## fIITJEE SAMPLE PAPER

(Big Bang Edge Test / Talent Recognition Exam-2020) for students presently in
Class 7 (Paper 2)
Time: 3 Hours (1:45 pm - 4:45 pm)

## 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 $\mathbf{6 0}$ Minutes on Section-I, $\mathbf{6 0}$ Minutes on Section-II and $\mathbf{6 0}$ Minutes on Section-III.
2. This Question paper consists of 3 sections. Marking scheme is given in table below:

| Section | Subject |  | Question no. | Marking Scheme for each question |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | correct answer | wrong answer |
| SECTION - I | PHYSICS | (PART-A) |  | 1 to 15 | +1.5 | 0 |
|  | CHEMISTRY | (PART-B) | 16 to 30 | +1.5 | 0 |
|  | MATHEMATICS | (PART-C) | 31 to 45 | +1.5 | 0 |
|  | BIOLOGY | (PART-D) | 46 to 60 | +1.5 | 0 |
| SECTION - II | PHYSICS | (PART-A) | 61 to 66 | +3 | -1 |
|  | CHEMISTRY | (PART-B) | 67 to 72 | +3 | -1 |
|  | MATHEMATICS | (PART-C) | 73 to 78 | +3 | -1 |
|  | BIOLOGY | (PART-D) | 79 to 84 | +3 | -1 |
| SECTION - III | MATHEMATICS | (PART-A) | 85 to 96 | +3 | 0 |
|  | MATHEMATICS | (PART-B) | 97 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 at the bottom of this sheet.
6. See method of marking of bubbles at the back of cover page for question no. 97 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. : $\qquad$
Registration Number : $\qquad$
Name of the Candidate : $\qquad$
Test Centre
: $\qquad$

## For questions 97 to 108

Numerical based questions single digit answer 0 to 9

## Example 1:

If answer is 6 .
Correct method:
(0)
(1)
(2) (3) (4)
(5)
(6) 7
(8) (9)

## Example 2:

If answer is 2.
Correct method:
(0)
(1)
(2) (3)
(4) (5)
(6) 7
(8) (9)

## Recommended Time: 60 Minutes for Section - I

## Section - I

## PHYSICS - (PART - A)

This part contains 15 Multiple Choice Questions number 1 to 15. Each question has 4 choices $(A),(B),(C)$ and (D), out of which ONLY ONE is correct.

1. Absolute zero corresponds to
(A) 273 K
(B) -273 K
(C) $273^{\circ} \mathrm{C}$
(D) $-273^{\circ} \mathrm{C}$
2. A car travels with a speed $60 \mathrm{~km} / \mathrm{h}$ in the initial one hour and with a speed of $40 \mathrm{~km} / \mathrm{h}$ in the next half hour. Its average speed is
(A) $50 \mathrm{~km} / \mathrm{h}$
(B) $53.33 \mathrm{~km} / \mathrm{h}$
(C) $48 \mathrm{~km} / \mathrm{h}$
(D) $70 \mathrm{~km} / \mathrm{h}$
3. A body from ground level is thrown vertically upwards and reaches a maximum height of 4 m . It then returns to the ground. The total distance travelled by the body is $\qquad$ .
(A) Zero
(B) 8 m
(C) 4 m
(D) None of these
4. One joule is approximately equal to
(A) 0.28 cal
(B) 0.32 cal
(C) 0.24 cal
(D) 4.2 cal
5. What will be the distance (in km ) covered by a motorist in 30 minutes travelling with a speed of 45 $\mathrm{km} / \mathrm{h}$ ?
(A) 22.5 km
(B) 45 km
(C) 1350 km
(D) 11.25 km
6. Flow of heat takes place
(A) from a body at higher temperature to a body at lower temperature
(B) from a body at lower temperature to a body at higher temperature
(C) when both the bodies are at same temperature
(D) None of these

