

# CUET PG 2025

1. In an examination, a student scores 4 marks for every correct answer and loses 1 mark for every wrong answer. If she/he attempts all 60 questions and secures 130 marks, the number of questions she/he attempts wrongly, are?

(CUET-PG 2025) Number System

- (a)38 (b)22 (c)21 (d)37

2. Arrange the following layers of MS DOS operating system starting from inner most to outer most.

- (a) ROM BIOS Device drivers  
(b) Resident System Program  
(c) MS DOS Device Drivers  
(d) Application Program

Choose the **correct** answer from the options given below:

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

(CUET-PG 2025) Ms- Dos

3. The Quicksort and randomized Quicksort procedures differ in:

(CUET-PG 2025) Algorithms

- (a) Selection of Pivot element  
(b) Worst case time complexity  
(c) Best case time Complexity  
(d) Final Output

4. If  $x = (2 + \sqrt{3})^{\frac{1}{3}} + (2 + \sqrt{3})^{-\frac{1}{3}}$  and  $x^3 - 3x + k = 0$ , then the value of k is:

(CUET-PG 2025) Algebra

- (a)-4 (b)4 (c) $\sqrt{3}$  (d) $2\sqrt{3}$

5. Consider a page reference string as : 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, Assume that there are 3-page frames available. calculate the total number of pages faults for the above reference string if **LRU** policy is used for page replacement.

(CUET-PG 2025) Page Replacement

- (a)10 (b)8 (c)9 (d)11

6. Consider the following four words, out of which three are alike in some manner and one is different.

(CUET-PG 2025) Odd One Out

- (A) Arrow (C) Missile  
(B) Sword (D) Bullet

Choose the combination that has alike words.

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

7. Which of the following scheduler/schedulers is/are also called CPU scheduler?

(CUET-PG 2025) CPU Scheduling

- (A) Short Term Scheduler  
(B) Long Term Scheduler  
(C) Medium Term Scheduler  
(D) Asymmetric Scheduler

Choose the **correct** answer from the options given below:

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

8. In \_\_\_\_\_ the search time is independent of the number of elements n.

(CUET-PG 2025) Hashing

- (a) Binary Search (b) Hashing  
(c) Linear (d) Jump search

9. A situation where two or more processes are blocked, waiting for resources held by each other is called:

(CUET-PG 2025) Deadlock

- (a) Pooling (b) Deadlock  
(c) Thrashing (d) Paging

10. Which of the following is a way to recover from the deadlock which has already occurred?

(CUET-PG 2025) Deadlock

- (a) Process termination  
(b) Non preemption of resources  
(c) Banker's algorithm  
(d) Circular wait

11. Identify the missing number (?) from the following figure.

(CUET-PG 2025) Number Puzzle

72	24	6
96	16	12
108	?	18

- (a)12 (b)16  
(c)18 (d)20

12. One term in the given number series is wrong. Find out the wrong term.

3, 10, 27, 4, 16, 64, 5, 25, 125

(CUET-PG 2025) Wrong Term

- (a)3 (b)10 (c)4 (d)27

13. Minimum number of 2:1 Multiplexers required to design a 16:1 Multiplexer is?

(CUET-PG 2025) Multiplexar

- (a)12 (b)14 (c)15 (d)16

14. Consider the task of finding the shortest path in an unweighted graph by using BFS and DFS.

(CUET-PG 2025) Graph Theory (BFS vs DFS – Shortest Path)

Which of the following statements are true?

- (a) BFS always finds the shortest path.  
(b) DFS always finds the shortest path.  
(c) DFS does not guarantee finding the shortest path.  
(d) BFS does not guarantee finding the shortest path.

