

CUET PG 2022

01. From among the four options given, choose the correct sequence of the four phrases give blow, to make a meaningful sentence:
 A. Lower our guard and our masks
 B. Repeatedly weather the pandemic might finally
 C. Be over, many of use are willing to
 D. Having asked ourselves

- (a) A, C, B, D (b) D, B, C, A
 (c) C, D, A, B (d) B, A, D, C

ENGLISH – Sentence Arrangement

02. Which of the following is one-word substitute for ‘the quality of having a ready insight into things’?
 (a) Felicity (b) Tenacity
 (c) Perspicacity (d) Chromaticity

ENGLISH – One-Word Substitution

03. Identify the correct indirect narration for the following sentence:

The lady said to the servant, “If you don’t wash the clothes properly, I will dismiss you”.

- (a) The lady warned the servant that she would dismiss her if she didn’t wash the clothes properly.
 (b) The lady told the servant that she would dismiss her on the event of bad work.
 (c) The lady cautioned the servant that she must wash the clothes properly
 (d) The lady advised the servant to wash the clothes properly

ENGLISH – Indirect Speech

04. Pick the plural form of ‘matrix’
 (a) Matrixes (b) Matrices (c) Matries (d) Matrii

ENGLISH – Plural Form

05. Which of the following options will be correct choice for the blank?

I’m not sure where he is. He _____ out for a walk.

- (a) gone (b) may have gone
 (c) has gone (d) is going

ENGLISH – Tense

06. Match List I with List II:

	List I		List II
	(Animals)		(Sound)
A.	Apes	I.	Howl
B.	Wolves	II.	Gibber
C.	Lambs	III.	Squel
D.	pigs	IV.	Bleat

Choose the correct answer from the options given below:

- (a) A – II; B – I; C – IV; D – III
 (b) A – III; B – IV; C – II; D – I
 (c) A – IV; B – II; C – III; D – I
 (d) A – II; B – III; C – IV; D – I

ENGLISH – Match (Animals–Sound)

07. From among the four options given, choose the one which is a grammatically correct sentence.

- (a) Frequent entertain or equality time in home calling out for comfort seating.

- (b) Frequent entertaining or quality time at home calls out for comfortable seating.
 (c) Comfort seat calling out for frequent entertaining or quality time at home.
 (d) Frequent entertaining calls out for comfortable seating or quality time at home.

ENGLISH – Sentence Correction

08. From among the four options given, choose the one in which the word has been spelt correctly.

- (a) Vituperative (b) Vetuperative
 (c) Vituparative (d) Vituperetive

ENGLISH – Spelling

09. Choose the correct option to make a meaning full sentence.

Shena is _____ in the art of cooking.

- (a) Adept (b) Adopt
 (c) Adapt (d) Admit

ENGLISH – Vocabulary

10. Choose the correct preposition to complete the following sentence:

Ramanujan is good _____ mathematics.

- (a) at (b) in
 (c) for (d) into

ENGLISH – Preposition

11. Reversing Roe is a documentary film centered on:

- (a) Civil Rights Movement
 (b) Debate on Abortion Rights
 (c) Women’s Right to Study Medicine
 (d) Voting Rights for the Blacks

GK – Documentary / Current Affairs

12. Match List I with List II:

List I		List II	
(Noble Prize Winners)		(Area/Subject)	
A.	Md. Yunus	I.	Chemistry
B.	Abdus Salam	II.	Peace
C.	Venkatraman Ramakrishna	III.	Economics
D.	Marie Ressa	IV.	Physics

Choose the correct answer from the options given below:

- (a) A – I; B – II; C – III; D – IV
 (b) A – III; B – IV; C – I; D – II
 (c) A – II; B – III; C – IV; D – I
 (d) A – IV; B – I; C – II; D – III

GK – Nobel Prize

13. Match List I with List II:

List I		List II	
(FM Radio)		(Tag line)	
A.	Radio Mirchi	I.	Dhoon badal ke toh Dekho
B.	My FM	II.	International Indians
C.	Big FM	III.	Jio Dil Se
D.	Ratio One	IV.Sunnewale always Khush

Choose the correct answer from the options given below:

- (a) A – I; B – II; C – III; D – IV
 (b) A – III; B – IV; C – II; D – I
 (c) A – IV; B – III; C – I; D – II
 (d) A – II; B – I; C – IV; D – III

GK – FM Radio Tagline

14. Match List I with List II:

List I (Author)	List II (Title of the book)
A. Salman Rushdie	I. The Inheritance of Loss
B. Arundhati Roy	II. The White Tiger
C. Kiran Desai	III. The God of Small Things
D. Arvind Adiga	IV. Midnight's Children

Choose the correct answer from the options given below:

- (a) A – I; B – II; C – IV; D – III
 (b) A – III; B – I; C – II; D – IV
 (c) A – II; B – IV; C – III; D – I
 (d) A – IV; B – III; C – I; D – II

ENGLISH – Books & Authors

15. Which company manufactured the Ambassador car?
 (a) Tata Motors Ltd. (b) Mahindra and Mahindra
 (c) Ashok Leyland Ltd. (d) Hindustan Motors Ltd.

