of the next month is again a holiday for shivratri. What day was it on the 14th ?
(A) Monday (B) Thursday (C) Friday (D) Tuesday

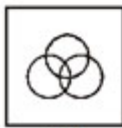
Space for Rough Work

7. What is the angle traced by minute hand between 10 : 00 a.m. to 10 : 40 a.m. ?
 (A) 240° (B) 230° (C) 260° (D) 180°
8. Direction : - One of two statements is given followed by two conclusion/assumptions. I and II. You have to consider the statement to be true, even if it seems to be at a variance from commonly known facts. You are to decide which of the given conclusion /assumptions, can definitely be drawn from the given statements.
Statements :
 All lawyers are cheats
 Some men are lawyers.
Conclusion :
 (I) Some men are cheats
 (II) All cheats are men.
 (A) If only conclusion I follows. (B) If only conclusion II follows.
 (C) If either conclusion I or II follows. (D) If neither conclusion I nor II follows.
9. In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.
- | | | |
|---|----|---|
| | 2 | |
| 1 | 41 | 5 |
| | 3 | |
- | | | |
|---|-----|---|
| | 3 | |
| 4 | 159 | 6 |
| | 2 | |
- | | | |
|---|---|---|
| | 7 | |
| 5 | ? | 3 |
| | 2 | |
- (A) 189 (B) 227 (C) 277 (D) 339
10. Manoj is 7 ranks ahead of Anish in the class of 39 students. If Ashok's rank is 17th from the last, then what is Manoj's rank from the starts ?
 (A) 16th (B) 23th (C) 24th (D) 15th
11. What was the day on 2nd January, 1901 ?
 (A) Monday (B) Wednesday (C) Sunday (D) Tuesday
12. In the following question, select the odd letter from the given alternatives.
 (A) B (B) N (C) P (D) W
13. Select the correct combination of mathematical signs to replace * signs and balance the given equation :
 $6 * 15 * 10 * 3 * 12$
 (A) $\div + = \times$ (B) $+ \div \times =$ (C) $\times \div + =$ (D) $+ - = \div$


Space for Rough Work

14. In the recent climate conference in Paris, out of 700 men, 500 women, 800 children Present inside the building premises, 20% of the men, 40% of women and 10% of the children were Indians. Find the percentage of people who are not Indian ?
 (A) 73% (B) 79% (C) 83% (D) 77%
15. In the question given below, there are few statements followed by few conclusions you have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusion logically follow (s) from the given statements.
STATEMENTS :
 No train is star
 Some stars are man
CONCLUSION :-
 1) Some men are trains
 2) No men is train
 3) All men are stars
 (A) None follows (B) only I follows
 (C) Only either I or II follows (D) only either I or III follows
16. What number will replace the question mark (?)
 13, 13, 15, 27, 47, 67, 97, 153, ?
 (A) 325 (B) 225 (C) 252 (D) 352
17. There questions are based on the word problems.
 Ravi is the brother of Anuj. Sakshi is the sister of Sumit. Anju is the son of Sakshi. How is Ravi related to Sakshi ?
 (A) Nephew (B) Father (C) Brother (D) Son
18. In the following question, select the related letter/word/number from the given alternatives.
 B J N X : C I O W : : D H P V : ?
 (A) EGQU (B) ELPV (C) E I Q W (D) E I O U
19. Six children P, Q, R, S, T and U are sitting in a straight line. T and S have two children between them. There are three children between Q and U. P is to the left of T, U is to the left of S, R is not on either extreme ends. Which one of them are on extremes ?
 (A) TU (B) QS (C) SR (D) PQ
20. The heights of A and B are equal. C is shorter than A, D is shorter than E, but taller than B. Who is tallest of all ?
 (A) D (B) C (C) E (D) B


