

# FIITJEE Big Bang Edge Test - 2022

for students presently in **Class 5 (going to 6) (Paper 1)**

Time: 3 Hours (9:00 am – 12:00 pm)

**CODE: 56-1**

Maximum Marks: 240

## Instructions:

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

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

Section	Subject	Question no.	Marking Scheme for each question	
			Correct answer	Wrong answer
SECTION – I	APTITUDE TEST	1 to 12	+3	0
		13 to 18	+4	0
SECTION – II	PHYSICS (PART-A)	19 to 22	+2	0
	CHEMISTRY (PART-B)	23 to 26	+2	0
	MATHEMATICS (PART-C)	27 to 31	+2	0
	BIOLOGY (PART-D)	32 to 36	+2	0
SECTION – III	PHYSICS (PART-A)	37 to 48	+1.5	0
	CHEMISTRY (PART-B)	49 to 60	+1.5	0
	MATHEMATICS (PART-C)	61 to 72	+1.5	0
	BIOLOGY (PART-D)	73 to 84	+1.5	0
SECTION – IV	PHYSICS (PART-A)	85 to 88	+3	0
	CHEMISTRY (PART-B)	89 to 92	+3	0
	BIOLOGY (PART-C)	93 to 96	+3	0
SECTION – V	MATHEMATICS (PART-A)	97 to 102	+3	0
	MATHEMATICS (PART-B)	103 to 108	+3	0

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

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

**OMR Answer Sheet No. :** \_\_\_\_\_  
**Registration Number :** \_\_\_\_\_  
**Name of the Candidate :** \_\_\_\_\_  
**Test Centre :** \_\_\_\_\_

For questions **103 to 108**

Numerical based questions single digit answer 0 to 9

**Example 1:**

If answer is 6.

Correct method:

① ② ③ ④ ⑤ ● ⑦ ⑧ ⑨

**Example 2:**

If answer is 2.

Correct method:

① ● ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

SAMPLE PAPER

# Recommended Time: 35 Minutes for Section – I

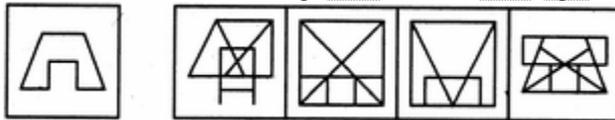
## Section – I

### 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.

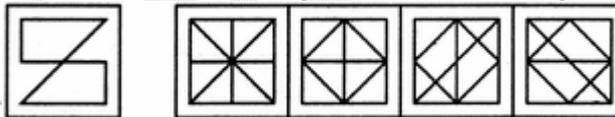
- Select the correct alternative from the given choices.  
12, 36, 150, 392, 1452, \_\_\_  
(A) 2452 (B) 2197 (C) 2246 (D) 2366
- Select the correct alternative from the given choices.  
49, 1625, 3649, 6481, \_\_\_  
(A) 81100 (B) 100144 (C) 100121 (D) 121169
- Select the correct alternative from the given choices.  
4, 18, 100, 294, \_\_\_  
(A) 1000 (B) 1100 (C) 1210 (D) 1452
- Select the correct alternative from the given choices.  
3, 35, 99, 195, \_\_\_, 483  
(A) 343 (B) 371 (C) 353 (D) 323

5. Find out the alternative figure which contains figure (X) as its part.



- (X) (1) (2) (3) (4)  
(A) 1 (B) 2 (C) 3 (D) 4

6. Find out the alternative figure which contains figure (X) as its part.



- (X) (1) (2) (3) (4)  
(A) 1 (B) 2 (C) 3 (D) 4

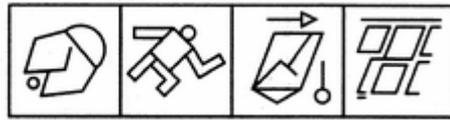
Space for Rough Work

7. Find out the alternative figure which contains figure (X) as its part.



(X)

(A) 1



(1)

(2)

(3)

(4)

(B) 2

(C) 3

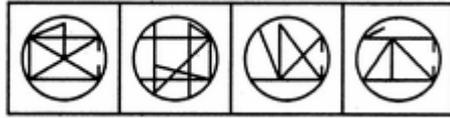
(D) 4

8. Find out the alternative figure which contains figure (X) as its part.



(X)

(A) 1



(1)

(2)

(3)

(4)