GK – Company / Industry

16. Pointing towards a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?
 (a) Brother (b) Uncle
 (c) Son-in-law (d) Nephew

REASONING – Blood Relation

17. If A + B means A is the mother of B;
 A – B means A is the brother of B;
 A % B means A is the father of B and
 A × B means A is the sister of B,
 which of the following shows that P is the maternal uncle of Q?
 (a) Q – N + M × P (b) P + S × N – Q
 (c) P – M + N × Q (d) Q – S % P

REASONING – Coded Relation

18. If Z = 52 and ACT = 48, then RAT will be equal to
 (a) 72 (b) 78
 (c) 92 (d) 64

REASONING – Alphabet Coding

19. There are equation that have become wrong due to incorrect order of signs. From the four alternatives, given below, find out the correct order of signs. So that equation becomes right.

$$8 \div 9 = 9 - 81$$

- (a) -, -, + (b) +, -, ÷
 (c) =, +, - (d) ×, +, =

REASONING – Operator Arrangement

20. If + means *, / means -, * means /, and - means +, what will be the value of

$$4 + 11 / 5 - 55 = ?$$

- (a) -48.5 (b) -11
 (c) 79 (d) None of these

REASONING – Coded Arithmetic

21. If $(25)^{7.5} \times (5)^{2.5} \div (125)^{1.5} = 5x$ then $x = ?$
 (a) 13 (b) 8.5 (c) 16 (d) 17.5

MATHS – Linear Equation

22. Half of a large Pizza is cut into 4 equal-sized pieces, and the other half is cut into 6 equal-sized pieces. If a person were to eat 1 of the large pieces and 2 of the smaller pieces, what fraction of the pizza would remain uneaten?
 (a) $\frac{5}{12}$ (b) $\frac{1}{24}$ (c) $\frac{7}{24}$ (d) $\frac{13}{24}$

MATHS – Fractions

23. In a business, A and C invested amounts in the ratio 2:1, whereas the ratio between amounts invested by A and B was 3:2. If Rs. 1,57,300 was their profit, how much amount did B receive?
 (a) Rs. 24,200 (b) Rs. 72,600
 (c) Rs. 36,300 (d) Rs. 48,400

MATHS – Partnership

24. Company A produces toy trucks at a cost of Rs. 50.00 each for the first 100 trucks and Rs. 35.00 for each additional truck. If 500 toy trucks were produced by Company A and sold for Rs. 100.00 each, what was Company A's gross profit?
 (a) Rs. 31,000 (b) Rs. 15,000
 (c) Rs. 21,000 (d) Rs. 13,000

MATHS – Profit & Loss

25. A shopkeeper fixes the marked price of an item 35% above its cost price. The percentage of discount allowed to gain 5% is.
 (a) 43% (b) 27%
 (c) 22% (d) 31%

MATHS – Discount

26. Choose the odd one out:
 (a) Mohammed Rafi (b) K. L. Saigal
 (c) Naushad (d) Adnan Sami

GK – Odd One Out (Music)

27. Which of the following options is the correct alphabetical order of the four words given as:
Rumbustious, Rumanian, Rumour, Rumble
 (a) Rumanian, Rumble, Rumour, Rumbustious
 (b) Rumour, Rumbustious, Rumble, Rumanian
 (c) Rumanian, Rumbustious, Rumour, Rumble
 (d) Rumble, Rumour, Rumbustious, Rumanian

REASONING – Alphabetical Order

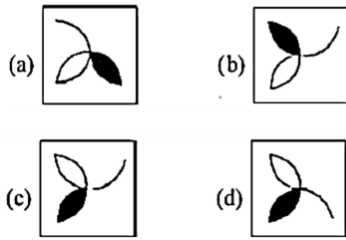
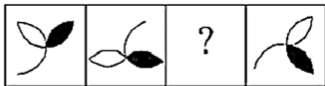
28. If 'ORANGE' is coded as 'MTYPEG' in a certain language, then how will 'CHILLY' be coded in that language?
 (a) AJGNNW (b) AJGNJA
 (c) AJKNNW (d) AJGOOW