Choose the **correct** answer from the options given below:

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

15. Which of the following is not an application of DFS?

(CUET-PG 2025) DFS Application

- (a) Topological
- (b) Determining Strongly Connected Components is a graph
- (c) Finding minimum distance to a node in an unweighted graph optimally
- (d) Solving Maze Problem

16. Consider the following statements.

- (a) Combinational logic circuits do not have memory, while sequential logic circuits have memory elements,
- (b) Sequential logic circuits depend only on the current inputs, while combinational logic circuits depend on both current and past inputs.
- (c) Flip-flops and latches are examples of combinational logic circuits.
- (d) Multiplexer is an example of combinational logic circuit.

Choose the **correct** statement/statements from the options given below: (CUET-PG 2025) Sequential Circuits

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

17. The points  $(K, 2 - 2K)$ ,  $(-K + 1, 2K)$  and  $(-4 - k, 6 - 2K)$  are collinear if:

(CUET-PG 2025) Co-ordinate

- (A)  $K = \frac{1}{3}$
- (B)  $K = \frac{-1}{2}$
- (C)  $K = \frac{2}{3}$
- (D)  $K = -1$
- (E)  $K = 1$

Choose the **correct** answer from the options given below:

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

18. Match **List-I** with **List-II**

	List-I		List-II
(A)	If $\begin{bmatrix} \lambda - 1 & 0 \\ 0 & \lambda - 1 \end{bmatrix} = 0$ , then $\lambda$ is	(I)	0
(B)	If $\Delta = \begin{bmatrix} 1 & 2 \\ 2 & 4 \end{bmatrix}$ , then $\Delta$ is	(II)	1
(C)	If $A = \begin{bmatrix} 1 & 0 \\ 0 & \frac{1}{2} \end{bmatrix}$ , then $ A^{-1} $ is	(III)	-2
(D)	If $\begin{bmatrix} a+1 & 1 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} -1 & 1 \\ 1 & 2 \end{bmatrix}$ , then $a$ is	(IV)	2

(CUET-PG 2025) Matrices & Determinants  
(Eigen/Determinant/Inverse type matching)

Choose the **correct** answer from the options given below:

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

19. Which disk scheduling algorithm looks for the track closest to the current head position?

(CUET-PG 2025) Disk Scheduling

- (a) LOOK
- (b) SSTF
- (c) FCFS
- (d) SCAN

20. Arrange the following steps in the correct order to understand the functioning of a 3 to 8 line decoder.

- (a) The encoder enable inputs is set to 1.
- (b) The decoder activates one of its 8 output lines based on the input code.
- (c) The input binary code is applied to the decoder.
- (d) The decoder converts the 3-bit binary input into 8 possible outputs.

(CUET-PG 2025) Decodar

Choose the **correct** answer from the options given below:

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

21. Door is related to bang in the way as chain is related to

(CUET-PG 2025) Analogy

- (a) Thunder
- (b) Clinch
- (c) Tinkle
- (d) Clank

22. Match **List-I** with **List-II**

List-I	List-II
(Letter number series)	(Missing term)
(A) D4, F6, H8, J10, ?	(I) U121
(B) 2B, 4C, 8E, 14H, ?	(II) 11I
(C) 3F, 6G, ?, 18L, 27P	(III) 22L
(D) W144, ?, S100, Q81, 064	(IV) L12

(CUET-PG 2025) Number Series

Choose the **correct** answer from the options given below:

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

23. Match **List-I** with **List-II**

List-I	List-II
(A) $\lim_{x \rightarrow 0} (1 + 2x)^{\frac{1}{x}}$	(I) $e^6$
(B) $\lim_{x \rightarrow \infty} (1 + \frac{1}{x})^x$	(II) $e^2$
(C) $\lim_{x \rightarrow 0} (1 + 5x)^{\frac{1}{x}}$	(III) $e$
(D) $\lim_{x \rightarrow \infty} (1 + \frac{3}{x})^{2x}$	(IV) $e^5$

(CUET-PG 2025) Integration

Choose the **correct** answer from the options given below:

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

24. Complete the following statement by choosing the correct option.

For a deadlock to occur, the four conditions namely Mutual Exclusion, Hold and wait, No preemption, circular wait \_\_\_\_\_