(B) 2

(C) 3

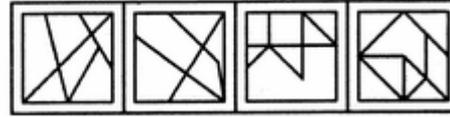
(D) 4

9. Find out the alternative figure which contains figure (X) as its part.



(X)

(A) 1



(1)

(2)

(3)

(4)

(B) 2

(C) 3

(D) 4

10. Arrange the given words in alphabetical order and tick the one that comes last:  
 (A) abandon (B) actuate (C) accumulate (D) acquit

11. Arrange the given words in alphabetical order and tick the one that comes at the second place:  
 (A) music (B) mint (C) mink (D) murder

12. If a meaningful word can be formed by re-arranging the letters USCALA; the last letter of the word so formed is the answer. Which one is that?  
 (A) C (B) S (C) A (D) L

13. Look at this series: 2, 1, (1/2), (1/4), ... What number should come next?  
 (A) (1/3) (B) (1/8) (C) (2/8) (D) (1/16)

14. Look at this series: 7, 10, 8, 11, 9, 12, ... What number should come next?  
 (A) 7 (B) 10 (C) 12 (D) 13

15. Look at this series: 36, 34, 30, 28, 24, ... What number should come next?  
 (A) 20 (B) 22 (C) 23 (D) 26

16. Look at this series: 3, 4, 7, 8, 11, 12, ... What number should come next?  
 (A) 7 (B) 10 (C) 14 (D) 15

**Space for Rough Work**

17. Find out the alternative figure which contains figure (X) as its part.



(X)  
(A) 1



(1)



(2)



(3)



(4)

(B) 2

(C) 3

(D) 4

18. Find out the alternative figure which contains figure (X) as its part.



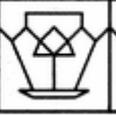
(X)  
(A) 1



(1)



(2)



(3)



(4)

(B) 2

(C) 3

(D) 4

Space for Rough Work

SAMPLE PAPER

## 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. What you will say about the lever, pulley, screw, wheel?  
(A) they are energy (B) they are simple machines  
(C) they are complex machines (D) they are forces
20. To measure the length of a distance between two cities of a country, which one is the most reasonable unit  
(A) millimeter (B) meter  
(C) kilometer (D) centimeter
21. By applying force one can  
(A) change direction of a moving object (B) change shape of an object  
(C) both (A) and (B) (D) none of these
22. km/hr is unit of  
(A) Distance (B) Time  
(C) Light Energy (D) speed

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*Space for Rough Work*

## CHEMISTRY – (PART – B)

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

23. Pick the correct option  
(A) Liquid can freeze (B) Solids can freeze  
(C) Gas can freeze (D) All of these
24. Which of the following has a definite volume but no definite shape?  
(A) Solid (B) Liquid  
(C) Gas (D) None of these
25. Which one of the following are after effects of earthquake  
(A) Cracking of roads (B) Shattering of buildings  
(C) Collapsing of communication system (D) All of these
26. Pick the odd one out:  
(A) Hydrogen (B) Nitrogen  
(C) Oxygen (D) Aerated cold drink

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*Space for Rough 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.  $0.04 \times 0.0162 = ?$   
(A) 6.48 (B) 0.00648  
(C) 64.8 (D) 0.000648
28. Find HCF of 14, 20 and 50.  
(A) 2 (B) 7 (C) 5 (D) 10
29. The product of the 7 fraction  $\left(1 - \frac{1}{2}\right)\left(1 - \frac{1}{3}\right)\left(1 - \frac{1}{4}\right)\left(1 - \frac{1}{5}\right)\left(1 - \frac{1}{6}\right)\left(1 - \frac{1}{7}\right)\left(1 - \frac{1}{8}\right)$  is  
(A)  $\frac{1}{8}$  (B)  $\frac{1}{4}$  (C)  $\frac{1}{6}$  (D)  $\frac{1}{2}$
30. The average of first five multiple of 3 is  
(A) 8 (B) 12 (C) 9 (D) 17
31. Which expanded form correctly represents the number 12.03 ?  
(A)  $1.2 + .03$  (B)  $10 + 2 + .3$  (C)  $10 + 2 + .03$  (D)  $12 + .3$

