AUAT 2024 MCA - Question Paper with Answers

# PART I – Core Subject (Questions 1–70)

1. 1. Which of the following is not an operating system?

**Answer:** Python

1. 2. In a computer, most processing takes place in the

**Answer:** Central Processing Unit (CPU)

1. 3. The first page of a website is commonly termed as

**Answer:** Home Page

1. 4. Which component of a computer is responsible for producing output from the computer’s processing?

**Answer:** Output devices

1. 5. Which is the most common tool used to restrict access to a computer system?

**Answer:** Password

1. 6. The minimum number of temporary variables needed to swap the contents of two variables is

**Answer:** 1

1. 7. If n has the value 3, then the output of the statement printf("%d %d", n++, ++n); is

**Answer:** Implementation dependent

1. 8. printf("%c",100);

**Answer:** Prints the ASCII equivalent of 100

1. 9. print("%d", printf("tim"));

**Answer:** Output tim3

1. 10. Which of the following is not a keyword in C?

**Answer:** IF

1. 11. In a for loop, if the condition is missing, then

**Answer:** It is assumed to be present and taken to be true

1. 12. Let x be array. Which expression gives the address of the second element of the array?

**Answer:** x + 1

1. 13. Any C program

**Answer:** Must contain at least one function

1. 14. The statement int \*\*a;

**Answer:** Is syntactically and semantically correct

1. 15. If x is any array of integer, then the value of &x[i] is same as that of

**Answer:** x + i

1. 16. UNIX was developed by

**Answer:** Bell Labs

1. 17. What does the ‘chmod’ command do in Unix?

**Answer:** It changes the permissions of a file or directory

1. 18. Which command is used to list all files, including hidden files, in a directory in Unix?

**Answer:** ls -a

1. 19. The file that stores an integer as a sequence of characters is a

**Answer:** Text file

1. 20. What is the effect of the command cd ./../. in a Unix-like operating system?

**Answer:** It changes the current directory to the parent directory of the current directory

1. 21. The depth of a complete binary tree with n nodes is

**Answer:** log₂(n + 1) – 1

1. 22. Which of the following traversal techniques lists the nodes of a BST in ascending order?

**Answer:** In-order

1. 23. The way a card game player arranges cards is an example of

**Answer:** Insertion sort

1. 24. Which algorithm solves the all-pair shortest path problem?

**Answer:** Floyd's algorithm

1. 25. Quick sort uses which design technique?

**Answer:** Divide and conquer

1. 26. Which data structure uses LIFO?

**Answer:** Stack

1. 27. Time complexity of inserting at the front of a queue using a linked list?

**Answer:** O(1)

1. 28. What does HTML stand for?

**Answer:** Hyper Text Markup Language

1. 29. What does CSS stand for?

**Answer:** Cascading Style Sheets

1. 30. Correct HTML tag for creating a hyperlink?

**Answer:** <a>

1. 31. Page fault occurs when

**Answer:** The page is not in main memory

1. 32. Semaphores are used to solve

**Answer:** Process synchronization

1. 33. Which scheduling process doesn't use context switching?

**Answer:** Shortest Job First Scheduling

1. 34. Deadlock-avoidance algorithm?

**Answer:** Banker’s algorithm

1. 35. Disk scheduling involves

**Answer:** Order in which disk access request must be serviced

1. 36. Set A = {0, 1}. Number of strings of length ‘n’?

**Answer:** 2ⁿ

1. 37. Regular expression for at least 2 a’s?

**Answer:** (a+b)\*a(a+b)\*a(a+b)\*

1. 38. Which automaton recognizes regular languages?

**Answer:** Finite Automaton

1. 39. Role of stack in PDA?

**Answer:** To manage context-free languages

1. 40. Most powerful automaton in language recognition?

**Answer:** Turing Machine

1. 41. Binary of 0.4375?

**Answer:** 0.0111

1. 42. Boolean expression X+X’Y equals

**Answer:** X + Y

1. 43. Primary key in database?

**Answer:** Uniquely identifies a row

1. 44. Which normal form has no transitive dependencies?

**Answer:** Third Normal Form (3NF)

1. 45. SQL statement to retrieve data?

**Answer:** SELECT

1. 46. Eigenvalues of a diagonal matrix are

**Answer:** The entries on the diagonal

1. 47. Determinant of identity matrix?

