

# FIITJEE SAMPLE PAPER – 2018

## (Big Bang Edge Test / Talent Recognition Exam)

for students presently in

### Class 8 (Paper 2)

Time: 3 Hours (1:45 pm – 4:45 pm)

Code 8008

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.

- You are advised to devote 30 Minutes on Section-I, 50 Minutes on Section-II, 50 Minutes on Section-III and 50 Minutes on Section-IV.
- 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	PHYSICS (PART-A)	1 to 6	+1	0
	CHEMISTRY (PART-B)	7 to 12	+1	0
	MATHEMATICS (PART-C)	13 to 18	+1	0
	BIOLOGY (PART-D)	19 to 24	+1	0
SECTION – II	PHYSICS (PART-A)	25 to 32	+3	-1
	CHEMISTRY (PART-B)	33 to 40	+3	-1
	MATHEMATICS (PART-C)	41 to 48	+3	-1
SECTION – III	PHYSICS (PART-A)	49 to 54	+3	-1
	CHEMISTRY (PART-B)	55 to 60	+3	-1
	MATHEMATICS (PART-C)	61 to 66	+3	-1
	BIOLOGY (PART-D)	67 to 72	+3	-1
SECTION – IV	PHYSICS (PART-A)	73 to 77	+3	0
	CHEMISTRY (PART-B)	78 to 82	+3	0
	MATHEMATICS (PART-C)	83 to 87	+3	0
	PHYSICS (PART-D)	88 to 90	+3	0
	CHEMISTRY (PART-E)	91 to 93	+3	0
	MATHEMATICS (PART-F)	94 to 96	+3	0

- 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.
- Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
- 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.
- See method of marking of bubbles at the back of cover page for question no. 88 to 96.

Note: Please check this Question Paper contains all 96 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 **88 to 96**

Numerical based questions single digit answer 0 to 9

**Example 1:**

If answer is 6.

Correct method:

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

**Example 2:**

If answer is 2.

Correct method:

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

SAMPLE PAPER

**Recommended Time: 30 Minutes for Section - I****Section - I****PHYSICS - (PART - A)**

This part contains **6 Multiple Choice Questions** number **1 to 6**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

1. The maximum force of friction when the block is just starting to move is called the \_\_\_\_\_.  
(A) sliding friction (B) limiting friction  
(C) rolling friction (D) none of these
2. An object weighting 10 N in air, weighs 9.3 N in a liquid. The buoyant force experienced by the object is  
(A)  $\frac{10}{9.3}$  N (B)  $\frac{9.3}{10}$  N  
(C) 0.7 N (D) (10 + 9.3)N
3. \_\_\_\_\_ is the S.I. unit of density of an object.  
(A)  $\text{kg m}^{-3}$  (B)  $\text{g cm}^{-3}$   
(C)  $\text{g cm}^3$  (D)  $\text{kg cm}^3$
4. Mass per unit volume of water is \_\_\_\_\_.  
(A)  $1 \text{ kg/m}^3$  (B)  $1000 \text{ kg/m}^3$   
(C)  $1 \text{ g/cm}^3$  (D) Both (B) and (C)
5. The mass of an astronaut on the surface of the earth is 60 kg. The ratio of the mass of the astronaut on the surface of earth and on the surface of moon will be  
(A) 1 : 6 (B) 6 : 1  
(C) 2 : 1 (D) 1 : 1
6. \_\_\_\_\_ can not travel through vacuum.  
(A) Heat waves (B) Light waves  
(C) Sound waves (D) Non-mechanical waves

**Space for Rough Work**

## CHEMISTRY – (PART – B)

This part contains **6 Multiple Choice Questions** number **7 to 12**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