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*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. Deficiency of proteins, carbohydrates and fats causes  
(A) marasmus (B) obesity  
(C) anaemia (D) none of these
33. \_\_\_\_\_ have hollow bones to reduce their body weight  
(A) birds (B) all of these  
(C) fish (D) lizard
34. Canning, dehydration and pickling are methods of \_\_\_\_\_ food.  
(A) garnishing (B) preserving  
(C) cooking (D) none of these
35. \_\_\_\_\_ is a mammal but can fly.  
(A) Bat (B) Lion  
(C) Bird (D) none of these
36. Vitamins and minerals are required in a \_\_\_\_\_ quantity.  
(A) big (B) small  
(C) both (A) and (B) (D) none of these

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**Space for Rough Work**

## 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. Which one of the following is not an example of simple machine  
(A) screw (B) wheel  
(C) lever (D) train
38. The speed of a freely falling body increases continuously. This is because :  
(A) the body is big (B) it is very light  
(C) the body drags the air (D) the earth attracts it
39. Which of the following is the example of kinetic energy?  
(A) A boy is sleeping  
(B) P V Sindhu is running in the field  
(C) A crowd sitting in a stadium to see Neeraj Chopra's javelin event  
(D) A boy watching TV..
40. Which of the following is smallest?  
(A) One centimetre (B) One foot  
(C) One metre (D) all are equal
41. Viewing from the window's of moving train in backward direction the persons standing on the roads seem to be  
(A) moving forward (B) at rest  
(C) moving backward (D) none of these
42. A force of 75N can produce a pressure of 75 Pa. Then the area in \_\_\_\_\_  $\text{cm}^2$  on which the force acts.  
(A)  $5000 \text{ cm}^2$  (B)  $10000 \text{ cm}^2$   
(C)  $2000 \text{ cm}^2$  (D)  $250 \text{ cm}^2$

*Space for Rough Work*

43. A simple machine used to move the object in vertically upward direction is  
(A) Wedge (B) Wheel and axle  
(C) Pulley (D) Inclined plane
44. Mass of grains can be measured in  
(A) gram (B) kilogram  
(C) quintal (D) All of these
45. kilogram is unit of  
(A) Distance (B) mass  
(C) Light Energy (D) Temperature
46. 2.5 cm is equal to  
(A) 15 mm (B) 150 mm  
(C) 0.025 m (D) both (A) and (C)
47. A particle is projected vertically upward with kinetic energy 1150 J, its potential energy at highest point will be, ignoring air resistance  
(A) less than 1150 J (B) greater than 1150 J  
(C) equal to 1150 J (D) none of these
48. Function of a machine is?  
(A) To make our work convenient (B) To enable us lift more load with less force  
(C) To make our work hard (D) both (A) and (B)

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*Space for Rough Work*

## CHEMISTRY – (PART – B)

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

49. The upper layer of the earth is made up of  
(A) Core (B) Tectonic plates  
(C) Magma (D) None of these
50. Which of the following are called building blocks of rocks?  
(A) sand particles (B) minerals  
(C) Pebbles (D) Stones
51. The temperature at which water gets converted in to water vapour is known as:  
(A) Melting point (B) Boiling point  
(C) Freezing point (D) Evaporation
52. Water, minerals, coal and petroleum are  
(A) Underground natural resources (B) Man made resource.  
(C) Natural resources on earth's surface (D) artificial resources.
53. An \_\_\_\_\_ is the smallest unit of an element that has properties of that element  
(A) Atom (B) Physical property  
(C) Molecule (D) Chemical property
54. When a liquid changes to a gas it is called  
(A) Condensation (B) Evaporation  
(C) Melting point (D) Boiling point
55. What is the most uncommon form of matter on earth?  
(A) Soil (B) Liquid  
(C) Plasma (D) Gas

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*Space for Rough Work*

56. \_\_\_\_\_ is used in balloons as it is lighter than air  
(A) Helium (B) Nitrogen  
(C) Oxygen (D) Argon
57. \_\_\_\_\_ is the second most element found on earth's crust?  
(A) Iron (B) Nickel  
(C) Cadmium (D) Silicon
58. Which of the following is not a state of matter  
(A) Solid (B) Liquid  
(C) Gas (D) Mass
59. Which of the following dissolved gases are present in drinking water?  
(A) Oxygen, nitric oxide (B) Oxygen, carbon monoxide  
(C) Oxygen, carbon dioxide (D) Oxygen, nitrogen
60. If we heat iodine, then it is a :  
(A) Physical Change (B) Chemical Change  
(C) No change take place (D) Can't be determined