(CUET-PG 2025) Deadlock

- (a) May or may not hold
- (b) The circular wait does not implies hold and wait condition
- (c) Are completely independent
- (d) Must hold simultaneously

25. To provide a memory capacity of 32K X 16 how many address lines and data are required?

(CUET-PG 2025) Memory Calculation

- (a) address lines=14, data lines=16
- (b) address lines=15, data lines=16
- (c) address lines=14, data lines=4
- (d) address lines=15, data lines=4

26.  $\int \frac{2x+1}{x^2+x+2} dx$  is

(CUET-PG 2025) Definite integral

- (a)  $\log(2x + 1) + c$ , where c is an arbitrary constant
- (b)  $\log \frac{(2x+1)}{(x^2+x+2)} + c$ , where c is an arbitrary constant
- (c)  $\log(x^2 + x + 2) + c$ , where c is an arbitrary constant
- (d)  $\log \left( \frac{1}{2} \right) + c$ , where c is an arbitrary constant

27. Match List-I with List-II

List-I		List-II	
(CPU Scheduling Algorithm)		(Feature)	
(A)	FCFS	(I).	FCFS + preemption
(B)	Round Robin	(II).	Allows the processes to move between queues
(C)	Multi level queue scheduling	(III).	Often long average waiting time
(D)	Multi level Feedback Queue	(IV).	Permanent assignment of processes to one specific queue

Choose the correct answer from the options given below.

(CUET-PG 2025) CPU Scheduling

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

28. If  $\begin{vmatrix} 1 & 1 & 1 \\ bc & ca & ab \end{vmatrix} = k$ , then the value

$$a(b+c) \quad b(c+a) \quad c(a+b)$$

of k is: (CUET-PG 2025) Equation Solving

- (a)  $ab + bc + ca$
- (b)  $(ab + bc + ca)^2$
- (c)  $2(ab + bc + ca)$
- (d) 0

29. A fair coin is tossed three times. Let A be the event of getting exactly two heads and B be the event of getting at most two tails, then  $P(A \cup B)$  is:

(CUET-PG 2025) Probabilities

- (a)  $\frac{1}{2}$
- (b)  $\frac{3}{8}$
- (c)  $\frac{1}{8}$
- (d)  $\frac{7}{8}$

30. Bag A contains 3 Red and 4 Black balls while Bag B contains 5 Red and 6 black balls. One ball is drawn at random from one of the bags and is found to be red. Then the probability that it was drawn from Bag B is

(CUET-PG 2025) Bayes Theorem

- (a)  $\frac{35}{68}$
- (b)  $\frac{7}{38}$
- (c)  $\frac{14}{37}$
- (d)  $\frac{34}{43}$

31. Match List-I with List-II

	List-I		List-II
(A)	Seek Time	(I).	Total number of bytes transferred, divided by the total time between the first request for service and the completion of the last transfer
(B)	Access Time	(II).	Time taken for the disk to rotate the desired sector to the disk head
(C)	Rotational Latency	(III).	Seek Time + Rotational Latency
(D)	Disk Bandwidth	(IV).	Time taken for the disk arm to move the heads to the cylinder containing the desired sector

(CUET-PG 2025) Disk Scheduling

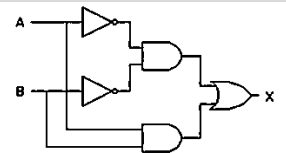
Choose the correct answer from the options given below:

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

32. The following circuit generates the same output as?

(CUET-PG 2025) Logic Gate

- (a) XOR GATE
- (b) XNOR GATE
- (c) NAND GATE
- (d) NOR GATE



33. Consider the following type of memories.

- (A) Hard Disk Drive (HDD)
- (B) Cache Memory
- (C) Random Access Memory
- (D) Register

Arrange the above memories according to their access speed (from fastest to slowest)

(CUET-PG 2025) Memory Hierarchy

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

34. Find the next two terms of the series:

**A, C, F, J, ?, ?**

- (a) O (b) U (c) R (d) V

Choose the **correct** answer from the options given below:

**(CUET-PG 2025) Alphabet Series**

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

35. Given the index  $i$  of a node in a heap, we can not compute:

**(CUET-PG 2025) Heap Properties**

- (a) Parent (i) (b) Heap size  
(c) Left (i) (d) Right (i)

36. Which of the following statement is true about IEEE754 representation of +0 and -0?

**(CUET-PG 2025) Floating Point (IEEE-754)**

- (a) have the same sign bit, but different mantissa bits.  
(b) differ only in the sign bit; their exponent and mantissa bits are identical.  
(c) have the same representation because they are mathematically equivalent.  
(d) differ in both their exponent and mantissa bits.

37. The value of  $\lim_{x \rightarrow \infty} (1 + \frac{2}{3x})^x$  is:

**(CUET-PG 2025) Limit**

- (a)  $e$  (b)  $e^2$  (c)  $e^3$  (d)  $e^3$

38. If  $f(x) = \begin{cases} x \sin(\frac{1}{x}), & x \neq 0 \\ 0, & x = 0 \end{cases}$ , then  $f(x)$  is

**(CUET-PG 2025) Continuity**

- (a) continuous for all  $x \in \mathbb{R}$   
(b) continuous at 0, 1 only  
(c) not continuous at 1  
(d) not continuous at 0

39. Choose the missing term (?) of the following series.

2, 7, 27, 107, 427, ?

**(CUET-PG 2025) Number series**

- (a) 1262 (b) 1707  
(c) 4027 (d) 4407

40. 'The Dining Philosopher' problem can be solved by:

**(CUET-PG 2025) Operating System Synchronization**

- (a) Use of semaphores (b) Use of overlays  
(c) Mutual exclusion (d) Bounded waiting

41. In the following question, there is a certain relationship between two given words on one side of ':' and one word is given on another side ':' while another word is to be found from the given options, having the same relation with this word as the words of the given pair bear, Choose the correct option to replace the '?'.

**(CUET-PG 2025) Analogy**

Milk : Emulsion :: Butter : ?

- (a) Aerosol (b) Suspension  
(c) Sol (d) Gel

42. All the elements that hash to the same slot are placed into the same linked list in:

**(CUET-PG 2025) Data Structures (Hashing – Chaining)**

- (a) Universal hashing (b) Linear Probing  
(c) Quadratic probing (d) Chaining

43. Perform the arithmetic addition of the two decimal numbers given in **List-I** using the signed-complement system. Match the corresponding output of **List-I** with binary number representation given in **List-II**.

List-I	List-II
(A) +6, +13	(I). 00000111
(B) -6, +13	(II). 00010011
(C) +6, -13	(III). 11101101
(D) -6, -13	(IV). 1111101

**(CUET-PG 2025) Signed Complement**

Choose the **correct** answer from the options given below:

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

44. Match List-I with List-II

List-I	List-II
<b>J K Flip Flop inputs</b>	<b>Next State</b>
(a) 0 0	(i). Toggle
(b) 0 1	(ii). Set
(c) 1 0	(iii). Reset
(d) 1 1	(iv). No Change

**(CUET-PG 2025) Digital Electronics Flip Flop**

Choose the correct answer from the options given below.

- (a) (A) - (i), (B) - (ii), (C) - (iii), (D) - (iv)  
(b) (A) - (iv), (B) - (iii), (C) - (ii), (D) - (i)  
(c) (A) - (iv), (B) - (iii), (C) - (i), (D) - (ii)  
(d) (A) - (i), (B) - (ii), (C) - (iv), (D) - (iii)