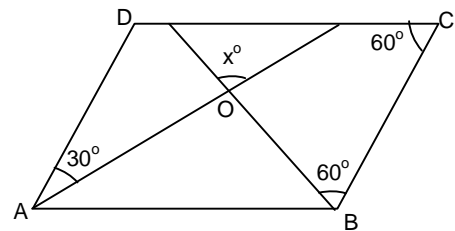
7. An element X forms an oxide XO which turns red litmus blue. Identify X.  
(A) A metal (B) A non-metal  
(C) A metalloid (D) A noble gas
8. Coal gas is a mixture of  
(A)  $\text{CH}_4 + \text{H}_2 + \text{CO}$  (B)  $\text{C}_4\text{H}_{10} + \text{H}_2$   
(C)  $\text{C}_4\text{H}_{10} + \text{H}_2\text{O}$  (D)  $\text{C}_2\text{H}_6 + \text{H}_2 + \text{O}_2$
9. Which polymer is known as synthetic wool?  
(A) nylon (B) acrylic  
(C) polyester (D) bakelite
10.  $\text{C}_{12}\text{H}_{22}\text{O}_{11} \xrightarrow[\text{H}_2\text{SO}_4]{\text{Conc.}} 12\text{C} + 11\text{H}_2\text{O}$   
Which of the following is obtained in the above reaction?  
(A) Animal charcoal (B) Sugar charcoal  
(C) Coke (D) Wood charcoal
11. Gasoline is obtained from crude petroleum oil by its  
(A) fractional distillation (B) vacuum distillation  
(C) steam distillation (D) pyrolysis
12. When a metal X is added to dilute HCl solution, there is no evolution of gas. The metal X is  
(A) K (B) Na  
(C) Ag (D) Zn

*Space for Rough Work*

## MATHEMATICS – (PART – C)

This part contains **6 Multiple Choice Questions** number **13 to 18**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

13. If  $\frac{3x-1}{4} - \frac{2x+5}{3} = \frac{5}{2} - 2x$ , then the value of x is equal to :
- (A)  $2\frac{1}{25}$  (B)  $2\frac{1}{35}$   
 (C)  $2\frac{3}{35}$  (D)  $2\frac{3}{25}$
14. In an examination, a student was asked to find  $\frac{3}{14}$  of a certain number. By mistake, he found  $\frac{3}{4}$  of that number. His answer was 150 more than the correct answer. The number is:
- (A) 180 (B) 240  
 (C) 280 (D) 290
15. For the data 2, 4, 6, 8, 9, 19, 8, 2, 4, 6, 8, 9, then
- (A) median = mode (B) median > mode  
 (C) median > mode = mean (D) none of these
16. If mode and median of a given data are 6 and 3 respectively, then their mean is
- (A) 1.5 (B) 1.6  
 (C) 1.4 (D) none of these
17. The highest marks obtained by a student in Mathematics is twice the lowest marks plus 7. If the highest score is 87, lowest score is equal to :
- (A) 40 (B) 20  
 (C) 45 (D) 30
18. In the adjoining figure ABCD is a parallelogram, then the measure of x is:
- (A)  $45^\circ$   
 (B)  $60^\circ$   
 (C)  $90^\circ$   
 (D)  $135^\circ$



*Space for Rough Work*

## BIOLOGY – (PART – D)

*This part contains 6 Multiple Choice Questions number 19 to 24. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.*

19. Manual removal of weeds can be done with the help of \_\_\_\_\_.
- (A) Plough (B) Khurpi  
(C) Seed drill (D) Pump
20. Before sowing the seeds, it is necessary to break soil to the size of grains to get better yield. The main tool used for such are:
- (A) Tractor, Hoe, Seed drill (B) Bullock, Tractor, Sprinkler  
(C) Plough, Hoe, Cultivator (D) Seed drill, Plough, Dripper
21. Restoring of the destroyed forests by planting new trees is known as
- (A) Housekeeping (B) Ecosystem  
(C) Reforestation (D) Deforestation
22. Which organ does hepatitis affect?
- (A) Heart (B) Brain  
(C) Liver (D) Kidneys
23. When the fertile soil gets converted into desert, this process is called as desertification. The main cause of this is/are
- (A) Deforestation (B) Less rainfall  
(C) Soil erosion (D) All of these
24. Kedarnath National Park is famous for
- (A) Crocodile (B) Tiger  
(C) Musk Deer (D) Rhinoceros

**Space for Rough Work**

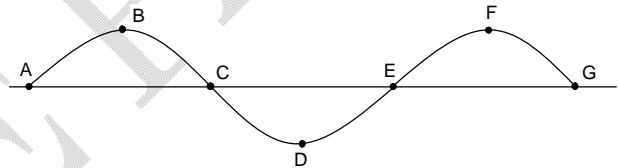
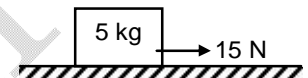
## Recommended Time: 50 Minutes for Section – II