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*Space for Rough Work*

**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. By what fraction should  $2\frac{3}{5}$  be multiplied to get  $1\frac{6}{7}$   
(A)  $1\frac{5}{7}$  (B)  $\frac{5}{7}$  (C)  $1\frac{1}{7}$  (D)  $\frac{1}{7}$
62. 8118 is divisible by  
(A) 2 and 5 (B) 8 and 11 (C) 2, 3 and 11 (D) 2, 3, 5 and 11
63. The average of first 10 natural number is  
(A) 10 (B) 5.5 (C) 5 (D) 55
64. The greatest fraction among  $\frac{2}{3}$ ,  $\frac{5}{6}$ ,  $\frac{11}{15}$  and  $\frac{7}{8}$  is  
(A)  $\frac{7}{8}$  (B)  $\frac{11}{15}$  (C)  $\frac{5}{6}$  (D)  $\frac{2}{3}$
65. The L.C.M. of 12, 24 and 36 is  
(A) 24 (B) 36 (C) 108 (D) 72
66. If  $510.237 = 5A + B + \frac{23}{C} + \frac{7}{D}$  then find value of  $A + B + C + D$ .  
(A) 1200 (B) 1210 (C) 1310 (D) 1300

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**Space for Rough Work**

67. The difference of largest and smallest three digit whole number is  
(A) 699 (B) 799 (C) 899 (D) 999
68. The value of  $0.6 \times 0.6 + 0.6 \div 6$  is equal to :  
(A) 0.86 (B) 0.46 (C) 0.96 (D) 0.6
69. A man buys an pen for Rs. 50 and sells it for Rs. 56. Find its gain percent ?  
(A) 9% (B) 8% (C) 10% (D) 12%
70. P and Q are natural numbers. If  $25 \times P \times 18 = Q \times 15$  the smallest value of P + Q is  
(A) 61 (B) 21 (C) 41 (D) 31
71. Shikha ate  $\frac{2}{5}$  of a cake and Anandi ate  $\frac{1}{4}$  of the same cake. What part of the cake was left ?  
(A)  $\frac{7}{10}$  (B)  $\frac{13}{20}$  (C)  $\frac{7}{20}$  (D)  $\frac{11}{20}$
72.  $1\frac{1}{2} \times 180 \times \frac{1}{0.5}$  simplified form is  
(A) 120 (B) 360 (C) 540 (D) 1350

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*Space for Rough Work*

## BIOLOGY – (PART – D)

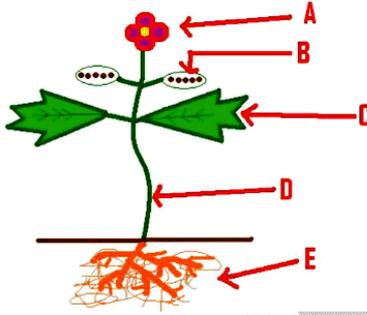
This part contains 12 Multiple Choice Questions number 73 to 84. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

73. Kwashiorkar occurs because of deficiency of \_\_\_\_\_ in the diet.  
(A) proteins (B) carbohydrates  
(C) fats (D) none of these
74. The, coldest region on earth is the:  
(A) polar region (B) tropical region  
(C) temperate region (D) coastal region
75. Which give us quick energy?  
(A) proteins (B) carbohydrates  
(C) fats (D) all of these
76. Camel is called \_\_\_\_\_ of the desert.  
(A) ship (B) train  
(C) boat (D) none of these
77. Iodized salt is a good source of  
(A) iron (B) calcium  
(C) iodine (D) none of these
78. Long sleep in winter month to protect from cold is called  
(A) hibernation (B) migration  
(C) both (A) and (B) (D) none of these
79. What are required for strong bones?  
(A) Vitamin D (B) Calcium  
(C) both of the above (D) none of these
80. Vitamin C protect us from  
(A) Night blindness (B) Scurvy  
(C) Rickets (D) Goitre

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**Space for Rough Work**

81. What is the process in which a plant takes in carbon dioxide and releases oxygen?  
 (A) Fertilization (B) Germination  
 (C) Photosynthesis (D) Respiration
82. Which animals live on trees?  
 (A) Arboreal (B) Amphibian  
 (C) Aerial (D) Aquatic
83. What part of the plant is next to letter A?