## SAMPLE PAPER-BBE/TRE-2020-C-VII (Paper-2)-S\&\&M-4

7. At which temperature water has maximum density?
(A) $0^{\circ} \mathrm{C}$
(B) $-273^{\circ} \mathrm{C}$
(C) $4^{\circ} \mathrm{C}$
(D) $100^{\circ} \mathrm{C}$
8. A ball is thrown upwards. Its velocity at the highest point is
(A) maximum
(B) same as initial velocity
(C) zero
(D) cannot be predicted
9. Which of the following will cause more severe burn
(A) steam at $100^{\circ} \mathrm{C}$
(B) boiling water
(C) water at $95^{\circ} \mathrm{C}$
(D) none of these
10. A 100 g iron ball is cooled down from $100^{\circ} \mathrm{C}$ to $30^{\circ} \mathrm{C}$. Calculate the loss of heat if specific heat of iron is $4.8 \times 10^{2} \mathrm{~J} \mathrm{~kg}^{-1}{ }^{\circ} \mathrm{C}^{-1}$.
(A) 3360000 J
(B) 3360 J
(C) 336 J
(D) 33.6 J
11. On a 120 km track, a train travels the first 30 km at a uniform speed of $30 \mathrm{~km} / \mathrm{h}$. How fast must the train travel the next 90 km so as to average speed for entire trip is $60 \mathrm{~km} / \mathrm{h}$ ?
(A) $60 \mathrm{~km} / \mathrm{h}$
(B) $40 \mathrm{~km} / \mathrm{h}$
(C) $90 \mathrm{~km} / \mathrm{h}$
(D) $120 \mathrm{~km} / \mathrm{h}$
12. The distance travelled by the body as per given velocitytime graph is
(A) 200 m
(B) 250 m
(C) 300 m
(D) 400 m

13. 100 g of hot water at $90^{\circ} \mathrm{C}$ is mixed to 400 g of cold water at $10^{\circ} \mathrm{C}$, the equilibrium temperature of the mixture is:
(A) $26^{\circ} \mathrm{C}$
(B) $45^{\circ} \mathrm{C}$
(C) $60^{\circ} \mathrm{C}$
(D) $50^{\circ} \mathrm{C}$
14. Change $5 \mathrm{~m} / \mathrm{s}$ to $\mathrm{km} / \mathrm{h}$
(A) $15 \mathrm{~km} / \mathrm{h}$
(B) $18 \mathrm{~km} / \mathrm{h}$
(C) $30 \mathrm{~km} / \mathrm{h}$
(D) None of these
15. An object covers half distance with speed $\mathrm{V}_{1}$ and rest half distance with speed $\mathrm{V}_{2}$. Find the average speed of object for whole journey.
(A) $\frac{V_{1}+V_{2}}{2}$
(B) $\frac{2 V_{1}+V_{2}}{V_{1}+2 V_{2}}$
(C) $\frac{2 V_{1} V_{2}}{V_{1}+V_{2}}$
(D) $\frac{V_{1}+2 V_{2}}{2 V_{1}+V_{2}}$

## CHEMISTRY - (PART - B)

This part contains 15 Multiple Choice Questions number 16 to 30. Each question has 4 choices $(A),(B),(C)$ and $(D)$, out of which ONLY ONE is correct.
16. Curd consists of the following acid.
(A) ascorbic
(B) butyric
(C) lactic
(D) oxalic
17. Scouring is done to remove
(A) grease
(B) dust
(C) dirt
(D) all the three
18. The colour of methyl orange in an alkaline solution is
(A) orange
(B) pink
(C) red
(D) yellow
19. Find the odd one among the following fibres.
(A) cotton
(B) silk
(C) nylon
(D) wool
20. The fleece of sheep are generally sheared during
(A) winter
(B) summer
(C) spring
(D) autumn
21. Burning of candle involves the following change/changes
(A) physical
(B) chemical
(C) both (A) and (B)
(D) none of these
22. The salt produced by neutralization of an acid and a base may be
(A) acidic
(B) basic
(C) neutral
(D) all the three
23. Which one of the following acid is inorganic?
(A) acetic acid
(B) carbonic acid
(C) lactic acid
(D) citric acid