Space for Rough Work

21. In a certain code PAGE is written as '3%7@' SORE is written as 8©9@. How is 'PEAS' written in that code ?
 (A) 3 @ © 8 (B) 3 @ % 9 (C) 3 @ % 8 (D) 3 % @ 8
22. Choose the odd one out from the given alternatives.
 (A) 5 : 9 (B) 17 : 19 (C) 83 : 89 (D) 37 : 41
23. In a class the number of boys is 20% more than the number of girls and total students are 33. If 5 more boys join the class, then what will be the ratio of number of boys to number of girls ?
 (A) 8 : 5 (B) 23 : 15 (C) 2 : 1 (D) 11 : 6
24. In a row of 16 girls, when kanika was shifted by two places towards the left. She became 7th from the left end. What was her earlier position from the right end ?
 (A) 7th (B) 9th (C) 8th (D) 10th
25. A series is given with one or more number/letter missing. Choose the correct alternative from the given ones that will complete the series.
 A, D, G, J, M, P, S, V, ?
 (A) Y (B) X (C) B (D) C
26. If it was Saturday on December 17, 1899, what will be the day on December 22, 1901 ?
 (A) Friday (B) Saturday (C) Sunday (D) Monday
27. Select the missing number from the given responses.
- | | | |
|----|----|---|
| 7 | 56 | 8 |
| 9 | 63 | 7 |
| 12 | ? | 5 |
- (A) 17 (B) 25 (C) 60 (D) 119
28. Identify the diagram that correctly represents the relationship among woman, mother and widow
- 

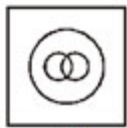
(A)



(B)



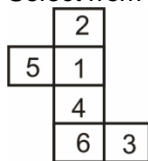
(C)



(D)
- (A) A (B) B (C) C (D) D

Space for Rough Work

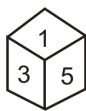
29. Select from the alternatives, the box that can be formed by folding the sheet shown in figure (X)



(X)



(A)



(B)



(C)

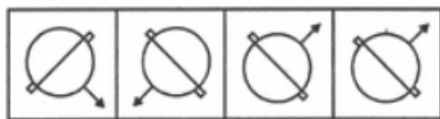


(D)

30. Choose the correct mirror image of the given figure (X) from amongst the four alternatives.



(X)



(1)

(2)

(3)

(4)

(A) 1

(B) 2

(C) 3

(D) 4

Space for Rough Work

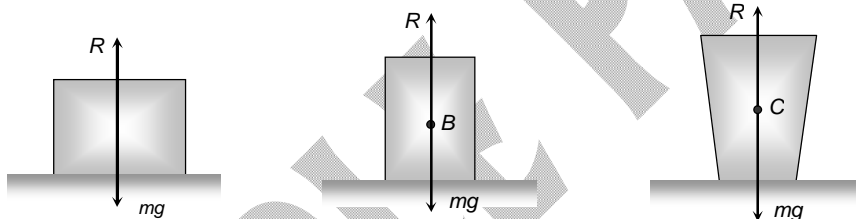
Recommended Time: 45 Minutes for Section – II

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. A trough full of water is placed on a spring balance. If we put our hand in water without touching the trough. How will be reading of the balance changed?
 (A) It will remain unchanged. (B) It will decrease.
 (C) It will increase. (D) It is not possible to predict.
32. Four students were asked to arrange forces due to rolling, static and sliding frictions in increasing order. Their arrangements are given below. Choose the correct arrangement:
 (A) rolling, static, sliding (B) rolling, sliding, static
 (C) static, sliding, rolling (D) sliding, static, rolling
33. What can be inferred regarding the limiting frictional force in the following three figures



- (A) $F_A = F_B = F_C$ (B) $F_A > F_B > F_C$
 (C) $F_A < F_B < F_C$ (D) $F_A = F_B < F_C$
34. Electrolysis is the passage ofthrough a liquid or a solution accompanied by achanges.
 (A) electric current, heat (B) electric current, chemical
 (C) heat, chemical (D) chemical, electric current

Space for Rough Work

35. Two wires P and Q are made from the same material. Wire P and Q has length in the ratio of 18 : 12 and having cross sectional area in the ratio of 4:3. Then ration of their resistances is:
(A) 8 : 9 (B) 9 : 8
(C) 1 : 2 (D) 2 : 1
36. When the length and area of cross-section both are doubled, then its specific resistance-
(A) Will become half (B) Will be doubled
(C) Will remain the same (D) Will become four times
37. The point on the earth surface of earth vertically above the place or origin of an earthquake is known as
(A) Focus (B) fault
(C) epicentre (D) all are correct
38. A fresh egg sinks in pure water, whereas it floats in saturated salty water. This is due to :
(A) the fluid matter inside the egg-shell
(B) higher density of the pure water
(C) higher density of the salty water
(D) the fact that the egg-shell is made of calcium which is heavier than pure water
39. Physical independence of a force is a consequence of
(A) third law of motion (B) second law of motion
(C) first law of motion (D) all of these laws