### Section – II

## PHYSICS – (PART – A)

This part contains **8 Multiple Choice Questions** number 25 to 32. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

25. A liquid has density 1.5 g/cc. 50 cc of it is mixed with 30 cc of water. What will be the density of mixture solution?  
 (A) 13.125 g/cc (B) 1.3125 g/cc  
 (C) 1.11 g/cc (D) 2.12 g/cc
26. In the given figure if coefficient of friction between block and surface is 0.1 then find acceleration produced by the resultant force acting on the block (take  $g = 10 \text{ m/s}^2$ )  
 (A)  $3 \text{ m/s}^2$  (B)  $2 \text{ m/s}^2$   
 (C)  $5 \text{ m/s}^2$  (D)  $0.5 \text{ m/s}^2$
27. Indicate the interval which represents one full wavelength.  
 (A) A to C  
 (B) B to D  
 (C) A to G  
 (D) C to G
28. A force of 15 N acts separately on two bodies of masses 3 kg and 5 kg. The ratio of the accelerations produces in the two cases will be  
 (A) 5 : 3 (B) 3 : 5  
 (C) 8 : 15 (D) 15 : 8.



**Space for Rough Work**

29. The time period  $T$  is found to depend upon  $L$  (length) as  
(A)  $T \propto L$  (B)  $T \propto L^2$   
(C)  $T^2 \propto L$  (D)  $T \propto \sqrt{\frac{1}{L}}$
30. Frictional force can't be measured in  
(A) kg wt (B) newton  
(C) dyne (D) kg m/s
31. Aluminium has a density of 2.7 g/cc. The mass of 15 cc of aluminium is  
(A) 45 g (B) 40.5 g  
(C) 80 g (D) 100 g
32. A body of weight  $w_1$  is suspended from the ceiling of a room through a chain of weight  $w_2$ . The ceiling pulls the chain by a force  
(A)  $w_1$  (B)  $w_2$   
(C)  $w_1 + w_2$  (D)  $\frac{w_1 + w_2}{2}$

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*Space for Rough Work*



## CHEMISTRY – (PART – B)

This part contains **8 Multiple Choice Questions** number **33 to 40**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

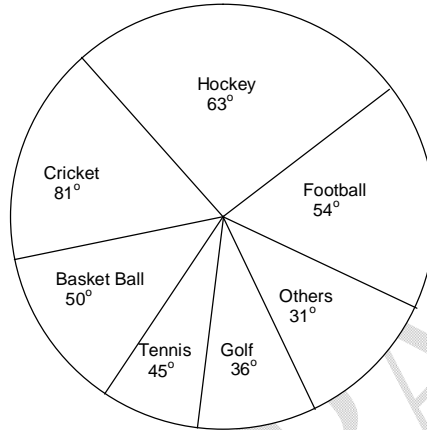
33. Range of carbon atoms in gasoline is:  
(A)  $C_{15} - C_{20}$  (B)  $C_2 - C_7$   
(C)  $C_5 - C_{12}$  (D)  $C_{13} - C_{15}$
34. An element X forms two oxides XO and  $XO_2$ , the oxide XO is neutral but  $XO_2$  is acidic in nature, the element X is most likely to be:  
(A) Sulphur (B) Carbon  
(C) Calcium (D) Hydrogen
35. Which of the following have branched structure?  
(A) Low density polythene (B) High density polythene  
(C) Poly Vinyl Chloride (D) Cellulose
36. Which of the following is **NOT** correct regarding terylene?  
(A) Step-growth polymer (B) Synthetic fibre  
(C) Condensation polymer (D) Thermosetting plastic
37. Boron is  
(A) metal (B) metalloid  
(C) non-metal (D) alkali
38. Which will condense near the top out of petrol, diesel oil, fuel oil and kerosene?  
(A) Petrol (B) Diesel oil  
(C) Fuel oil (D) Kerosene
39. Which of the following is **NOT** an example of addition polymerization?  
(A) Teflon (B) Polythene  
(C) Nylon (D) PVC
40. An alloy is  
(A) a compound (B) a heterogeneous mixture  
(C) a homogeneous mixture (D) an element

*Space for Rough Work*

## MATHEMATICS – (PART – C)

This part contains **8 Multiple Choice Questions** number **41 to 48**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

**Directions (Questions 41 to 45) :** The circle – graph given here shows the expenditures of a country on various sports during a particular year. Study the graph carefully and answer the questions given below it.



