FIITJEE Big Bang Edge Test - 2023

for students presently in Class XI (going to XII) (Paper 1)

SAMPLE PAPER

Time: 3 Hours (9:30 am – 12:30 pm) **CODE: 1112-1** ***Maximum Marks: 243***

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 and 120 Minutes on Section-II.**
2. **This Question paper consists of 2 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 47	**+3**	**0**
	CHEMISTRY (PART-B)	48 to 64	**+3**	**0**
	MATHEMATICS (PART-C)	65 to 81	**+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.

Note: ***Please check this Question Paper contains all 81 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

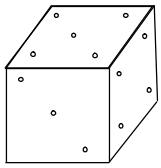
Section – I

APTITUDE TEST

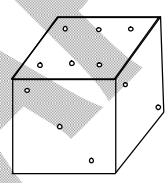
*This section contains **30 Multiple Choice Questions** number **1 to 30**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

1. Find out the missing term of the series.
0, 4, 6, 3, 7, 9, 6, ?, 12
(A) 8 (B) 10
(C) 11 (D) 12

2. Two positions of a dice are shown below. If 1 is at the bottom, which number will be on the top?



(i)



(ii)

(A) 2 (B) 3
(C) 4 (D) 5

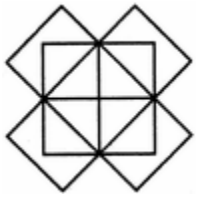
3. The ratio of expenditure and saving is 3 : 2. If the income increases by 15% and the savings increases by 6%, then by how much per cent should be expenditure increases ?
(A) 25 (B) 21
(C) 12 (D) 24

4. A pupil's marks were wrongly entered as 83 instead of 63. Due to that the average marks for the class got increased by half (1/2). The number of pupils in the class is:
(A) 10 (B) 20
(C) 40 (D) 73

5. When X is subtracted from the numbers 9, 15 and 27, then remainders are in the continued proportion. What is the value of X?
(A) 8 (B) 6
(C) 4 (D) None of these

Space for Rough Work

6. Count the number of rectangles in the given figure.



(A) 20 (B) 18
(C) 16 (D) 15

7. In what ratio must a person mix three kinds of tea costing Rs.60/kg, Rs.75/kg and Rs.100/kg so that the resultant mixture when sold at Rs.96/kg yields a profit of 20%?
(A) 1 : 2 : 4 (B) 3 : 7 : 6
(C) 1 : 4 : 2 (D) None of these

8. At what percent pr annum will Rs. 3000 amounts to Rs. 3993 in 3 years, if the interest in compounded annually?
(A) 9% (B) 10%
(C) 11% (D) 13%

9. Of the 200 candidates who were interviewed for a position at a call center, 100 had a two-wheeler, 70 had a credit card and 140 had a mobile phone. 40 of them had both, a two-wheeler and a credit card, 30 had both, a credit card and a mobile phone and 60 had both, a two wheeler and mobile phone and 10 had all three. How many candidates had none of the three?
(A) 0 (B) 20
(C) 10 (D) 18

Directions (10 – 14): Study the following information carefully to answer the given questions.

Eight people P, Q, R, S, T, U, V and W were born in three different months(of the same year) but not necessarily in the same order, namely March June and December such that not less than two people and not more than three people were born in a month. Each of them also likes a different fruit namely Guava, Peach, Banana, Cherry, Mango, Orange,
Kiwi and apple but not necessarily in the same order.

- ⇒ Only Q and W were born in March. R likes Apple and was born in the same month as T. R was not born in December. The one who likes Mango was born in the month which has 30 days only.
- ⇒ U was not born in the same month as T. S likes Cherry and born in the same month as U. V does not like Mango.
- ⇒ The one who likes Kiwi and the one who likes Banana were born in the same month, The one who likes Kiwi was not born in the same month as W.
- ⇒ U does not like Kiwi. The one who likes Guava was born in the same month as P. Q does not like Peach. T does not like Mango.