REASONING – Coding-Decoding

29. Choose the odd one out from the following
 (a) Morarji Desai (b) V. P. Singh
 (c) Narendra Modi (d) Sardal Patel

GK – Odd One Out (Politics)

30. Which will be the missing patten in the series? Redraw figure



REASONING – Figure Series

31. If 'MANGO' is coded as 'KCLIM' in a certain language then how will 'SWEETY' be coded in that language?
 (a) QYCGRA (b) QYCCRA
 (c) QYGCRA (d) YQCGRA

REASONING – Coding-Decoding

32. Which among the following words comes first in a dictionary?

Shrub, Shudder, Shroud, Shuttle

- (a) Shrum (b) Shudder
 (c) Shroud (d) Shudder

REASONING – Dictionary Order

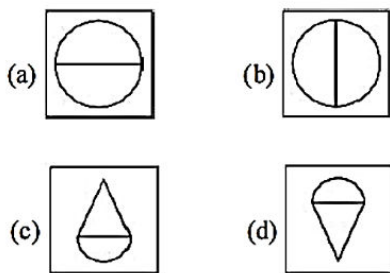
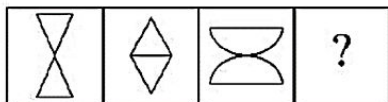
33. Which of the following options is the correct alphabetical order of the four words given below?

Sport, Squash, Sporadic, Sprout

- (a) Sport, Sprout, Sporadic, Squash
 (b) Sporadic, Sport, Sprout, Squash
 (c) Sporadic, Sport, Squash, Sprout
 (d) Squash, Sprout, Sport, Sporadic

REASONING – Alphabetical Order

34. What will be the Next Pattern in the series?



REASONING – Figure Pattern

35. Complete the series by filling the missing number
2, 5, 14, 57, 284, ?

- (a) 1420 (b) 1421 (c) 1704 (d) 1705

MATHS – Number Series

If $A = \begin{bmatrix} \cos B & -\sin B \\ \sin B & \cos B \end{bmatrix}$ then $A + A^T = I$ for B equals to

- (a) $\frac{\pi}{3}$ (b) $\frac{\pi}{6}$ (c) π (d) $\frac{3\pi}{2}$

MATHS – Trigonometric Equation

37. The number of 7-digit numbers whose sum of the digits equals to 10 and which is formed by using the digit 1, 2 and 3 only is

- (a) 55 (b) 66
 (c) 77 (d) None of these

MATHS – Permutation & Combination

38. If from each of the three boxes containing 3 white and 1 black, 2 white and 2 black, 1 white and 3 black balls, one ball is drawn at random, then the probability that 2 white and 1 black balls will be drawn is

- (a) $\frac{13}{32}$ (b) $\frac{1}{4}$ (c) $\frac{1}{32}$ (d) $\frac{3}{16}$

MATHS – Probability

39. Let $f(x) = ||x| - 1|$ then point (s) where $f(x)$ is not differentiable is (are):

- (a) 0, ± 1 (b) ± 1 (c) 0 (d) 1

MATHS – Differentiability

Let $f : [2, \infty] \rightarrow R$ be the function defined by $f(x) = x^2 - 4x + 5$, then the range of f

- (a) R (b) $[1, \infty)$
 (c) $[4, \infty)$ (d) $(-\infty, 0]$

MATHS – Functions (Range)

41. The function $f(x) = \frac{[\ln(1+ax) - \ln(1-bx)]}{x}$ is not defined at $x = 0$. What value may be assigned to f at $x = 0$, so that it is continuous?

- (a) $a + b$ (b) $a - b$
 (c) $b - a$ (d) $\ln a + \ln b$

MATHS – Continuity

42. The area enclosed between the graphs of $y = x^3$ and the lines $x = 0, y = 1, y = 8$ is

- (a) 7 (b) 12
 (c) $\frac{45}{4}$ (d) $\frac{21}{8}$

MATHS – Area Under Curve

43. If the vertices of a triangles are $O(0, 0), A(a, 0)$ and $B(0, a)$. Then, the distance between its circumcenter and orthocenter is:

- (a) $\frac{a}{2}$ (b) $\frac{a}{\sqrt{2}}$
 (c) $\sqrt{2}a$ (d) $\frac{a}{4}$

MATHS – Coordinate Geometry

44. The straight line $x + y = 0, 3x + y - 4 = 0$ and $x + 3y - 4 = 0$ form a triangle which is

- (a) Right angled (b) Equilateral
 (c) Isoscales (d) Isoscales and right angled

MATHS – Straight Line

45. If one of the lines of $ax^2 + 2hxy + by^2 = 0$ bisects the angle between the axes in the first quadrant, then

- (a) $h^2 - ab = 0$ (b) $h^2 + ab = 0$
 (c) $(a + b)^2 = h^2$ (d) $(a + b)^2 = 4h^2$