- (A) Flower (B) Stem  
 (C) Root (D) Leaves
84. Which of the following is NOT true of stems?  
 (A) They transport water (B) They transport air  
 (C) They transport food and nutrients (D) They hold up the plant to get light

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Space for Rough Work

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

**Section – IV**

**PHYSICS – (PART – A)**

*This part contains 4 Multiple Choice Questions number 85 to 88. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

85.  $2 \text{ m}^2 = \dots$   
(A)  $100 \text{ cm}^2$   
(C)  $20000 \text{ cm}^2$   
(B)  $10000 \text{ cm}^2$   
(D) none of these
86. Light year is unit of  
(A) Distance  
(C) Light Energy  
(B) Time  
(D) Temperature
87. The effort is between the \_\_\_\_\_ and load in class 3 levers.  
(A) object  
(C) fulcrum  
(B) force  
(D) all of these
88. We get hydroelectricity from  
(A) sea  
(C) raining water  
(B) flowing water  
(D) coastal wind

*Space for Rough Work*

## CHEMISTRY – (PART – B)

This part contains 4 Multiple Choice Questions number 89 to 92. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

89. The mother rock inside the earth is  
(A) Quartzite (B) Gneiss  
(C) Magma (D) Shole
90. Pumice is formed when lava from volcano cools. Which type of rock is pumice?  
(A) Gaseous rock (B) Igneous rock  
(C) Sedimentary rock (D) metamorphic rock
91. Which of these solids turn into vapour on heating.  
(A) Cotton (B) Wood  
(C) Napthalene (D) Paper
92. The quantity of salt dissolved per litre of water in dead sea is:  
(A) 300 gm (B) 200 gm  
(C) 400 gm (D) 500 gm

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*Space for Rough Work*

## BIOLOGY – (PART – C)

*This part contains 4 Multiple Choice Questions number 93 to 96. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

93. \_\_\_\_\_ is an abiotic component?  
(A) Rat (B) Parrot  
(C) Soil (D) Tree
94. Given below are some adaptive features of animals:  
(i) Layer of fat under the skin  
(ii) Long, curved and sharp claws  
(iii) Slippery body  
(iv) Thick white fur  
Which of them are the adaptive features of a polar bear?  
(A) (i) only (B) (i) and (ii) only  
(C) (i), (ii) and (iii) only (D) (i), (ii) and (iv) only
95. \_\_\_\_\_ is an example of aquatic habitat?  
(A) Desert (B) Mountain region  
(C) Grassland (D) Lake
96. Heterotrophs include  
(A) Herbivores only (B) Carnivores only  
(C) Green plants (D) Both herbivores and carnivores

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*Space for Rough Work*

**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.  $\left(\frac{0.1}{0.01} + \frac{0.01}{0.1}\right) = ?$   
(A) 10.1 (B) 1.01 (C) 1.10 (D) 10.01
98. Reena sold a carpet for Rs.10,000 at a profit price rupees 2,000. Find price (Rs) at which she bought it.  
(A) 8000 (B) 6000 (C) 12000 (D) 11000
99. Find the unit digit in the product  $4139 \times 4139 \times 4139 \times 4139 \times \dots$  (25 times)  
(A) 9 (B) 1 (C) 0 (D) 6
100. Simplify  $0.1 \times 0.01 \times 0.001$   
(A) 0.000001 (B) 0.0001 (C) 0.001 (D) 0.01
101. Which of the following is multiple of 11  
(A) 1354 (B) 14884 (C) 193479 (D) 17590
102. There are 7 observations in the data and their average is 11. If each observation multiplied by 2, then new average is \_\_\_\_\_.  
(A) 11 (B) 13 (C) 55 (D) 22

*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 7 is the average of 6 observations then what is the average if each observation is decreased by 3.
104. Solve :  $\frac{1}{2} \times \left( \frac{5}{6} \div \frac{1}{12} \right)$ .
105. Simplify  $\left[ \frac{\frac{5}{4} - \frac{1}{4}}{1\frac{9}{20} + 1\frac{3}{10}} \right] \times 11$
106. If  $x7y5$  is exactly divisible by 3, then the least value of  $(x + y)$  is
107. C.P. = Rs. 870 and S.P = Rs. 770. If loss = k(in Rs) then  $\frac{k}{25} = ?$
108. If  $\frac{x}{7} - \frac{2}{3} = \frac{10}{21}$  then  $x = ?$

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*Space for Rough Work*

# FIITJEE Big Bang Edge Test - 2022

for students presently in **Class 5 (going to 6) (Paper 1)**

## SAMPLE PAPER ANSWER KEY

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