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 monomeric unit of natural rubber is
 (A) 1, 3-Butadiene (B) Chloroprene
 (C) Isoprene (D) Styrene
41. What concentration of carbon monoxide in air leads to loss of consciousness?
 (A) 100 ppm (B) 300 ppm
 (C) 600 ppm (D) 800 ppm
42. Which of the following is a polyamide?
 (A) Teflon (B) Nylon – 6, 6
 (C) Terylene (D) Bakelite.
43. Buna – S is a Synthetic copolymer of
 (A) Styrene and ethylene (B) 1, 3-butadiene and ethylene
 (C) Styrene and 1, 3 –butadiene (D) None of the above.
44. Sulphide ores are generally concentrated by
 (A) Froth floatation (B) Roasting
 (C) Gravity Separation (D) Reduction by carbon.
45. The chemical added to LPG to help detect its leakage is:
 (A) Isobutene (B) Ethylamine
 (C) Methylamine (D) Ethyl mercaptan
46. Which of the following burns without producing a flame.
 (A) Camphor (B) Coke
 (C) Cooking gas (D) Kerosene
47. Identify the substance which is tough, porous and black. It is almost a pure form of carbon.
 (A) Curd Oil (B) Coke
 (C) Coal tar (D) Coal gas.
48. One of the advantages of nylon over rayon is that nylon
 (A) Is wrinkle free (B) Has low elasticity
 (C) Is a natural fibre (D) Is a good conductor of electricity

Space for Rough Work

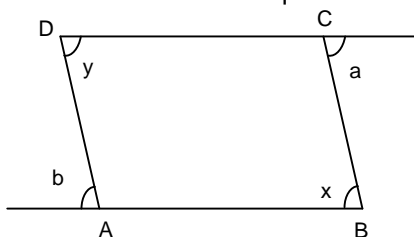
MATHEMATICS – (PART – C)

*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. If $a^a = b$, $b^b = c$ and $c^c = a$, then find the value of abc
 (A) -1 (B) 0 (C) 1 (D) None of these
50. Factorize : $(3x + 4y)^2 + 2(3x + 4y)(3x - 4y) + (3x - 4y)^2$
 (A) $6x^2$ (B) $36x^2$
 (C) $6x$ (D) $36x$
51. Which of the following expression is correct?
 (A) $\frac{ab+c}{b} = a+c$ (B) $\frac{b+c}{a+c} = \frac{b}{c}$
 (C) $\frac{ab+ac}{ad} = \frac{b+c}{d}$ (D) $\frac{ab+ac}{d} = \frac{b+c}{d}$
52. If both a and b be rational numbers then a and b satisfying $\frac{3-\sqrt{5}}{3+2\sqrt{5}} = a\sqrt{5} - b$ are
 (A) $a = \frac{9}{11}, b = \frac{19}{11}$ (B) $a = \frac{19}{11}, b = \frac{9}{11}$ (C) $a = \frac{2}{11}, b = -\frac{8}{11}$ (D) $a = \frac{10}{11}, b = \frac{21}{11}$
53. $\sqrt[3]{125} + \sqrt{24}$ is equal to
 (A) $\sqrt{5} - 1$ (B) $\sqrt{3} + \sqrt{2}$ (C) $\sqrt{5} + 1$ (D) $\sqrt{5} + \sqrt{2}$
54. Manju added the lengths of three sides of a rectangle and got 44 cm. Jagan added the lengths of three sides of the same rectangle and got 40 cm. What is the perimeter of the rectangle?
 (A) 42 cm (B) 56 cm (C) 64 cm (D) 84 cm

Space for Rough Work

55. Sides BA and DC of a quadrilateral ABCD are produced as shown in figure then $a + b$ is equal to:



- (A) $x - y$ (B) $x + y$
 (C) $x + 2y$ (D) None of these
56. If the price of a commodity be raised by 40%, by how much per cent must a householder reduce his consumption of that commodity, so as not to increase his expenditure?
- (A) $12\frac{1}{4}$ (B) $13\frac{1}{3}$ (C) $28\frac{4}{7}$ (D) 18
57. A number is increased by 5% and then decreased by 5%, the net increase or decrease percent is,
- (A) 4% increase (B) 0.25% decrease (C) 1% decrease (D) None