45. If  $(x - 1)$  is a factor of  $2x^2 - 5x + k = 0$ , then the value of  $k$  is:

**(CUET-PG 2025) Polynomial Division**

- (a) 2 (b) 5  
(c) 3 (d) 4

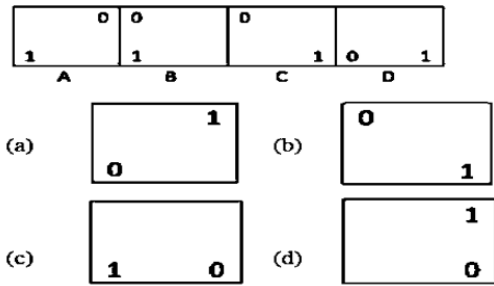
46. In a binary search tree, the worst case time complexity of inserting and deleting a key is:

**(CUET-PG 2025) Time Complexity**

- (a)  $O(\log n)$  for insertion and  $O(\log n)$  for deletion  
(b)  $O(n)$  for insertion and  $O(\log n)$  for deletion  
(c)  $O(n)$  for insertion and  $O(n)$  for deletion  
(d)  $O(\log n)$  for insertion and  $O(n)$  for deletion

47. Which figure comes next in the series below.

(CUET-PG 2025) Visual Pattern



48. If the line through (3, y) and (2, 7) is parallel to the line through (-2, 4) and (0, 6), then the value of y is:

(CUET-PG 2025) Parallel Lines

- (a) -7      (b) 9      (c) 7      (d) 2

49. Match List-I with List-II

List-I	List-II
(A) X and Y are two sets such that $n(X) = 17$ , $n(Y) = 23$ , $n(X \cup Y) = 38$ , then $n(X \cap Y)$ is	(i) 20
(B) If $n(X) = 28$ , $n(Y) = 32$ , $n(X \cap Y) = 10$ , then $n(X \cup Y)$ is	(ii) 10
(C) If $n(X) = 10$ , then $(7X)$ is	(iii) 50
(D) If $n(Y) = 20$ , then $n\left(\frac{Y}{2}\right)$ is	(iv) 2

(CUET-PG 2025) Set Theory

Choose the correct answer from the options given below:

- (a) (A) – (iv), (B) – (iii), (C) – (ii), (D) – (i)  
 (b) (A) – (iv), (B) – (iii), (C) – (i), (D) – (ii)  
 (c) (A) – (iv), (B) – (i), (C) – (ii), (D) – (iii)  
 (d) (A) – (iv), (B) – (ii), (C) – (i), (D) – (iii)

50. Details a paging system for memory management are as follows:

Logical address space: 32 KB

Page Size: 4 B

Physical Memory size: 64 KB

The number of pages in the logical address space and number of page frames in physical memory, respectively are:

(CUET-PG 2025) Paging

- (a) 4, 16      (b) 4, 12  
 (c) 8, 16      (d) 3, 16

51. What is the result of the following operation defined by IEEE754. (NaN = Nan)

(CUET-PG 2025) Comparison

- (a) false      (b) true  
 (c) error      (d) 1

52. Match List-I with List-II

List-I		List-II	
(Algorithm/ Application)		(Data Structure Used)	
(A)	BFS	(I)	Stack
(B)	DFS	(II)	B Trees
(C)	Heap sort	(III)	Priority Queue
(D)	Storage on secondary storages devices	(IV)	Queue

(CUET-PG 2025) Application of DS

Choose the correct answer from the options given below:

- (a) (A) (IV), (B) (I), (C) (III), (D) - (II)  
 (b) (A) (I), (B) (III), (C) (II), (D) - (IV)  
 (c) (A) (1), (B) (II), (C) (IV), (D) - (III)  
 (d) (A) (III), (B) (IV), (C) (I), (D) - (II)

53. Which of the following statements are TRUE, where  $|E|$  represents the number of edges.

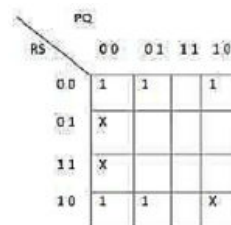
- (A). In case of a directed graph, the sum of lengths of all the adjacency list is  $E$   
 (B). For an undirected graph, the sum of the lengths of all the adjacency list is  $2|E|$   
 (C). For a dense graph, adjacency matrix representation is preferable  
 (D). The memory requirement of the adjacency matrix of a graph is dependent on the number of edges