Space for Rough Work

10. As per the given arrangement which of the following combination represents only the people who were born in December?
(A) T, V (B) U, P, T
(C) V, U (D) U, V, S

11. As per the given arrangement which of the following person represent the one who was born in the same month as the one who likes Orange?
(A) U (B) P
(C) R (D) W

12. Which of the following fruits does T like as per the given arrangement?
(A) Orange (B) Peach
(C) Guava (D) Banana

13. Which of the following combinations is correct as per the given arrangement?
(A) December – Peach (B) June – Orange
(C) June – Banana (D) December – Banana

14. Who amongst the following likes Peach as per the given arrangement?
(A) P (B) V
(C) U (D) W

15. I am facing South. I turn right and walk 20 metre. Then I turn right again and walk 10 metre. Then I turn left and walk 10 metre and then turning right walk 20 metre. Then I turn right again and walk 60 metre. In which direction am I from the starting point ?
(A) North-East (B) North-West
(C) North (D) West

16. Point H is 6 m west of point F. Point J is 3 m south of point D. A person starts from point H in south direction, reaches a point K, takes a left turn and reaches point J. Find KE.
(A) 15 m (B) $3\sqrt{5}$ m
(C) $2\sqrt{5}$m (D) can't be determine

17. Arun can finish a work in 12 days; Ajit can finish the same work in 15 days while Amit can finish the same work in 20 days. Find the total Time taken when all three work together to complete the work.
(A) 6 days (B) 5 days
(C) 4 days (D) 3 days

Space for Rough Work

Directions (18 - 19): Study the following arrangement and answer questions given:

4 8 @ B D E ! Y I 7 * K W 6 A L 5 # 9 O 2 U ^ © 3 N (M $

18. How many such letters are there in the above arrangement each of which is immediately preceded by a symbol and immediately followed by a consonant?
(A) Four (B) Three
(C) None (D) One

19. How many such numbers are there each of which is immediately preceded by a symbol?
(A) None (B) One
(C) Two (D) Three

20. Choose the alternative which is closely resembles the water-image of the given combination.

RAJ589D8

(1) (2)
(3) (4)

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

21. Choose the alternative which is closely resembles the mirror image of the given combination.

EFFECTIVE

(1) (2) EVITCEFFE
(3) (4)

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

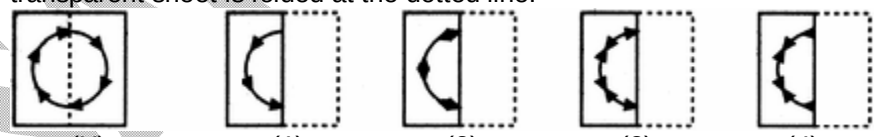
22. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures

Problem Figures: Answer Figures:

(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

(A) 1 (B) 2
(C) 3 (D) 5

23. Find out from amongst the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.

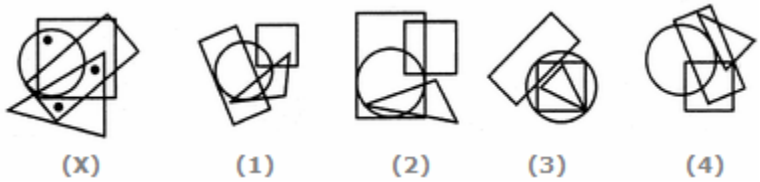


(X) (1) (2) (3) (4)

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

Space for Rough Work

24. Select the figure which satisfies the same conditions of placement of the dots as in Figure-X.



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

25. What is the remainder when $16^3 + 17^3 + 18^3 + 19^3$ is divided by 70 ?
(A) 35 (B) 2
(C) 5 (D) 0

26. If 1st April 1963 was a Monday, then which day of the week will 1st August 1959 be?
(A) Saturday (B) Monday
(C) Tuesday (D) Thursday

27. In a certain code language if the word 'CHAMBER' is code as CHADBEI, then how will you code the word 'INDUSTRY' in that language?
(A) IEDUIBIG (B) IEDCSBIG
(C) IEDCJTIG (D) IEDCJBIG

28. Find out the missing term of the series.
$\frac{2}{3}, \frac{4}{7}, ?, \frac{11}{21}, \frac{16}{31}$
(A) $\frac{5}{9}$ (B) $\frac{6}{11}$
(C) $\frac{7}{13}$ (D) $\frac{9}{17}$

29. An alloy of iron and nickel weight 50g. It contains 80% iron. How much iron should be added to the alloy so that percentage of iron is increased to 90?
(A) 50 g (B) 60 g
(C) 30 g (D) 40 g

30. A earns 25% more than B. C earns 25% more than A. A earns 20% more than D. E earns 20% more than A. A, B, C, D, and E earn integer amounts less than Rs. 100. What is the total amount earned by all five of them put together?
(A) Rs. 300 (B) Rs. 245
(C) Rs. 305 (D) Rs. 480