## SAMPLE PAPER-BBE/TRE-2020-C-VII (Paper-2)-S8\&M-6

24. Vinegar is a dilute solution of
(A) acetic acid
(B) citric acid
(C) tartaric acid
(D) none of these
25. The fine gummy filaments from silkworms get hardened on exposure to
(A) water
(B) sunlight
(C) air
(D) none of these
26. Silk fibres are made up of
(A) carbohydrates
(B) proteins
(C) fats
(D) wax
27. Which one of the following is a physical change?
(A) combustion
(B) respiration
(C) evaporation
(D) corrosion
28. Sugar is an example of
(A) element
(B) compound
(C) mixture
(D) salt
29. In which one of the following preparations, physical change is observed.
(A) Tea
(B) Lemonade
(C) Pizza
(D) Cake
30. Which one does NOT alter during physical and chemical changes?
(A) colour
(B) energy
(C) mass
(D) none of these

## Space for Rough Work

## MATHEMATICS - (PART - C)

This part contains 15 Multiple Choice Questions number 31 to 45. Each question has 4 choices $(A),(B),(C)$ and $(D)$, out of which ONLY ONE is correct.
31. In the given figure $A B=C B=5.2 \mathrm{~cm}, \mathrm{AE}=\mathrm{CD}=5 \mathrm{~cm}$ and $\angle A=\angle C=40^{\circ}$ then $\triangle E A B$ is $\qquad$ $\triangle \mathrm{DCB}$.
(A) $=$
$(C) \cong$
(B) ~
(D) $\equiv$

32. In the given figures what must be value of $x$ to prove $\Delta \mathrm{ABC} \cong \triangle \mathrm{DEC}$ by $S A S$ ?
(A) $15^{\circ}$
(B) $25^{\circ}$
(C) $75^{\circ}$
(D) $65^{\circ}$

33. In the given triangle, if $\mathrm{ZW}=\mathrm{ZX}, \mathrm{WY}=\mathrm{WX}$, then $\angle \mathrm{WZX}$ is equal to
(A) $70^{\circ}$
(B) $140^{\circ}$
(C) $40^{\circ}$
(D) $100^{\circ}$

34. Find the angle whose complement is one third of its supplement.
(A) $45^{\circ}$
(B) $30^{\circ}$
(C) $55^{\circ}$
(D) $60^{\circ}$

## Space for Rough Work

35. Solve for t :
$t-(2 t+5)-5(1-2 t)=2(3+4 t)-3(t-4)$
(A) 5
(B) 2
(C) 7
(D) 3
36. $\triangle A B C$ is an equilateral triangle in which $A D \perp B C \triangle A B D$ is congruent to:
(A) $\triangle A D C$
(B) $\triangle A C D$
(C) $\triangle A B C$
(D) $\triangle$ CDA
37. If a bicycle wheel has 36 spokes then the angle between pair of adjacent spokes is
(A) $10^{\circ}$
(B) $15^{\circ}$
(C) $20^{\circ}$
(D) $12^{\circ}$
38. The side included between $\angle A$ and $\angle B$ of $\triangle A B C$ is
(A) AC
(B) CB
(C) $A B$
(D) None of these
39. In the given figure $A B=A C$, then which of the following is correct relation between $x$ and $y$ ?
(A) $x>y$
(B) $x<y$
(C) $x=y$
(D) $\frac{x}{y}=\frac{1}{2}$