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. Sickle is connected to
(A) sowing (B) harvesting
(C) ploughing (D) threshing
59. The productivity of crop plants gets affected by weeds due to
(A) competition for space and sunlight
(B) competition for water and nutrients
(C) Both A and B
(D) None of these
60. Energy is produced in the form of _____
(A) ATP (B) MCPA
(C) AMP (D) 2,4-D
61. The pesticides are considered as hazardous because
(A) they persist in the environment (B) they do not enter the food chain
(C) they affect the target organism only (D) they do not kill natural enemy populations
62. Xanthium and Parthenium are examples of:
(A) Pests (B) Weeds
(C) Insects (D) Crop plants
63. The biggest cell is
(A) Ostrich egg (B) PPLO
(C) Human cell (D) Amoeba
64. Which of the following require more water during initial growth?
(A) Wheat (B) Paddy
(C) Maize (D) Mustard
65. Which of the following act as a garbage disposable system
(A) Golgi apparatus (B) Lysosome
(C) Vacuole (D) Peroxisome
66. In leguminous plants, the root nodules contain a nitrogen-fixing bacterium called
(A) bacilli (B) spirilla
(C) monococcus (D) Rhizobium

Space for Rough Work

Recommended Time: 30 Minutes for Section – III

Section – III

PHYSICS – (PART – A)

*This part contains 6 Multiple Choice Questions number 67 to 72. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

67. There is rubber ball and a stone ball of same size. If both balls are at rest :
 (A) rubber ball has more inertia than stone ball
 (B) stone ball has more inertia than rubber ball
 (C) both have same inertia
 (D) less mass more inertia
68. A book is placed on your study chair at rest. Consider the following forces:
 (I) A downward force of gravity
 (II) An upward force exerted by the chair
 (III) A net downward force exerted by the air
 Then, which of the force(s) is/are acting on the book?
 (A) Only (I) is correct
 (B) (I) and (II) both are correct
 (C) (I), (II) and (III) are correct
 (D) none of the above forces
69. Pressure can be measured in :
 (A) Nm^{-2}
 (B) bar
 (C) Pa
 (D) All are correct
70. If a body is allowed to freely fall from a height, its speed increases continuously. It is because:
 (A) air does not exert frictional force
 (B) magnetic force of earth increases its speed
 (C) gravitational force of earth increases its speed
 (D) pressure of air force it downward
71. Which of these do not allow the current to pass through it
 (A) Brass rod
 (B) Bakelite rod
 (C) Copper rod
 (D) Iron rod
72. Two statements are given below:
 (I) The buoyant force depends on the nature of object immersed in the liquid.
 (II) 'Archimedes' principle can also be applied to gases.
 Choose your option from following:
 (A) Statement (I) is true but statement (II) is false
 (B) Statement (I) and statement (II) both are true
 (C) Statement (I) is false but statement (II) is true
 (D) Statement (I) and statement (II) both are false

Space for Rough Work

CHEMISTRY – (PART – B)

*This part contains 6 Multiple Choice Questions number 73 to 78. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

73. Bleaching powder reacts with water to give _____ which kills germs.
(A) H_2 (B) O_2
(C) O_3 (D) Cl_2
74. Give the constituent of fluorspar
(A) MnO_4 (B) CaF_2
(C) $Sn(SO_2)_3$ (D) None of these
75. Oxides of non-metals are
(A) Acidic (B) Basic
(C) Amphoteric (D) None of these
76. Which among the following has the highest calorific value?
(A) Natural gas (B) LPG
(C) Coal (D) Hydrogen
77. Which amongst the following is used in the manufacturing of perfumes?
(A) Coal tar (B) Coal gas
(C) Coke (D) Kerosene
78. Among the following groups of oxides, the group that cannot be reduced by carbon to give the respective metals is
(A) Cu_2O , K_2O (B) Fe_2O_3 , ZnO
(C) CaO , K_2O (D) PbO , Fe_3O_4

Space for Rough Work

MATHEMATICS – (PART – C)

*This part contains 6 Multiple Choice Questions number 79 to 84. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