Space for Rough Work

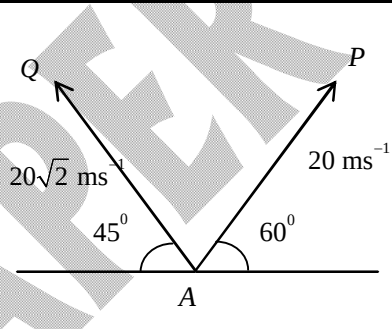
Recommended Time: 120 Minutes for Section – II

Section – II

PHYSICS – (PART – A)

*This part contains **17 Multiple Choice Questions** number **31 to 47.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

31. Two particles P and Q are projected simultaneously away from each other from a point A as shown in figure. The velocity of P relative to Q in ms^{-1} at the instant when the motion of P is horizontal is



(A) $10\sqrt{4-\sqrt{3}}$

(B) $20\sqrt{4-\sqrt{3}}$

(C) $10\sqrt{4+\sqrt{3}}$

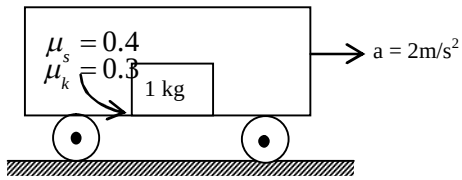
(D) $20\sqrt{4+\sqrt{3}}$

32. A particle is projected with speed u at angle α with horizontal to pass over a tower of height h. The product of the two possible times taken to pass over the tower is

(A) $\frac{2u}{g}$ (B) $\frac{2h}{g}$

(C) $\frac{u}{g}$ (D) $\frac{4h}{g}$

33. A block of mass 1 kg is placed on the rough horizontal surface of a car moving with a constant acceleration a = $2m/s^2$ starting from rest as shown. The net work done by frictional force on the block relative to ground in first 4 sec is

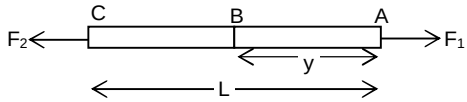


(A) 8 Joule (B) 16 Joule

(C) 32 Joule (D) 64 Joule

Space for Rough Work

34. A uniform rod of length L and mass M is acted on by two unequal forces F_1 and F_2 $(F_2 < F_1)$ as shown in the figure. The tension in the rod at a distance y from the end A is given by

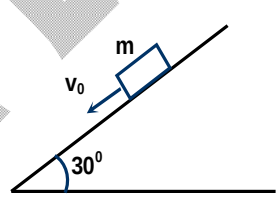


(A) $F_1\left(1-\frac{y}{L}\right)+F_2\left(\frac{y}{L}\right)$ (B) $F_2\left(1-\frac{y}{2}\right)+F_1\left(\frac{y}{L}\right)$

(C) $(F_1-F_2)\frac{y}{L}$ (D) $\frac{(F_2+F_1)y}{L}$

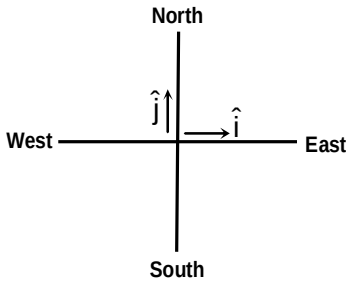
35. A particle moves in x – y plane according to the law $x=4\sin t$ and $y=4(1-\cos t)$. Then find the distance (in meter) covered by the particle in 2 seconds. (x and y are in meters)
(A) 8 (B) 4
(C) 10 (D) 16

36. A block of mass m is pushed down on a rough inclined plane (co-efficient of friction is 0.25) with a velocity v_0 as shown in the figure. Then, the block will



(A) decelerate and come to rest
(B) accelerate downward
(C) move downward with velocity v_0
(D) first accelerate then decelerate

37. A man walking eastward at 5 m/s observes that wind is blowing from the north. On doubling his speed eastward, he observes that wind is blowing from north-east. The velocity of the wind is

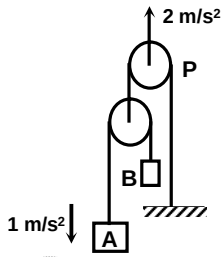


(A) $\vec{v}_w=-5\hat{i}-5\hat{j}$ m/s
(B) $\vec{v}_w=5\hat{i}+5\hat{j}$ m/s
(C) $\vec{v}_w=5\hat{i}-5\hat{j}$ m/s
(D) $\vec{v}_w=-5\hat{i}+5\hat{j}$ m/s