MATHS – Pair of Lines

46. What is the value of:
 $[\tan^2(90 - \theta) - \sin^2(90 - \theta)] \operatorname{cosec}^2(90 - \theta) \cot^2(90 - \theta)$
 (a) 0 (b) 1 (c) -1 (d) 2

MATHS – Trigonometric Identity

47. If $A + B = 45^\circ$, then $(1 + \tan A)(1 + \tan B)$ is equal to
 (a) 4 (b) 2 (c) 3 (d) 1

MATHS – Trigonometric Value

48. If \vec{a} and \vec{b} are two unit vectors such that $\vec{a} + \vec{b}$ and $5\vec{a} - 4\vec{b}$ are perpendicular to each other, then the angle between \vec{a} and \vec{b} is:
 (a) 45° (b) 60°
 (c) $\cos^{-1}(\frac{1}{3})$ (d) $\cos^{-1}(\frac{2}{7})$

MATHS – Vector Algebra

49. Let $\vec{a} = \hat{i} - \hat{j}$ and $\vec{b} = \hat{i} + \hat{j} + \hat{k}$ and \vec{c} be a vector such that $(\vec{a} \times \vec{c}) + \vec{b} = 0$ and $\vec{a} \cdot \vec{c} = 4$, then $|\vec{c}|^2$ equal to:
 (a) 8 (b) $\frac{19}{2}$ (c) 9 (d) $\frac{17}{2}$

MATHS – Vector Triple Product

50. If $\vec{a}, \vec{b}, \vec{c}$ and \vec{d} are the unit vectors such that $(\vec{a} \times \vec{b}) \cdot (\vec{c} \times \vec{d}) = 1$ and $(\vec{a} \cdot \vec{c}) = \frac{1}{2}$, then
 (a) only $\vec{a}, \vec{b}, \vec{c}$ are non-coplanar
 (b) only $\vec{a}, \vec{b}, \vec{d}$ are non-coplanar
 (c) Both $\vec{a}, \vec{b}, \vec{c}$ and $\vec{a}, \vec{b}, \vec{d}$ are non-coplanar
 (d) Both $\vec{a}, \vec{b}, \vec{c}$ and $\vec{a}, \vec{b}, \vec{d}$ are coplanar

MATHS – Coplanarity of Vectors

51. Let $A = \{1, 2, 3\}$ and consider the relation $R = \{(1, 1), (2, 2), (3, 3), (1, 2), (1, 3)\}$ then R is
 (a) Reflexive but not symmetric
 (b) Reflexive but no transitive
 (c) Symmetric and transitive
 (d) Equivalence relation

MATHS – Relations

52. A spring is being moved up and down. An object is attached to the end of the spring that undergoes a vertical displacement. The displacement is given by the equation $y = 3.50 \sin t + 1.20 \sin 2t$. Find the first two values of t (in seconds) for which $y = 0$.
 (a) $t = 0, \frac{\pi}{4}$ (b) $t = 0, \frac{\pi}{2}$
 (c) $t = 0, \pi$ (d) $t = 0, \frac{\pi}{6}$

MATHS – SHM

53. A ball is thrown off the edge of a building at an angle of 60° and with the initial velocity of 5 meters per second. The equation that represents the horizontal distance of the ball x is $x = v_0 (\cos \theta)t$ where v_0 is the initial velocity, θ is the angle at which it is thrown and t is the time in seconds. About how far will the ball travel in 10 seconds?
 (a) $25\sqrt{3}$ m (b) $50\sqrt{2}$ m
 (c) 25 m (d) $\frac{25}{\sqrt{3}}$ m

MATHS – Projectile Motion

54. Let b be a positive integer and $R = \{(a, b) \in Z \times Z | a - b = nm \text{ for some } m \neq 0 \in Z\}$
 (a) Reflexive on Z (b) Symmetric
 (c) Transitive (d) Equivalence relation of Z

MATHS – Relations (Properties)

55. The a, b, c and d are in GP and are in ascending order such that $a + d = 112$ and $b + c = 48$. If the GP is continued with a as the first term, then the sum of the first six terms is
 (a) 1156 (b) 1256
 (c) 1356 (d) 1456

MATHS – Geometric Progression

56. Given below are two statements:
Statement I: If $A \subset B$; then B can be expressed as $B = A \cup (A \cap B)$ and $P(A) > P(B)$.
Statement II: If A and B are independent events, then

$(A \text{ and } B), (A \text{ and } \bar{B})$ and $(\bar{A} \text{ and } B)$ are also independent.
 In the light of the above statements, choose the most

appropriate answer from the options given below:

- (a) Both Statement I and Statement II are true
 (b) Both Statement I and Statement II are false
 (c) Statement I is true but Statement II is false
 (d) Statement I is false but Statement II are true

MATHS – Probability (Statements)

57. Given the following truth table:

A	B	x
0	0	1
0	1	0
1	0	0
1	1	0

Which of the following Boolean functions does it represent?