40. The mean of 10 numbers is 7. If each number is multiplied by 12 , then the mean of new set of numbers is
(A) 82
(B) 48
(C) 78
(D) 84
41. The ages of $A$ and $B$ are in the ratio $5: 3$. After 6 years, their ages will be in the ratio $7: 5$. Find the sum of their present ages is:
(A) 9 years
(B) 10 years
(C) 15 years
(D) 24 years
42. A reflex angle measure:
(A) more than $90^{\circ}$ but less than $180^{\circ}$
(B) more than $180^{\circ}$ but less than $270^{\circ}$
(C) more than $180^{\circ}$ but less than $360^{\circ}$
(D) none of these
43. In the given triangle $A B C$, find the value of $x$.
(A) $55^{\circ}$
(B) $110^{\circ}$
(C) $70^{\circ}$
(D) $27.5^{\circ}$

44. If in any triangle $A B C$, the base $B C$ is produced in both ways the sum of the exterior angles at $B$ and $C$ is
(A) $180^{\circ}-\mathrm{A}$
(B) $180^{\circ}+\mathrm{A}$
(C) $90^{\circ}+\mathrm{A}$
(D) $180^{\circ}-\mathrm{A} / 2$
45. From the pie graph shown, find the percent of student that are in grade 7.
(A) $35 \%$
(B) $50 \%$
(C) $40 \%$
(D) $28 \%$


## BIOLOGY - (PART - D)

This part contains 15 Multiple Choice Questions number 46 to 60. Each question has 4 choices $(A),(B),(C)$ and $(D)$, out of which ONLY ONE is correct.
46. Parallel venation is found in:
(A) Dentaria
(B) Hollyhock
(C) Banyan
(D) Grass
47. In plants, xylem and phloem comprises of
(A) Protective tissue
(B) Food storing tissue
(C) Vascular tissue
(D) Reproductive tissue
48. Rakesh went for mountain climbing. As he climbed higher, he began to feel difficulty in breathing following dizziness and lack of muscular co-ordination. Later, he had to be carried down. What caused this?
(A) Absence of oxygen
(B) Decrease in oxygen content
(C) Decrease in nitrogen content
(D) None of these
49. Omnivores are those which eat:
(A) Only plants
(B) Only animals
(C) Both A \& B
(D) None of these
50. A balanced diet contains:
(A) Carbohydrate
(B) Protein
(C) Fat, minerals, vitamins
(D) All of these
51. Dietary fibres are known as:
(A) Roughage
(B) Protein
(C) Carbohydrate
(D) None of these
52. Which vitamin can be prepared by our body in presence of sunlight?
(A) Vitamin A
(B) Vitamin B
(C) Vitamin C
(D) Vitamin D
53. Roots are of mainly:
(A) Tap root
(B) Fibrous root
(C) Both A \& B types
(D) None of these
54.
(A) Trachea
(B) Syrinx
(C) Pharynx
(D) Oesophagus
55. Relative humidity is measured with the help of a -
(A) Thermometer
(B) Hydrometer
(C) Hygrometer
(D) Rain gauge
56. When water vapour condenses near the ground there is:
(A) Rainfall
(B) Snowfall
(C) Fog
(D) a hailstorm
57. The process of breathing includes:
(A) Taking in $\mathrm{O}_{2}$
(B) Giving out $\mathrm{CO}_{2}$
(C) Both (A) \& (B)
(D) None of these
58. Plants cannot manufacture food without:
(A) Oxygen
(B) Chlorophyll
(C) Both (A) \& (B)
(D) None of these
59. The process by which an organism procures food is called:
(A) Respiration
(B) Nutrition
(C) Transportation
(D) All of these
60. Breathing is a part of:
(A) Reproduction
(B) Respiration
(C) Both (A) \& (B)
(D) None of these