79. How many diagonals are there in a pentagon ?
 (A) 5 (B) 6 (C) 10 (D) 3
80. When the diagonals of a parallelogram are perpendicular to each other and diagonals are not equal then it is called:
 (A) square (B) rectangle (C) rhombus (D) parallelogram
81. Simplify : $\frac{(a^2 - b^2)^3 + (b^2 - c^2)^3 + (c^2 - a^2)^3}{(a - b)^3 + (b - c)^3 + (c - a)^3}$
 (A) $3(a + b)(b + c)(c + a)$ (B) $(a + b)(b + c)(c + a)$
 (C) $3(a - b)(b - c)(c - a)$ (D) $(a - b)(b - c)(c - a)$
82. ABCD is a trapezium and P, Q are the mid points of the diagonals AC and BD then PQ = ?
 (A) $\frac{1}{2}AB$ (B) $\frac{1}{2}CD$ (C) $\frac{1}{2}(AB - CD)$ (D) $\frac{1}{2}(AB + CD)$
83. If x% of y is the same as 4/5 of 80. Then find the value of xy.
 (A) 64 (B) 640 (C) 6400 (D) 16000
84. In a mixture 60 litres, the ratio of milk and water 2 : 1. If this ratio is to be 1 : 2, then the quantity of water to be further added is:
 (A) 20 litres (B) 30 litres (C) 40 litres (D) 60 litres

Space for Rough Work

BIOLOGY – (PART – D)

This part contains **6 Multiple Choice Questions** number **85 to 90**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

85. "Micrographia" is a book authored by
 (A) Leeuwenhoek (B) Jan Sammerdan
 (C) Robert Hooke (D) Rudolf Virchow
86. Assertion (A): Maize is kharif crop
 Reason (R): Maize is grown in rainy season
 (A) Both A and R are true and R is the correct explanation for A
 (B) Both A and R are true and R is not the correct explanation for A
 (C) A is true and R is false
 (D) A is false and R is true
87. When green tomatoes turns red than
 (A) new chloroplast are made
 (B) chromoplasts are changed into chloroplasts
 (C) chloroplasts are disintegrated and get converted into chromoplasts
 (D) none of these
88. Match the following
- | | |
|--|--|
| a. <i>Rhizobium</i>
b. <i>Lactobacillus</i>
c. <i>Penicillium</i>
d. Rabies | (i) Antibiotic
(ii) Soil fertility
(iii) Virus
(iv) Milk curdling |
| a b c d
(A) (ii) (i) (iii) (iv)
(B) (i) (iii) (ii) (iv)
(C) (ii) (iv) (i) (iii)
(D) (i) (ii) (iv) (iii) | |
89. Which one of the following is/are included in bacterium?
 (i) Nucleus (ii) Membrane bound organelles
 (iii) Mesosome (iv) 70s ribosomes
 (A) (i) and (ii) (B) (i), (ii), and (iii)
 (C) (ii) only (D) (iii), and (iv)
90. A cell has mitochondria, ribosomes, smooth ER and other organelles. Based on this information, it could NOT be:
 (A) a bacterium (B) a cell from onion
 (C) a cell from *Drosophila* (D) a cell from *Neurospora*

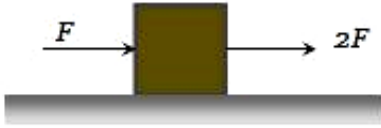
Space for Rough Work

Recommended Time: 45 Minutes for Section – IV

Section – IV

PHYSICS – (PART – A)

*This part contains 4 Multiple Choice Questions number 91 to 94. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

91. During purification of metals, the refined metal is obtained at the
 (A) cathode (B) anode
 (C) surface of electrolyte (D) None of these
92. A block is subjected two forces as shown in figure, where $F = 10\text{ N}$. The mass of block 30 kg. The acceleration in the motion of block will be
- 
- (A) 3 m/s^{-2} (B) 1.5 m/s^{-2}
 (C) 1 m/s^{-2} (D) 0.5 m/s^{-2}
93. The pressure at the bottom of a tank containing a liquid does not depend on
 (A) Acceleration due to gravity (B) Height of the liquid column
 (C) Area of the bottom surface (D) Nature of the liquid
94. The potential difference between the two points of a wire carrying 2 amperes current is 2.2 volt. Then the resistance between these points is (in Ohm)
 (A) 4.4 (B) 2.2
 (C) 1.1 (D) 0.11

Space for Rough Work

CHEMISTRY – (PART – B)

*This part contains 4 Multiple Choice Questions number 95 to 98. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