- (a) OR (b) XOR (c) NOR (d) XNOR

COMPUTER – Boolean Logic

58. If \vec{a}, \vec{b} and \vec{c} are unit vectors, $|\vec{a} - \vec{b}|^2 + |\vec{b} - \vec{c}|^2 + |\vec{c} - \vec{a}|^2$ does not exceed:
 (a) 4 (b) 9 (c) 8 (d) 6

MATHS – Vector Algebra

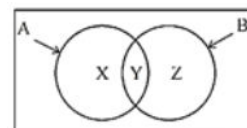
59. The product of two four bit positive binary numbers 1011 and 0011 is _____
 (a) 1000011 (b) 100001
 (c) 100101 (d) 100111

COMPUTER – Binary Multiplication

60. If $\vec{a} = \hat{i} + \hat{j} + \hat{k}$, $\vec{a} \cdot \vec{b} = 1$ and $\vec{a} \times \vec{b} = \hat{j} - \hat{k}$ then \vec{b} is equal to:
 (a) $\hat{i} - \hat{j} + \hat{k}$ (b) $2\hat{j} - \hat{k}$
 (c) \hat{i} (d) $2\hat{i}$

MATHS – Vector Algebra

61. Consider the diagram given below and the following two statements:



Statement I: Events A and B can be expressed as:

$$A = (A \cap B) \cup Y \quad B = (A \cap B) \cup Z$$

Statement II: Events A and B can be expressed as:

$$A = X - Y \quad B = Y + Z$$

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are true
- (b) Both Statement I and Statement II are false
- (c) Statement I is true but Statement II is false
- (b) Statement I is false Statement II are true

MATHS – Set Theory

62. The simplified form of Boolean expression $AB + AB'$ is _____.

- (a) A
- (b) B
- (c) $1 + A$
- (d) $1 + B'$

COMPUTER – Boolean Algebra

63. Representation of -11 in sign – and magnitude is

- (a) 11011
- (b) 010111
- (c) 10011
- (d) 01110

COMPUTER – Number Representation

64. 1001 is 2's complement representation of _____.

- (a) -7
- (b) $+9$
- (c) $+6$
- (d) -6

COMPUTER – 2's Complement

65. Match List I with List II

	List I		List II
A.	$(x + y)'$	I.	I
B.	$x + 1$	II.	$x' + y'$
C.	$(xy)'$	III.	$x' \cdot y'$
D.	$x + 0$	IV.	x

Choose the correct answer from the options given below:

- (a) A – II; B – I; C – III; D – IV
- (b) A – II; B – IV; C – I; D – III
- (c) A – III; B – I; C – IV; D – II
- (d) A – III; B – I; C – II; D – IV

COMPUTER – Boolean Identities

66. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: Carbon Monoxide when inhaled causes death.

Reason R: Carbon Monoxide combines with haemoglobin.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true and R is not the correct explanation of A
- (c) A is true but R is not false.
- (d) A is false but R is true.

SCIENCE – Biology (Carbon Monoxide)

67. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: In a class of 40 students, 22 drink sprite, 10 drink Sprite but not Pepsi. Then the number of student who drink both Sprite and Pepsi is 15.

Reason R: For any two finite sets A and B,

$$n(A - B) + n(A \cap B)$$

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true and R is not the correct explanation of A
- (c) A is true but R is not false.
- (d) A is false but R is true.

MATHS – Set Theory

68. Universities in India are preferring traditional attire during convocations.

- (A) Indian Universities are against western dresses.
- (B) Indian Universities wants to promote traditional dresses.
- (C) Indians love to celebrate occasions traditionally.
- (D) Indian traditional dresses are better than western wear.
- (E) Western wear is banned by government.

Choose the correct answer from the options given below.