(CUET-PG 2025) Properties

Choose the correct answer from the option gives to

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

54. Consider the following Karnaugh Map (k-map). Minimal Function generated by this Karnaugh map is



(CUET-PG 2025) K- map

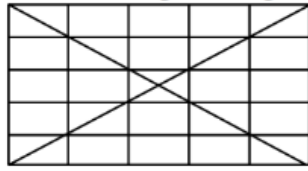
- (a)  $Q'S + P'Q$       (b)  $Q'S' + P'S'$   
 (c)  $P'Q' + P'S' + Q'S'$       (d)  $PQ + Q'S' + P'S'$

55. if  ${}^1P_1 + {}^1P_1 = {}^xP_1$  then the value of x is:

(CUET-PG 2025) Equation Solving

- (a) 121      (b) 120  
 (c) 12      (d) 24

56. Find the number of triangles in the given figure.



(CUET-PG 2025) Figure Counting

- (a) 36 (b) 44  
(c) 48 (d) 46

57. The length of major axis and coordinate of vertices for the ellipse  $3x^2 + 2y^2 = 6$  respectively are:

(CUET-PG 2025) Ellipse

- (a)  $2\sqrt{2}$ ,  $(0, \pm\sqrt{3})$  (b)  $2\sqrt{3}$ ,  $(0, \pm\sqrt{3})$   
(c)  $2\sqrt{2}$ ,  $(\pm\sqrt{3}, 0)$  (d)  $2\sqrt{3}$ ,  $(\pm\sqrt{3}, 0)$

58. External fragmentation occurs

(CUET-PG 2025) Memory Management

(a) when enough total memory space exists to satisfy a

request, but it is not contiguous, storage is fragmented into a large number of small holes.

(b) When enough total memory space exists to satisfy a request, which is contiguous, storage is fragmented into a large number of small holes.

(c) When memory is empty.

(d) Always.

59. Which CPU scheduling algorithm prefers the process with the shortest burst time?

(CUET-PG 2025) Scheduling

- (a) FCFS (b) SJF  
(c) Round Robin (d) Priority Scheduling

60. Consider a typical process P, in the critical section. Arrange the following statements of code to make a valid general structure.

(CUET-PG 2025) Process Section

- (a) Critical section (b) Remainder section  
(c) Entry section (d) Exit section

Choose the correct answer from the options given below:

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

61. Arrange the following time complexities in increasing order. (CUET-PG 2025) Time Complexity

- (a) Bubble sort (worst case)  
(b) Deleting head node in singly linked list  
(c) Binary search  
(d) Worst case of merge sort

Choose the correct answer from the options given below:

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

62. If  $x^2 = -16y$  is an equation of parabola then:

(A) directrix is  $y = 4$

(B) directrix is  $x = 4$

(C) co-ordinates of focus are  $(0, -4)$

(D) co-ordinates of focus are  $(-4, -0)$

(E) length of latusrectum = 16

(CUET-PG 2025) Parabola

Choose the correct answer from the options given below:

(a) (A) and (E) only (b) (B), (C) and (E) only

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

63. Introducing a man to her husband, a woman said, "His brother's father is the only son of my grandfather." How is the woman related to this man?

(CUET-PG 2025) Blood Relation

a) Mother

(b) Aunt

(c) Sister

(d) Daughter

64. If a, b and c in Geometric Progression and  $a^x = b^y = c^z$  then, x, y, z are in \_\_\_\_\_.

(CUET-PG 2025) AP & GP

(a) Arithmetic Progression

(b) Geometric Progression

(c)  $\frac{2}{y} = \frac{1}{x} + \frac{1}{z}$

(d)  $x = y + z$

65. In a certain code, VISHWANATHAN is written as NAAWTHHSANIV. How is KARUNAKARANA written in that code?

(CUET-PG 2025) Coding-Decoding

(a) KAAANRAURNAAK (b) AKNUARRANKA

(c) NKKRANKRAUK (d) RURNKAAUNAK

66. Find missing word (?) which is similar to the given words.

Sitar : Guitar : Tanpura : ?