41. What percent of the total expenses is spent on Tennis?
- (A)  $12\frac{1}{2}\%$  (B)  $22\frac{1}{2}\%$   
(C) 25% (D) 45%
42. How much percent more is spent on Hockey than that on Golf?
- (A) 27% (B) 35%  
(C) 37.5% (D) 75%

**Space for Rough Work**

43. How much percent less is spent on Football than that on Cricket?  
(A)  $22\frac{2}{9}\%$  (B) 27%  
(C)  $33\frac{1}{3}\%$  (D)  $37\frac{1}{2}\%$
44. If the total amount spent on sports during the year was Rs. 2 crores, the amount spent on Cricket and Hockey together was:  
(A) Rs. 8,00,000 (B) Rs. 80,00,000  
(C) Rs. 1,20,00,000 (D) Rs. 1,60,00,000
45. If the total amount spent on sports during the year be Rs 1,80,00,000, the amount spent on Basketball exceeds that on Tennis by:  
(A) Rs. 2,50,000 (B) Rs. 3,60,000  
(C) Rs. 3,75,000 (D) Rs. 4,10,000
46. Surbhee's age after 15 years will be 5 times her age 5 years back. What is the present age of Surbhee?  
(A) 10 years (B) 15 years  
(C) 20 years (D) 30 years
47. The value of the component with central angle  $27^\circ$  in a pie chart is 90. Then, the value of the component with central angle  $42^\circ$  is  
(A) 110 (B) 90  
(C) 140 (D) None of these
48. The ratio of two numbers is 3 : 8 and their difference is 115. The largest number is:  
(A) 69 (B) 115  
(C) 184 (D) 230

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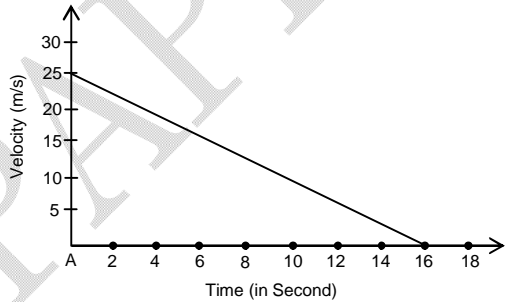
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## Recommended Time: 50 Minutes for Section – III

### Section – III

## PHYSICS – (PART – A)

This part contains **6 Multiple Choice Questions** number **49 to 54**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

49. A stone is dropped in a well of depth 500 m and a sound is heard after  $45/4$  seconds. Then speed of sound is (if  $g = 10 \text{ m/s}^2$ ):  
 (A) 340 m/s (B) 350 m/s  
 (C) 380 m/s (D) 400 m/s
50. The velocity time graph of a ball moving along a straight line on a long table is given in figure. Find the force applied by surface of table on the ball to bring it to rest if mass of ball is 50 g.  
 (A)  $7.825 \times 10^{-2} \text{ N}$   
 (B) 7.825 N  
 (C) 0.7825 N  
 (D) none of these
- 
51. If the distance between a crest and its consecutive trough is  $L$ , then the wavelength is given by  
 (A)  $L/2$  (B)  $L$   
 (C)  $4L$  (D)  $2L$
52. A boy blows a whistle while standing in front of a cliff. He becomes able to hear the echo after 0.4 second. If velocity of sound is 334 m/s, then at what distance from the cliff he is standing?  
 (A) 66.8 m (B) 66.8 cm  
 (C) 133.6 m (D) 133.6 cm
53. The product of the time period of a pendulum and its frequency is  
 (A) Infinite (B) zero  
 (C) More than unity but less than infinity (D) unity
54. A driver accelerates his car first at the rate of  $1.8 \text{ m/s}^2$  and then at the rate of  $1.2 \text{ m/s}^2$ . The ratio of two forces exerted by the engine in the two cases will be  
 (A) 1 : 2 (B) 2 : 1  
 (C) 2 : 3 (D) 3 : 2