- (a) B and C only
- (b) A, B and C only
- (c) A, B and D only
- (d) D and E only

REASONING – Statement Conclusion

69. Match List I with List II

	List I		List II
A.	If 4 th term of a G.P. is square of its second term, and its first term is 3, then common ratio is _____.	I.	5
B.	The first term of an AP is 5, the last term is 45 and the sum of the terms is 400. The number of term is _____.	II.	$-\frac{5}{2}$
C.	The sum of three numbers which are in AP is 27 and sum of their squares is 293. Then the common difference is _____.	III.	16
D.	The fourth and 54 th terms of an AP are, respectively 64 and -61 . The common difference is _____.	IV.	3

Choose the correct answer from the options given below:

- (a) A – IV; B – III; C – I; D – II
- (b) A – III; B – II; C – I; D – IV
- (c) A – II; B – III; C – I; D – IV
- (d) A – II; B – I; C – III; D – IV

MATHS – AP & GP

70. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: The system of equations

$$x + y + z = 4, 2x - y + 2z = 5, x - 2y - z = -3$$

has unique solution.

Reason R: If A is 3×3 matrix and B is a 3×1 non-zero column matrix, then the equation $AX = B$ has unique solution if A is non-singular.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both A and R are correct and R is the correct explanation of A
- (b) Both A and R are correct and R is not the correct explanation of A
- (c) A is correct but R is not correct.
- (d) A is correct but R is correct.

MATHS – System of Linear Equations

71. Given below are two statements:

Statement I: 011010 is 2's complement representation of -37.

Statement II: $111_{(8)}$ is octal representation of 73.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are true
- (b) Both Statement I and Statement II are false
- (c) Statement I is true but Statement II is false
- (d) Statement I is false Statement II are true

COMPUTER – Number System

72. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: Binary information is represented in digital in terms of 'zeros' and 'ones'.

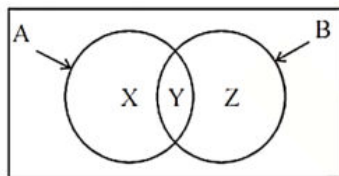
Reason R: Digital computers are electronic devices, which operate using electrical voltages.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both A and R are correct and R is the correct explanation of A
- (b) Both A and R are correct and R is not the correct explanation of A
- (c) A is correct but R is not correct.
- (d) A is correct but R is correct.

COMPUTER – Computer Fundamentals

73. Consider the diagram given below and the following two statements:



Statement I:

Regions X, Y and Z can be expressed as $A \cap \bar{B}$, $A \cap B$ and $\bar{A} \cap B$ respectively..

Statement II: $P(Y) = P(A) - P(X) = P(B) - P(Z)$.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are true
- (b) Both Statement I and Statement II are false
- (c) Statement I is true but Statement II is false
- (d) Statement I is false Statement II are true

MATHS – Probability

74. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: Goitre is a common disease in mountainous regions.

Reason R: The diet of the people in mountains lacks iodine content.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both A and R are correct and R is the correct explanation of A
- (b) Both A and R are correct and R is not the correct explanation of A
- (c) A is correct but R is not correct.
- (d) A is correct but R is correct.

SCIENCE – Biology (Iodine Deficiency)

75. Which of the following storage hardwares can be used as a back-up device?

- (A) HDD
- (B) ROM
- (C) RAM
- (D) Cache
- (E) Magnetic Tape

Choose the correct answer from the options given below:

- (a) only A, B and C
- (b) only B, C and D
- (c) only A and E
- (d) only A, C and E

COMPUTER – Storage Devices

76. In a class there are 400 students, the following table shows the number of students studying one or more of the subjects:

Subject	Number of students
MATHSemantics	250
Physics	150
Chemistry	100
MATHSemantics and Physics	100
MATHSemantics and Chemistry	60
Physics and Chemistry	40
MATHSemantics, Physics and Chemistry	30

- A. The number of students who study only MATHSemantics is 100.
- B. The number of students who study only Physics is 40.
- C. The number of students who study only Chemistry is 40.
- D. The number of students who do not study MATHSemantics, Physics and Chemistry is 70.

Choose the correct answer from the options given below.

- (a) B and D only
- (b) A and B only
- (c) A only
- (d) C only

MATHS – Set Theory

77. The arithmetic means of two observations is 125 and their geometric means is 60. Find the harmonic mean of the two observations.

- (a) 4.17
- (b) 8.34
- (c) 28.8
- (d) 57.6

MATHS – A.M.–G.M.–H.M.

78. The arithmetic mean and standard deviation of series of 20 items were calculated by a student as 20 cm and 5 cm respectively. But while calculating them an item 15 was misread as 30. Find the correct standard deviation.

- (a) 4.10 (b) 4.40
(c) 4.54 (d) 4.66

MATHS – Statistics (Standard Deviation)

79. In a processor, while executing an instruction

- A. Programme Counter is used to hold the address of next instruction.
B. Instruction register holds the instruction for execution.
C. Memory Address Register is used to perform address translation.
D. Memory Data Register is used to perform data operation.
E. Clock generates control signals.

Choose the correct answer form the options given below.