(CUET-PG 2025) Analogy

(a) Trumpet

(b) Violin

(c) Harmonium

(d) Mridanga

67. From the given sets, which is an infinite set:

(CUET-PG 2025) Set Theory

(a)  $\{x: x \in \mathbb{N} \text{ and } (x-1)(x-2) = 0\}$

(b)  $\{x: x \in \mathbb{N} \text{ and } x \text{ is prime number and less than } 199\}$

(c)  $\{x: x \in \mathbb{N} \text{ and } x^5 - 1 = 0\}$

(d)  $\{x: x \in \mathbb{N} \text{ and } x \text{ is odd}\}$

68. In case of Binary search tree which of the following procedure's running time is distinct among all

(CUET-PG 2025) Bst Operation Time

- (a) TREE-SUCCESSOR (finds successor of the given node)

- (b) REE-MAXIMUM (finds the node with maximum value)
- (c) INORDER-WALK (prints all elements of a tree in inorder manner)
- (d) TREE-MINIMUM (finds the node with minimum value)

69. Consider the following alphabet series:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

If the second half of the given alphabet series is written in reverse order, which letter will be seventh to the right of the twelfth letter from the left end?

(CUET-PG 2025) Alphabet Rearrangement

- (a) R (b) S
- (c) U (d) T

70. Match List-I with List-II

List-I		List-II	
(Algorithm)		(Recurrence relation)	
(A)	Binary Search	(I)	$T(n) = T(n/2) + c$ (where $c$ is a constant)
(B)	Merge Sort	(II)	$T(n) = 2T(n/2) + O(n)$
(C)	Quick sort (worst case partitioning)	(III)	$T(n) = T(n-1) + O(n)$
(D)	Linear Search	(IV)	$T(n) = T(n-1) + c$ (where $c$ is a constant)

(CUET-PG 2025) Recurrence relations

Choose the correct answer from the options given below:

- (a) (A)(1), (B) (II), (C) - (III), (D) - (IV)
- (b) (A)(1), (B) (III), (C) (II), (D) - (IV)
- (c) (A) (1), (B) (II), (C) (IV), (D) - (III)
- (d) (A) (III), (B) (IV), (C) (I), (D) - (II)

71. What should be the minimum hamming distance  $d_{min}$  to guarantee correction of upto  $p$  errors in a given block code.

(CUET-PG 2025) Code Distance

- (a)  $2p$  (b)  $2P+1$
- (c)  $2P-1$  (d)  $2^{P-2}$

72. The statements of pseudocode for searching the first element with key  $k$  in the linked list  $L$  are given below. Arrange them in the correct order.

- (A) while ( $x \neq \text{Nil}$ , and  $x.\text{key} = 0$ )
- (B)  $x = L.\text{head}$
- (C)  $x = x.\text{next}$
- (D) return  $x$

(CUET-PG 2025) Linked List

Choose the **correct** answer from the options given below:

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

73. The center and radius for the circle  $x^2 + y^2 + 6x - 4y + 4 = 0$  respectively are:

(CUET-PG 2025) Circle

- (a) (2, 3) and 3 (b) (3, 2) and 8
- (c) (2, -3) and 3 (d) (-3, 2) and 3

74. Out of 5 consonants and 4 vowels, how many words of 3 consonants and 3 vowels can be made?

(CUET-PG 2025) P & C

- (a) 40 (b) 80 (c) 20 (d) 240

75. What should be the output of the following boolean expression after simplifying it to a minimum number of variables?

$a'b' + ab + a'b$

(CUET-PG 2025) Boolean Algebra

- (a)  $a + b'$  (b)  $a' + b$
- (c)  $a' + b'$  (d)  $a + b$

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