## Space for Rough Work

## Recommended Time: 60 Minutes for Section - II

## Section - II

## PHYSICS - (PART - A)

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. 1 litre of water at $40^{\circ} \mathrm{C}$ is mixed with 1 litre of water at $80^{\circ} \mathrm{C}$. Temperature of resulting mixture will be
(A) Less than $40^{\circ} \mathrm{C}$
(B) Greater than $80^{\circ} \mathrm{C}$
(C) $100^{\circ} \mathrm{C}$
(D) Greater than $40^{\circ} \mathrm{C}$ but less than $80^{\circ} \mathrm{C}$
62. How much heat energy is required to completely melt 20 g of ice at $0^{\circ} \mathrm{C}$ to water? (Latent heat of fusion of ice $=80 \mathrm{cal} / \mathrm{g}$ )
(A) 1600 cal
(B) 1.6 cal
(C) 80 cal
(D) None of these
63. Calculate the quantity of heat required to convert 1.5 kg of ice at $0^{\circ} \mathrm{C}$ to water at $15^{\circ} \mathrm{C}$. Latent heat of fusion of ice $=3.35 \times 10^{5} \mathrm{~J} \mathrm{~kg}^{-1}$, specific heat of water $=4186 \mathrm{~J} \mathrm{~kg}^{-1}{ }^{\circ} \mathrm{C}^{-1}$
(A) 597000 J
(B) 596685 J
(C) 595000 J
(D) none of these
64. A car covers distance $S_{1}$ with velocity $V_{1}$ and distance $S_{2}$ with velocity $V_{2}$ between two cities $P$ and $Q$ on a straight line path. Its average velocity will be
(A) $\frac{V_{1}+V_{2}}{2}$
(B) $\frac{V_{1}-V_{2}}{2}$
(C) $\frac{\left(S_{1}+S_{2}\right) V_{1} V_{2}}{S_{1} V_{2}+S_{2} V_{1}}$
(D) $\frac{S_{1} V_{2}+S_{2} V_{1}}{\left(S_{1}+S_{2}\right) \times V_{1} V_{2}}$

## Space for Rough Work

65. For the given distance-time graph, select the correct speed-time graph:

(A)

(B) speed

(C)

(D)

66. $\quad 10 \mathrm{~kg}$ of water at $90^{\circ} \mathrm{C}$ is cooled to $60^{\circ} \mathrm{C}$. Calculate the heat lost by the water. Specific heat of water is $4200 \mathrm{~J} \mathrm{~kg}^{-1}{ }^{\circ} \mathrm{C}^{-1}$.
(A) 1260 kJ
(B) 42000 J
(C) 1260 J
(D) 420 kJ

## CHEMISTRY - (PART - B)

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. Slaked lime is chemically
(A) CaO
(B) $\mathrm{Ca}(\mathrm{OH})_{2}$
(C) $\mathrm{CaCO}_{3}$
(D) $\mathrm{Ca}\left(\mathrm{HCO}_{3}\right)_{2}$
68. Arrange the following terms in order for wool processing

1. Sorting
2. Scouring
3. Spinning
4. Shearing
(A) 4, 3, 2, 1
(B) 4, 1, 2, 3
(C) $4,2,1,3$
(D) $4,3,1,2$
5. Acid rain may contain
(A) carbonic acid
(B) sulphurous acid
(C) nitric acid
(D) all the three
6. Evaporation takes place
(A) at boiling point
(B) at melting point
(C) above boiling point
(D) below boiling point
7. Which one is NOT a property of silk?
(A) cool in summer
(B) difficult to dye
(C) warm in winter
(D) absorbs moisture
8. Vinegar is added to baking soda and a chemical change takes place. This can be the best example for
(A) production of heat
(B) change of colour
(C) production of sound
(D) evolution of gas

## MATHEMATICS - (PART - C)

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. The condition that makes the following pair of triangles congruent is
(A) SSS
(B) ASA
(C) SAS
(D) RHS

74. If 'a' means ' $\div$ ', 'b' means ' $x$ ', ' c' means ' - ' and ' $d$ ' means ' + ' then, what is the value of 45 a 15 b 18c 1 d 11 ?
(A) 67
(B) 80
(C) 59
(D) 64
75. In the given figure, if I \| m , then what type of a triangle ABC is?
(A) Equilateral
(B) Isosceles
(C) Scalene
(D) Right angled