- (a) Only A and B are true
(b) Only C and D are true
(c) Only A, B and E are true
(d) Only B, C and D are true

COMPUTER – CPU Registers

80. Given the marks of 25 students in the class as $\{m_1, m_2, \dots, m_{25}\}$. Marks lie in the range of [1 – 100] and \bar{m} is the mean. Which of the following quantity has the value zero?

- (a) $\sum_{i=1}^{25} |m_i - \bar{m}|$ (b) $\sum_{i=1}^{25} (m_i - \bar{m})^2$
(c) $\sum_{i=1}^{25} (m_i - \bar{m})$ (d) $\sum_{i=1}^{25} m_i$

MATHS – Mean Deviation

81. India has been continuously experiencing military threats from its neighboring countries.

Statement I: India should engage into an all out war to stop the nagging threats.

Statement II: India should get the neighbors into a serious dialogue to reduce the tension at its border.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are correct
(b) Both Statement I and Statement II are incorrect
(c) Statement I is correct but Statement II is incorrect
(d) Statement I is incorrect Statement II are correct

REASONING – Statement Evaluation

82. A + B means A is daughter of B

A × B means A is son of B

A – B means A is the wife of B

P × Q – S means

Statement I: S is father of P.

Statement II: P is daughter of Q.

- (a) Both Statement I and Statement II are true
(b) Both Statement II and Statement II are false
(c) Statement I is true but Statement II is false
(d) Statement I is false but Statement II is true.

REASONING – Blood Relation

83. The terms 1, $\log_y(x)$, $\log_z(y)$ and $-15 \log_x(z)$ are in AP. Based on this information answer the following questions.

The common difference of AP is:

- (a) 2 (b) -2
(c) 1/2 (d) -1/2

MATHS – Logarithmic AP

84. The terms 1, $\log_y(x)$, $\log_z(y)$ and $-15 \log_x(z)$ are in AP. Based on this information answer the following questions.

The value of xy is:

- (a) 1 (b) -1 (c) z^2 (d) z^3

MATHS – Logarithms

85. The terms 1, $\log_y(x)$, $\log_z(y)$ and $-15 \log_x(z)$ are in AP. Based on this information answer the following questions.

yz is equal to

- (a) x (b) x^2 (c) z^{-2} (d) z^{-3}

MATHS – Logarithms

86. Consider n events E_1, E_2, \dots, E_n with respective probabilities p_1, p_2, \dots, p_n . If $(E_1, E_2, \dots, E_n) = \prod_{i=1}^n p_i$ then:

- (a) The events are mutually exclusive
(b) The events are independent
(c) The events are dependent
(d) The events are mutually exclusive and independent

MATHS – Probability (Independence)

87. Given a set of events E_1, \dots, E_n , defined on the sample space S such that:

(i) $\forall i$ and $j, i \neq j, E_i \cap E_j = \phi$

(ii) $\bigcup_{i=1}^n E_i = S$

(iii) $P(E_i) > 0, \forall i = 1, n$

Then the events are:

- (a) Pairwise disjoint and exhaustive
(b) Pairwise disjoint and independent
(c) Dependent and mutually exclusive
(d) Independent and mutually exclusive

MATHS – Probability (Events)

88. Given the following statement and five possible conclusions.

All Scientists working in America and talented. Some Indian scientists are working in America.

- A. None of Indian scientists are talented.
B. Some talented Indian scientists have migrated to America.
C. All talented scientists are Indians.
D. Some Indian scientists are talented.
E. Scientists working in India are not talented.

Choose the correct answer from the options given below.

- (a) Conclusions A and D only are correct.
(b) Conclusions B and D only are correct.
(c) Conclusions A and E only are correct.
(d) Conclusions B and E only are correct.

REASONING – Syllogism

89. Ministers arrived at the public function in their cars. Consider the following statements.
 A. All ministers are rich.
 B. Minister have official cars in general.
 C. Minister usually participate in public functions.
 D. Only rich Ministers arrive in cars.
 E. Person with cars can only be a Minister.
 Choose the correct answer from the options given below.
 (a) A and B only (b) B and D only
 (c) B and C only (d) C and E only

REASONING – Statement Conclusion

90. The simplified form of Boolean Expression:
 $ABC + ABC$ is _____.
 (a) AC (b) AB
 (c) BC (d) 0

COMPUTER – Boolean Algebra

91. 4 Indians, 3 Americans and 2 Britishers are to be arranged around a round table. Answer the following Questions.
 The number of ways of arranging them is
 (a) 9! (b) 9!/2
 (c) 8! (d) 8!/2