**Space for Rough Work**

## CHEMISTRY – (PART – B)

This part contains **6 Multiple Choice Questions** number **55 to 60**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

55. Which of the following is thermosetting plastics?  
(A) Poly Vinyl Chloride (B) Nylon  
(C) Melamine (D) Terylene
56. The process of heating coal in the absence of air is called  
(A) fractional distillation (B) distillation  
(C) destructive distillation (D) none of these
57. Roasting is generally done in case of the following ores:  
(A) oxide ores (B) silicate ores  
(C) sulphide ores (D) carbonate ores
58. Monomeric units of bakelite are phenol and  
(A) acetaldehyde (B) formaldehyde  
(C) acetone (D) none of these
59. Which of the following can be used as a plasticizer?  
(A) Coconut oil (B) Mustard oil  
(C) Castor oil (D) Pine oil
60. Bone charcoal is used in sugar industry  
(A) As paint (B) for decolourising  
(C) As reducing agent (D) As an oxidising agent

*Space for Rough Work*

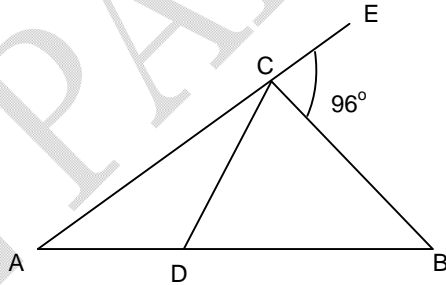
## MATHEMATICS – (PART – C)

This part contains **6 Multiple Choice Questions** number **61 to 66**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

61. If ABCD is a quadrilateral in which  $AB \parallel CD$  and  $AD = BC$ , then  $\angle A$  is equal to  
 (A)  $\angle B$  (B)  $\angle C$   
 (C)  $\angle D$  (D)  $\frac{1}{2}\angle B$

62.  $\triangle ABC$  is a right angled triangle in which  $\angle B = 90^\circ$  and  $\angle C = 2\angle A$ . If  $BC = 12$  cm then  $\text{ar}(\triangle ABC)$  is  
 (A)  $44 \text{ cm}^2$  (B)  $144\sqrt{3} \text{ cm}^2$   
 (C)  $72\sqrt{3} \text{ cm}^2$  (D)  $72 \text{ cm}^2$

63. In figure  $AD = CD = BC$  and  $\angle BCE = 96^\circ$  then find  $\angle DBC$ .  
 (A)  $36^\circ$   
 (B)  $32^\circ$   
 (C)  $64^\circ$   
 (D)  $72^\circ$



64. If  $\frac{x}{y} + \frac{y}{x} = -1$  ( $x, y \neq 0$ ), then the value of  $x^3 - y^3$  is  
 (A) 3 (B) -3  
 (C) 0 (D) 1

65. Which of the following is correct if  $A = 2^{2^{2^2}}$ ,  $B = 2^{2^{2^2}}$ ,  $C = 2^{2^{2^2}}$ ,  $D = 2^{2^{2^2}}$ ?  
 (A)  $A > B > C > D$  (B)  $C > A > B > D$   
 (C)  $A > C > D > B$  (D)  $C > B > D > A$

66. The mean of 50 observations was 36. It was found later that an observation 48 was wrongly taken as 23. The corrected new mean is equal to:  
 (A) 35.2 (B) 36.1  
 (C) 36.5 (D) 39.1

**Space for Rough Work**

## BIOLOGY – (PART – D)

*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. From the options given below select the correct pair of plant disease, its causative agent and its mode of transmission.  
 (A) Citrus canker – Virus – Water  
 (B) Rust of wheat – Bacteria – Air  
 (C) Yellow vein mosaic of Bhindi – Virus – Insect  
 (D) Both (B) and (C)
68. To preserve jams and squashes from microorganisms, we used chemical preservatives as like:  
 (A) Sodium benzoate and Sodium metabisulphite  
 (B) Sodium peroxide  
 (C) Sodium bicarbonate  
 (D) Sodium hypochloride
69. Identify the odd combination of the habitat and the particular animal concerned.  
 (A) Sunderbans – Bengal Tiger  
 (B) Periyar – Elephant  
 (C) Kaziranga – one horned Rhinoceros  
 (D) Dachigam National Park – Crocodile
70. Yangoupokpi- Lokchao wildlife sanctuary is located at  
 (A) Madhya Pradesh  
 (B) Meghalaya  
 (C) Chhattisgarh  
 (D) Manipur
71. Which of the following is the matching pair of sanctuary and its main protected Wild animal?  
 (A) Kaziranga – Musk deer  
 (B) Gir – Lion  
 (C) Sunderbans – Rhino  
 (D) All of these
72. The management and care of farm animals by human for profit is known as  
 (A) Granary  
 (B) Animal husbandry  
 (C) Poultry farms  
 (D) Warehouse