76. Sum of the digits of a two digit number is 9 . The number obtained by interchanging the digits is 18 more than twice the original number. The original number is
(A) 72
(B) 27
(C) 36
(D) 63
77. An integer is 10 more than its one third part. The integer is
(A) 15
(B) 12
(C) 18
(D) 25
78. What is increasing order of the fractions $\frac{6}{7}, \frac{8}{9}, \frac{7}{8}, \frac{9}{10}$ ?
(A) $\frac{6}{7}, \frac{8}{9}, \frac{7}{8}, \frac{9}{10}$
(B) $\frac{9}{10}, \frac{7}{8}, \frac{8}{9}, \frac{6}{7}$
(C) $\frac{6}{7}, \frac{7}{8}, \frac{8}{9}, \frac{9}{10}$
(D) $\frac{9}{10}, \frac{8}{9}, \frac{7}{8}, \frac{6}{7}$

## BIOLOGY - (PART - D)

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. Deficiency of iron mineral in our diet causes:
(A) Anaemia
(B) Goitre
(C) Rickets
(D) Bone and tooth decay
80. Holozoic nutrition includes taking in the $\qquad$ substances and converting them into $\qquad$ substances:
(A) complex, more complex
(B) simpler, complex
(C) complex, simpler
(D) None of these
81. If a photosynthesizing plant releases oxygen containing more than the normal amount of ${ }^{18} \mathrm{O}$, it is concluded that the plant has been supplied with
(A) $\mathrm{C}_{6} \mathrm{H}_{12} \mathrm{O}_{6}$ containing ${ }^{18} \mathrm{O}$
(B) $\mathrm{H}_{2} \mathrm{O}$ containing ${ }^{18} \mathrm{O}$
(C) $\mathrm{CO}_{2}$ containing ${ }^{18} \mathrm{O}$
(D) Oxygen in the form of ozone
82. When diaphragm of man is completely dome shaped it shows
(A) End of expiration and beginning of inspiration
(B) Beginning of expiration and end of inspiration
(C) Increased rate of breathing
(D) Decreased rate of breathing
83. Root develops from which part of the germinating seed?
(A) Cotyledons
(B) Radicle
(C) Pericarp
(D) Plumule
84. Mark the incorrect statement:
(A) The lion-tailed macaque (also called beard ape) lives in the rainforests of Western Ghats.
(B) Tusks of elephants are modified teeth
(C) Both (A) and (B)
(D) Red eyed frog possesses a long, large beak

## Space for Rough Work

## Recommended Time: 60 Minutes for Section - III

## Section - III

## MATHEMATICS - (PART - A)

This part contains 12 Multiple Choice Questions number 85 to 96. Each question has 4 choices $(A),(B),(C)$ and (D), out of which ONLY ONE is correct.
85. In the given figure $\triangle \mathrm{ABC} \cong \triangle C D A$, if $\angle \mathrm{ABC}=70^{\circ}, \angle \mathrm{BAC}=50^{\circ}, \angle \mathrm{BCA}=60^{\circ}$, then find the $\angle \mathrm{CAD}$.
(A) $55^{\circ}$
(B) $60^{\circ}$
(C) $65^{\circ}$
(D) $70^{\circ}$

86. The value of $63 \times 7-28 \times 89+76.4-37.66$ is
(A) 2012.26
(B) 2014.26
(C) -2012.26
(D) -2014.26
87. In figure, $A B \| C D$ find the values of the angles $x, y$ and $z$ respectively.
(A) $137^{\circ}, 43^{\circ}, 56^{\circ}$
(B) $122^{\circ}, 56^{\circ}, 48^{\circ}$
(C) $116^{\circ}, 43^{\circ}, 56^{\circ}$
(D) $137^{\circ}, 56^{\circ}, 48^{\circ}$

88. In the given figure $\triangle \mathrm{ADB} \cong \triangle \mathrm{BCA}$, which of the following statement is true?
(A) SSS
(B) ASA
(C) SAS
(D) RHS