95. The main metal used in thermite welding is
(A) Aluminium (B) Zinc
(C) Copper (D) Iron
96. Which of the following is an oxygen-demanding waste?
(A) Pesticides (B) Oil
(C) Grease (D) Domestic sewage
97. Terylene is a popular form of
(A) Polyster (B) Monomer
(C) Plastic (D) Nylon
98. Ordinarily, kerosene oil burns in air with a yellow flame. However, in stoves, it burns with a blue flame. Which of the following statements explains the above observation?
(A) Complete combustion of kerosene takes place in stoves
(B) The ignition temperature of kerosene is attained easily in stoves.
(C) Stoves are made of iron and kerosene burns with a blue flame in the presence of iron
(D) None of these

Space for Rough Work

MATHEMATICS – (PART – C)

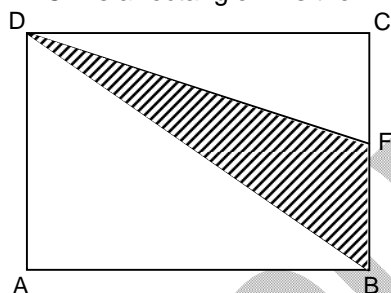
*This part contains 4 Multiple Choice Questions number 99 to 102. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

99. A and B together have Rs. 1210. If $\frac{4}{15}$ of A's amount is equal to $\frac{2}{5}$ of B's amount, how much amount does B has ?
 (A) Rs 460 (B) Rs. 484 (C) Rs. 550 (D) 664

100. The factors of $z^2 + \frac{1}{z^2} + 2 - 2z - \frac{2}{z}$ are :

- (A) $\left(z + \frac{1}{z} + 2\right)\left(z - \frac{1}{z}\right)$ (B) $\left(z + \frac{1}{z}\right)\left(z + \frac{1}{z} - 2\right)$
 (C) $\left(z - \frac{1}{z} + 2\right)\left(z + \frac{1}{z}\right)$ (D) $\left(z - \frac{1}{z}\right)\left(z - \frac{1}{z} - 2\right)$

101. ABCD is a rectangle. F is the mid-point of BC. If area BDF = 10 cm² then area ABCD is



- (A) 40 cm² (B) 20 cm²
 (C) 10 cm² (D) 80 cm²

102. The product of $(x^2 + x + 1)$ and $(x^2 - x + 1)$ is equal to

- (A) $x^4 - x^2 - 1$ (B) $x^4 + x^2 + 1$
 (C) $x^4 + 2x^2 + 1$ (D) None of these

Space for Rough Work

BIOLOGY – (PART – D)

This part contains **8 Multiple Choice Questions** number **103 to 110**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

103. Among the following which is not true about vaccines?
(A) Vaccines contain dead microbial cell or their parts
(B) Vaccines contains antibiotics to prevent diseases.
(C) Vaccine contain special proteins which evoke immune system against disease.
(D) Vaccines contains inactivated micro organisms.
104. Name of the microbe used in making yoghurt is
(A) *Lactobacillus*
(B) *Saccharomyces*
(C) *Clostridium*
(D) *Rhizobium*
105. The germ theory of disease was proposed by
(A) Hippocrates
(B) Pasteur and Koch
(C) Jenner
(D) Garrod
106. *Escherichia coli* is found in
(A) Human Intestine
(B) Parasite on plant
(C) Milk
(D) Animal liver
107. Which one of the following lists the structures which are present in both animal and plant cells?
(A) Cell wall, chromosomes, cytoplasm, chloroplasts
(B) Cell membrane, chromosomes, cytoplasm, mitochondrion
(C) Cell membrane, chloroplast, chromosomes, cytoplasm
(D) Cytoplasm, mitochondrion, cell wall, chromosomes
108. Which of the following term is used for raising both plant crop and livestock in farm?
(A) Mixed farming
(B) Intercropping
(C) Mixed cropping
(D) Crop rotation
109. Which of the following is an incorrect match?
(A) Cilia – Paramecium
(B) Flagella – Plasmodium
(C) Pseudopodia – Amoeba
(D) None of the above
110. A pulse crop is grown in the time interval between 2 cereal crops to compensate for the
(A) Loss of phosphate
(B) Loss of water
(C) Loss of Potassium
(D) Loss of Nitrogen

Space for Rough Work

FIITJEE Admission Test

for students presently in **Class 8 (Paper 1)**

SAMPLE PAPER ANSWER KEY

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