**Space for Rough Work**

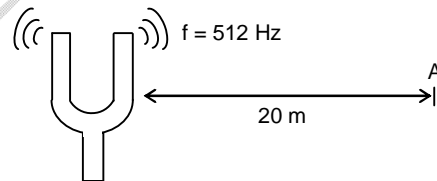
## Recommended Time: 50 Minutes for Section – IV

### Section – IV

## PHYSICS – (PART – A)

This part contains 5 Multiple Choice Questions number 73 to 77. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

73. When a force of one Newton acts on a mass of 1 kg that is able to move freely, the object moves with  
 (A) speed of 1 m./s (B) speed of 1 km/s  
 (C) acceleration of 10 m/s<sup>2</sup> (D) acceleration of 1 m/s<sup>2</sup>.
74. A pendulum completes 20 oscillations in 2.5s. Its frequency is  
 (A) 20 Hz (B) 8 Hz  
 (C) 200 Hz (D) 50 Hz
75. Which one of the following is a contact force?  
 (A) Force of gravity (B) Force of friction  
 (C) Magnetic force (D) Electrostatic force
76. A and B are two objects with masses 6 kg and 34 kg respectively.  
 (A) A has more inertia than B (B) B has more inertia than A  
 (C) A and B are of the same inertia (D) None of the above is true.
77. The time required for the sound wave ( $v = 340$  m/s) to travel from the tuning fork to point A is  
 (A) 0.020 s  
 (B) 0.059 s  
 (C) 0.59 s  
 (D) 2.9 s



**Space for Rough Work**



## CHEMISTRY – (PART – B)

This part contains 5 Multiple Choice Questions number 78 to 82. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

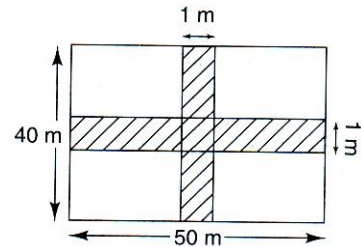
78. Which of the following is a macromolecule but **NOT** a polymer?  
(A) Chlorophyll (B) Protein  
(C) Starch (D) Cellulose
79. The reducing agent in thermite process is  
(A) Al (B) Mg  
(C) BaO<sub>2</sub> (D) MnO<sub>2</sub>
80. Cinnabar is an ore of which metal?  
(A) Hg (B) Pb  
(C) Fe (D) Cu
81. Amide linkage is present in  
(A) Terylene (B) Poly vinyl chloride  
(C) Rayon (D) Nylon
82. The reactivities of iron, magnesium, sodium and zinc towards water are in the order  
(A) Fe > Mg > Na > Zn (B) Zn > Na > Mg > Fe  
(C) Na > Mg > Zn > Fe (D) Mg > Na > Fe > Zn

*Space for Rough Work*

## MATHEMATICS – (PART – C)

*This part contains 5 Multiple Choice Questions number 83 to 87. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

83. A man sells to the first customer half his stock of apples and half an apple, to the second customer he sells half his remaining stock and half an apple, and so on to the third and to the fourth customer. He finds that he has now 15 apples left. How many apples did he have in the beginning?  
 (A) 225 (B) 235  
 (C) 245 (D) 255
84. Choose the correct statement:  
 (A) The diagonals of a parallelogram are equal  
 (B) The diagonals of a rectangle are perpendicular to each other  
 (C) If the diagonals of a quadrilateral intersect at right angles, it is not necessarily a rhombus  
 (D) Every quadrilateral is either a trapezium or a parallelogram or a kite
85. In a parallelogram ABCD diagonals AC and BD intersect at O and AC = 6.8 cm and BD = 5.6 cm. Then the measures of OC and OD are  
 (A) 3.4 cm, 2.8 cm (B) 3.04 cm, 2.82 cm  
 (C) 3.34 cm, 2.58 cm (D) None of these
86. The diagonals do not necessarily intersect at right angles in a  
 (A) Parallelogram (B) Square  
 (C) Rhombus (D) kite
87. The area of the shaded region in the following figure is  
 (A)  $2000 \text{ m}^2$  (B)  $90 \text{ m}^2$   
 (C)  $45 \text{ m}^2$  (D)  $89 \text{ m}^2$