89. If ' + ' means ' $x$ ', ' - ' means ' $\div$ ', ' $\div$ ' means ' - ' and ' $x$ ' means ' + '. Find the value of the expression: $6 \div$ $8-2+5 \times 20=$
(A) 8
(B) 4
(C) 6
(D) 9
90. The side of an equilateral triangle measures 72 cm . The perimeter of this triangle is equal to the perimeter of a square shape. What is the length of the side of the square?
(A) 18 cm
(B) 36 cm
(C) 54 cm
(D) 108 cm
91. What should be subtracted from 0.10 to get 0.03 ?
(A) 0.7
(B) 0.07
(C) 0.007
(D) None of these
92. In the given figure, If $\angle B A C=\angle D A C$ and $\angle B C A=\angle D C A$, then $\triangle A B C \cong$
(A) $\triangle C D A$
(B) $\triangle$ DAC
(C) $\triangle A D C$

(D) $\triangle A C D$
93. In a triangle $\mathrm{ABC} \angle \mathrm{B}=90^{\circ}$. $\mathrm{AB}: \mathrm{BD}: \mathrm{DC}=3: 1: 3$. If $\mathrm{AC}=20 \mathrm{~cm}$ then what is the length of $A D$.
(A) $4 \sqrt{10} \mathrm{~cm}$
(B) $2 \sqrt{10} \mathrm{~cm}$
(C) $3 \sqrt{10} \mathrm{~cm}$
(D) none of these

94. In the given figure find the value of $x+y+z$.
(A) $180^{\circ}$
(B) $225^{\circ}$
(C) $195^{\circ}$
(D) $210^{\circ}$

95. Simplifying $272 \times 42+272 \times 50+272 \times 82$
(A) 47328
(B) 45328
(C) 46528
(D) 48526
96. The hypotenuse of a right angled triangle is 15 cm . If one of the remaining two sides is 9 cm , find the length of the other side.
(A) 10 cm
(B) 12 cm
(C) 15 cm
(D) 17 cm

## Space for Rough Work

## MATHEMATICS - (PART - B)

This part contains 12 Numerical Based Questions number 97 to 108. Each question has Single Digit Answer 0 to 9.
97. In a $\triangle A B C \angle B=90^{\circ}$ and $A C=8 \sqrt{2}$. If $A B=B C$, then find $A B$.
98. In the given figure find $\frac{\angle \mathrm{ADC}}{12}$

99. Area of rectangle is $216 \mathrm{~m}^{2}$. If length of rectangle is 36 m . Find the value of $\frac{\text { perimeter of rectangle }}{12}$.
100. If the sum of four consecutive odd number is 40 , then find the smallest number.
101. If the angles of a triangle $A B C$ are in the ratio $11: 13: 12$, then the unit digit of smallest angle is.
102. If the complement of an angle is $89^{\circ}$, then the angle will be
103. In a right angle triangle $O A B, \angle A=90^{\circ}, O A=24 \mathrm{~m}$ and $A B=10 \mathrm{~m}$, find the sum of the digits of length $O B$.
104. If $\triangle \mathrm{PQR}$ is congruent to $\Delta \mathrm{STU}$, then what is the length of TU?

105. In the given figure, $\triangle A B F \cong \triangle D C E$, then find the value of $C D$.

106. After 15 years, Salma will be four times as she is now. Determine her present age (in years).
107. Michael purchased a notebook for Rs.23.75 a pencil for Rs.3.35 and a pen for Rs.15.90. He has a 50 rupee note to the shopkeeper. The amount he got back is Rs. $\qquad$ .
108. The sum of three numbers is 25 . The second number is twice the first and the third exceeds the second by 5 . Find the second number.

## Space for Rough Work

# F|TJEG SAMPLE PAPER - 2020 <br> (Big Bang Edge Test / Talent Recognition Exam) 

for students presently in

## Class 7 (Paper 2) ANSWERS

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