38. If magnitude of vector product is $\sqrt{3}$ times the magnitude of scalar product, then angle between the two vectors is
(A) $\pi/2$ (B) $\pi/6$
(C) $\pi/3$ (D) $\pi/4$

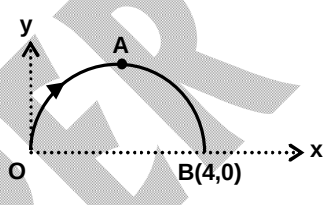
Space for Rough Work

39. In the figure shown the pulley P is pulled up with an acceleration of 2 m/s^2. Block A is moving down with an acceleration of 1 m/s^2. The acceleration of block B is:



(A) 2.5 m/s^2 in downward direction
(B) 2.5 m/s^2 in upward direction
(C) 9 m/s^2 in upward direction
(D) 3 m/s^2 in downward direction

40. Given $\vec{F} = \left(xy^2\right)\hat{i} + \left(x^2y\right)\hat{j}$ Newton. Find the work done by $\vec{F}$ when a particle is taken along the semicircular path OAB where the co-ordinates of B are (4, 0).



(A) $\frac{65}{3}$J (B) $\frac{75}{2}$J
(C) $\frac{73}{4}$J (D) 0 J

41. When a body of mass M slides down an inclined plane of inclination θ, through a distance s, the work done by normal reaction is: (μ is coefficient of friction)
(A) zero (B) μ Mg sin θ s
(C) Mg (μ cos θ- sin θ)s (D) μ Mg cos θ s

42. A block of mass 10 kg accelerates uniformly from rest to a speed of 2m/s in 20 second. The average power at in time interval 0 to 20 second is
(A) 10 W (B) 1 W
(C) 20 W (D) 2 W

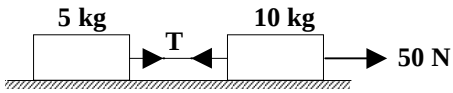
43. A particle is moving eastwards with velocity of 5 m/sec. In 10 seconds, the velocity changes to 5 m/sec northwards. The average acceleration in this time is:
(A) $\frac{1}{\sqrt{2}}$m/sec^2 towards north-west (B) $\frac{1}{\sqrt{2}}$m/sec^2 towards north-east
(C) $\frac{1}{2}$m/sec^2 towards south (D) $\frac{1}{2}$m/sec^2 towards north

44. A 1000 Kg aeroplane moves in straight flight with a constant velocity. The force of air friction is 1800 N. The net force on the plane is
(A) zero (B) 1800 N
(C) 9000 N (D) 3600 N

Space for Rough Work

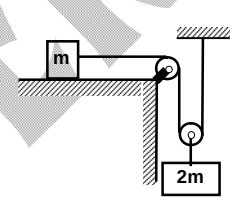
45. Work - energy theorem is valid in the presence of
(A) external forces only (B) internal forces only
(C) conservative forces only (D) all types of forces

46. Two blocks of mass 5 kg and 10 kg respectively are connected by a massless string as shown in the figure. The whole system is kept on a frictionless surface. A force of 50 N is applied horizontally as shown in the figure. The tension T in the string will be



(A) $\frac{50}{3}$ N (B) 25 N
(C) 50 N (D) $\frac{100}{3}$ N

47. Find the acceleration of blocks of mass m. Assume pulleys are massless and frictionless.
(A) g/3 (B) 2g/3
(C) g/2 (D) g/6



Space for Rough Work

CHEMISTRY – (PART – B)

*This part contains **17 Multiple Choice Questions** number **48 to 64.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

48. When 4 g of $CaCO_3$ and sand mixture is treated with excess of HCl, 0.88 g of CO_2 is produced. Calculate % weight of $CaCO_3$.
(A) 40 (B) 50
(C) 60 (D) 70

49. To obtain maximum mass of NO_2 from a given mass of a mixture of NH_3 and O_2, the ratio of mass of NH_3 to O_2 should be

$$2NH_3 + \frac{7}{2}O_2 \rightarrow 2NO_2 + 3H_2O$$

(A) $\frac{17}{40}$ (B) $\frac{4}{7}$
(C) $\frac{17}{56}$ (D) None of these

50. A piece of iron when kept in air increases its weight by 4.28%. What percent of iron has been rusted? (At. Wt. of Fe = 56, O = 16) Rust is Fe_2O_3
(A) 2% (B) 5%
(C) 10% (D) 42.8%