MATHS – Circular Permutation

92. 4 Indians, 3 Americans and 2 Britishers are to be arranged around a round table. Answer the following questions.
 The number of ways arranging them so that the two Britishers should never come together is:
 (a) $7! \times 2!$ (b) $6! \times 2!$
 (c) $7!$ (d) $6! \cdot 6P_2$

MATHS – Circular Permutation

93. 4 Indians, 3 Americans and 2 Britishers are to be arranged around a round table. Answer the following questions.
 The number of ways of arranging them so that the three Americans should sit together is:
 (a) $7! \times 3!$ (b) $6! \times 3!$
 (c) $6! \cdot {}^6P_3$ (d) $6! \cdot {}^7P_3$

MATHS – Circular Permutation

94. Match List I with List II

	List I		List II
A.	The story of my Experiments with Truth	I.	Maulana Abul Kalam Azad
B.	Glimpses of Word History	II.	Narndra Modi
C.	India Wins Freedom	III.	Pandit Jawaharlal Nehru
D.	Exam Warrior	IV.	M. K. Gandhi

Choose the correct answer from the options given below:

- (a) A – IV; B – III; C – I; D – II
 (b) A – III; B – IV; C – II; D – I
 (c) A – IV; B – II; C – III; D – I
 (d) A – IV; B – III; C – II; D – I

GK – Books & Authors

95. Match List I with List II

List I		List II	
A.	Austria	I.	Oslo
B.	Iran	II.	Stockholm
C.	Norway	III.	Vienna
D.	Sweden	IV.	Tehran

Choose the correct answer from the options given below:

- (a) A – III; B – I; C – IV; D – II
 (b) A – III; B – IV; C – II; D – I
 (c) A – III; B – IV; C – I; D – II
 (d) A – I; B – II; C – III; D – IV

GK – Capitals

96. Given three identical boxes B_1 , B_2 and B_3 each containing two balls. B_1 contains two golden balls, B_2 contains two silver balls and B_3 contains one silver and one golden ball. Conditional probabilities that the golden ball is drawn from B_1, B_2, B_3 are _____ respectively.
 (a) 0, 1, 1/2 (b) 1/2, 0, 1
 (c) 1, 0, 1/2

MATHS – Conditional Probability

97. Match List I with List II

	List I		List II
A.	In a GP, the third term is 24 and 6th term is 192. The common ratio is _____.	I.	78
B.	Let S_n denote the sum of the first n terms of an AP. If $S_{2n} = 3n$, then S_{3n}/S_n equals to _____.	II.	6
C.	The sum of the first 3 terms of a GP is 13/12 and their product is – 1. The first term is _____.	III.	–1
D.	The least value of n for which the sum $3 + 6 + 9 \dots + n$ is greater than 1000 is	IV.	2

Choose the correct answer from the options given below:

- (a) A – III; B – I; C – II; D – IV
 (b) A – III; B – IV; C – I; D – II
 (c) A – IV; B – II; C – III; D – I
 (d) A – IV; B – III; C – II; D – I

MATHS – AP & GP

98. Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R.
Assertion A: Military service should be made compulsory in our country.
Reason R: Every citizen should protect his country.
 In the light of the above statements, choose the most appropriate answer from the options given below:
 (a) Both A and R are correct and R is the correct explanation of A
 (b) Both A and R are correct and R is not the correct explanation of A
 (c) A is correct but R is not correct.
 (d) A is correct but R is correct.

REASONING – Assertion–Reason

99. Match List I with List II

	List I		List II
A.	The value of $\frac{1}{9}(1-w)(1-w^2)(1-w^4)(1-w^8)$ is	I.	0
B.	$w(1+w-w^2)^7$ _____ is equal to	II.	1
C.	The least positive integer n such that $(1+w^2)^n = (1+w^4)^n$ is	III.	-128
D.	$(1+w-w^2)$ is equal to	IV.	3

Choose the correct answer from the options given below:

- (a) A – II; B – III; C – I; D – IV
- (b) A – II; B – III; C – IV; D – I
- (c) A – III; B – II; C – IV; D – I
- (d) A – III; B – II; C – I; D – IV

MATHS – Complex Numbers

100. Match List I with List II

	List I		List II
A.	$\log_4(\log_3 81) =$	I.	0
B.	$3^4 \log_9^7 = 7^k$, then K =	II.	3
C.	$2^{\log_3^5} - 5^{\log_3^2} =$	III.	1
D.	$\log_2[\log_2(256)] =$	IV.	2

Choose the correct answer from the options given below:

- (a) A – I; B – III; C – II; D – IV
- (b) A – I; B – III; C – IV; D – II
- (c) A – III; B – IV; C – II; D – I
- (d) A – III; B – IV; C – I; D – II

MATHS – Logarithms

ANSWER KEY

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