**Space for Rough Work**

## PHYSICS – (PART – D)

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*This part contains 3 Numerical Based Questions number 88 to 90. Each question has Single Digit Answer 0 to 9.*

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88. Two particles A and B of masses 20 g and 30 g respectively are at rest at a certain time. Because of the forces exerted by them on each other, the particles start moving. At a given instant, particle A is found to move towards east with a velocity of 6 cm/sec. What is the velocity of particle B at this instant (in cm/s)?
89. A boat at anchor is rocked by waves whose crests are 100 m apart and velocity is 25 m/sec. The boat bounces up once in every \_\_\_\_\_ seconds.
90. A wave completes 40 vibrations in 5 sec. Its frequency (in Hz) is \_\_\_\_\_.
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*Space for Rough Work*

SAMPLE PAPER

## CHEMISTRY – (PART – E)

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*This part contains 3 Numerical Based Questions number 91 to 93. Each question has Single Digit Answer 0 to 9.*

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91. Number of possible reactions out of the following is:  
 $\text{Cu} + 2\text{AgNO}_3 \longrightarrow 2\text{Ag} + \text{Cu}(\text{NO}_3)_2$   
 $\text{Cu} + \text{ZnSO}_4 \longrightarrow \text{CuSO}_4 + \text{Zn}$   
 $\text{Mg} + \text{CuSO}_4 \longrightarrow \text{MgSO}_4 + \text{Cu}$   
 $\text{Zn} + \text{PbSO}_4 \longrightarrow \text{ZnSO}_4 + \text{Pb}$
92. The given reaction represents formation of iron from its oxide:  
 $\text{Fe}_2\text{O}_3 + x\text{C} \longrightarrow 2\text{Fe} + x\text{CO}$   
Here, x is:
93. Amongst the following, the total number of thermoplastics is polyester, bakelite, polythene, PVC, Teflon, PAN, nylon 6, melamine-formaldehyde resin

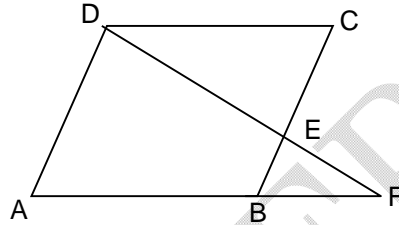
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**Space for Rough Work**

## MATHEMATICS – (PART – F)

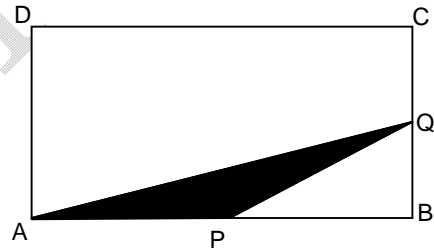
This part contains 3 Numerical Based Questions number 94 to 96. Each question has **Single Digit Answer 0 to 9**.

- 94 In Figure ABCD is a parallelogram and E is the mid-point of side BC. If DE and AB when produced meet at F, then  $\frac{AF}{AB} =$



95.  $\sqrt{6+\sqrt{6+\sqrt{6+\sqrt{6+\dots}}}}_{\text{to } \infty} =$  \_\_\_\_\_

96. In the figure, P and Q are the mid – points of the sides AB and BC of the rectangle ABCD. If the area of the triangle APQ is 1 square centimetre, what is the area of the whole rectangle (in  $\text{cm}^2$ )?



**Space for Rough Work**

# FIITJEE SAMPLE PAPER – 2018

## (Big Bang Edge Test / Talent Recognition Exam)

for students presently in

### Class 8 (Paper 2)

## ANSWERS

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