51. Bohr radius of a shell in H-atom is $8.46\,\text{Å}$. The number of electrons in this shell are:
(A) 2 (B) 8
(C) 18 (D) 32

52. Which atomic number is likely to have the following quantum numbers for the last electron?

$$\left(n = 3,\ l = 1,\ m = -1,\ s = +\frac{1}{2}\right)$$

(A) 11 (B) 13
(C) 17 (D) 19

Space for Rough Work

53. The formation of oxide ion $O^{2-}(g)$ requires first an exothermic and then an endothermic step as shown below:

$O(g) + e^- \rightarrow O^-(g); \quad \Delta H^o = -142 \text{ kJ mol}^{-1}$

$O^-(g) + e^- \rightarrow O^{2-}(g); \quad \Delta H^o = +844 \text{kJ mol}^{-1}$

This is because:

(A) oxygen is more electronegative

(B) Oxygen has high electron affinity

(C) O^- ion will tend to resist the addition of another electron

(D) O^- ion has comparatively larger size than oxygen atom

54. Elements of which set do not belong to the same group but resemble chemically in many properties?

(A) Li and Mg (B) Be and Al

(C) B and Si (D) All of these

55. Covalent character is maximum in

(A) NaF (B) Na_2O

(C) Na_3N (D) All equal

56. The given increasing order of energies of various molecular orbitals is not true for which of the following molecules?

$\sigma 1s < \sigma * 1s < \sigma 2s < \sigma * 2s < (\pi 2p_x = \pi 2p_y) < \sigma 2p_z < (\pi * 2p_x = \pi * 2p_y) < \sigma * 2p_z$

(A) B_2 (B) C_2

(C) N_2 (D) O_2

57. In $[O = C = C = C = O]$ state of hybridization on each carbon

(A) sp^2 sp sp^2 (B) sp^3 sp sp

(C) sp sp sp (D) sp^2 sp sp

58. If $1\frac{1}{2}$ moles of oxygen combine with Al to form Al_2O_3, the weight of Al used in the reaction is:

(Al = 27)

(A) 2 g (B) 54 g

(C) 40.5 g (D) 81 g

Space for Rough Work

59. An organic compound contains 20 atoms of carbon per molecule, the percentage of carbon by weight being 70. The gram molecular mass of the organic compound is approximately:
(A) 465.0 (B) 343.0
(C) 415.0 (D) 667.0

60. In a hydrogen atom, which transition produces a photon with the highest energy?
(A) $n = 3 \rightarrow n = 1$ (B) $n = 5 \rightarrow n = 3$
(C) $n = 12 \rightarrow n = 10$ (D) $n = 22 \rightarrow n = 20$

61. Uncertainty in position is twice the uncertainty in momentum. Uncertainty in velocity is:
(A) $\sqrt{\frac{h}{\pi}}$ (B) $\frac{1}{2m}\sqrt{\frac{h}{\pi}}$
(C) $\frac{1}{2m}\sqrt{\frac{h}{2\pi}}$ (D) $\sqrt{\frac{h}{4\pi}}$

62. The radial probability distribution curve of an orbital of H has '4' local maxima. If orbital has 3 angular node, then orbital will be:
(A) 7f (B) 8f
(C) 7d (D) 8d

63. An orbital is found to contain total nodes = 3 and radial nodes = 1. Orbital angular momentum for the electron present in this orbital:
(A) 0 (B) $\frac{h}{2\pi}\sqrt{6}$
(C) $\frac{h}{2\pi}\sqrt{2}$ (D) $\frac{h}{4\pi}\sqrt{6}$

64. Correct order of radius of the 1st orbit H, He^{+},Li^{2+}, Be^{3+} is:
(A) $H > He^{+} > Li^{2+} > Be^{3+}$ (B) $Be^{3+} > Li^{2+} > He^{+} > H$
(C) $He^{+} > Be^{3+} > Li^{2+} > H$ (D) $He^{+} > H > Li^{2+} > Be^{3+}$

Space for Rough Work

MATHEMATICS – (PART – C)

*This part contains **17 Multiple Choice Questions** number **65 to 81.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

65. The least integral value of k such that $(k-2)x^2 + 8x + k + 4$ is positive for all real values of x is
(A) 1 (B) 2
(C) 3 (D) 5

66. If $\log_6 16 = k$, then $\log_{18} 24$ =
(A) $\frac{2(k+2)}{k-8}$ (B) $\frac{2(k+2)}{8-k}$
(C) $\frac{k+8}{k}$ (D) $\frac{k}{k+8}$

67. If $\cos\theta - \sin\theta = \sqrt{2}\sin\theta$; Then the value of $\cos\theta + \sin\theta$ is equal to;
(A) $\sqrt{2}\cos\theta$ (B) $-\sqrt{2}\cos\theta$
(C) $-\sqrt{2}\sin\theta$ (D) none of these

68. The equations of the lines representing the sides of a triangle are $3x - 4y = 0$, $x + y = 0$ and $2x - 3y = 7$. The line $3x + 2y = 0$ always passes through the
(A) incentre (B) centroid
(C) circumcentre (D) orthocentre

69. Value of $(1+\tan 21^\circ)(1+\tan 22^\circ)(1+\tan 23^\circ)(1+\tan 24^\circ)$ is
(A) 4 (B) 2
(C) 1 (D) 0

70 Find value of $\left(1+\cos\frac{\pi}{9}\right)\left(1+\cos\frac{3\pi}{9}\right)\left(1+\cos\frac{5\pi}{9}\right)\left(1+\cos\frac{7\pi}{9}\right)$?
(A) $\frac{9}{16}$ (B) $\frac{11}{16}$
(C) $\frac{13}{16}$ (D) $\frac{5}{16}$

Space for Rough Work

71. $\lim\limits_{x\to 0}\dfrac{\tan x-\sin x}{x^3}$ equals

(A) $\dfrac{1}{2}$ (B) 0

(C) 1 (D) 2

72. If A and B are two sets and A^c denotes complement of set A, then $A\cap(A\cup B)^c$ equals

(A) ϕ (B) A

(C) B (D) $A\cap B$

73. $\lim\limits_{x\to\frac{\pi}{2}}\dfrac{1+\cos 2x}{(\pi-2x)^2}$ equals

(A) 2 (B) 0

(C) 1 (D) $\dfrac{1}{2}$

74. If $x^2-\sqrt{3}x+1=0$, then value of $x^{2020}+x^{2014}+x^{2008}+x^{2002}$ is

(A) 0 (B) $\sqrt{3}$

(C) 1 (D) 2

75. Find minimum value of $\sin^4 x + \cos^4 x$?

(A) 1 (B) $\dfrac{1}{2}$

(C) $\dfrac{1}{4}$ (D) 0

76. Value of $\lim\limits_{x\to a}\dfrac{\sqrt{a+2x}-\sqrt{3x}}{\sqrt{3a+x}-2\sqrt{x}}$?

(A) $\dfrac{2}{3\sqrt{3}}$ (B) $\dfrac{1}{3\sqrt{3}}$

(C) $\dfrac{2}{\sqrt{3}}$ (D) $6\sqrt{3}$

Space for Rough Work

77. In a class, 63% students study physics and 76% students study chemistry. If x% students study both subjects, then
(A) $x \leq 35$ (B) $x = 64$
(C) $39 \leq x \leq 63$ (D) $x \geq 64$

78. If a – b, b – c, c – a are in A.P., then the straight line $(a-b)x + (b-c)y + (c-a) = 0$ will pass through
(A) (1, 2) (B) (2, 1)
(C) (2, 3) (D) (3, 1)

79. The incentre of the triangle formed by the lines $y = |x|$ and $y = 1$ is
(A) $(0, 2 - \sqrt{2})$ (B) $(2 - \sqrt{2}, 0)$
(C) $(2 + \sqrt{2}, 0)$ (D) $(0, 2 + \sqrt{2})$

80. If the sum of the reciprocals of the intercepts made by a line on the coordinate axes is 1/5, then the line always passes through
(A) (5, -5) (B) (-5, 5)
(C) (-5, -5) (D) (5, 5)

81. Equation of a line passing through the intersection of the lines $2x + y = 3$ and $x + y = 1$ and perpendicular to the line $y = 2x + k$ is
(A) $x - 2y = 0$ (B) $x + 2y = 0$
(C) $y - x = 0$ (D) $y + x = 0$

Space for Rough Work

FIITJEE Big Bang Edge Test - 2023

for students presently in Class XI (going to XII) (Paper 1)

SAMPLE PAPER ANSWER KEY

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