**Answer:** 1

1. 48. Condition for AB = BA?

**Answer:** A and B commute

1. 49. Natural numbers are not closed under

**Answer:** Subtraction

1. 50. A∩(A∩B)’ equals

**Answer:** Φ (empty set)

1. 51. Today is Wednesday. What’s the day after 61 days?

**Answer:** Saturday

1. 52. Odd one: Running, Painting, Cycling, Jogging?

**Answer:** Painting

1. 53. Largest 4-digit number divisible by 7, and +10 becomes divisible by 3?

**Answer:** 9989

1. 54. LCM = 120, which cannot be HCF?

**Answer:** 35

1. 55. 0.393939... as fraction?

**Answer:** 39/99

1. 56. Average of all odd numbers up to 100?

**Answer:** 50

1. 57. Find missing number: 8, 7, 11, 12, 14, 17, 17, 22, ?

**Answer:** 24

1. 58. Odd group: 15:46, 12:37, 9:28, 8:33?

**Answer:** 8 : 33

1. 59. Raghu’s rank is twice Paul’s; 10 rank worse than Raghu. Paul’s rank?

**Answer:** 10th

1. 60. Meena:Mukta = 3:5, after 9 yrs 3:4. Mukta’s age?

**Answer:** 15 years

1. 61. Who is good in CS, History, and Dramatics?

**Answer:** Shobha

1. 62. Who is good in Physics, Dramatics, CS?

**Answer:** Madhu

1. 63. Who is good in Physics, History, Dramatics?

**Answer:** Poonam

1. 64. Who is good in History, Physics, CS, and Maths?

**Answer:** Anjali

1. 65. Who is good in Physics, History, and Maths but not CS?

**Answer:** Nisha

1. 66. Who is between E and H?

**Answer:** I

1. 67. Who are three lady members?

**Answer:** E, H and G

1. 68. How many between K and F?

**Answer:** 2

1. 69. What is true about J and K?

**Answer:** J is female, K is male

1. 70. Who is to the immediate left of F?

**Answer:** J

1. 71. Islamic thanksgiving phrase?

**Answer:** Jazakallah

1. 72. God understands prayers in?

**Answer:** Any language

1. 73. Which is true about dignity?

**Answer:** All are equal

1. 74. Daily prayers are?

**Answer:** Obligatory in all situations

1. 75. Which is true?

**Answer:** All messengers are prophets but not all prophets are messengers

1. 76. Prophet Muhammad born in?

**Answer:** Rabi al-Awwal

1. 77. Youngest daughter of Prophet?

**Answer:** Fatima

1. 78. Who was enemy then supporter of Islam?

**Answer:** Hazrat Umar

1. 79. Hijri calendar months?

**Answer:** 12

1. 80. Greenery is \_\_\_\_\_ in Islam

**Answer:** Encouraged

1. 81. Is it permitted to drink water while fasting?

**Answer:** No, it is not permitted

1. 82. What does hijab refer to?

**Answer:** Islamic dress for women

1. 83. Arabic word for Angels?

**Answer:** Malaikah

1. 84. 570 CE – CE stands for?

**Answer:** Common Era

1. 85. Muslim values?

**Answer:** Piety and humility

1. 86. Islamic finance based on?

**Answer:** Sharing return and risk

1. 87. Sunnah to wear slippers with?

**Answer:** Right leg first

1. 88. Do good deed, expect?

**Answer:** Reward from Allah (SWT)

1. 89. Zam Zam means?

**Answer:** Stop-Stop

1. 90. Two prayers with no Azan?

**Answer:** Eid-ul-Adha and Janaza

1. 91. Remorse, he determined to \_\_\_\_\_ for his crime

**Answer:** Atone

1. 92. Remote areas away from rivers?

**Answer:** Hinterland

1. 93. Person who drives a car?

**Answer:** Chauffeur

1. 94. I can't give her credit \_\_\_\_\_ all she boasts \_\_\_\_\_

**Answer:** For, of

1. 95. At sixes and sevens means?

**Answer:** In disorder or confusion

1. 96. How many Fundamental Duties?

**Answer:** 11

1. 97. SI unit of mechanical power?

**Answer:** Watt

1. 98. Vitamin for blood clotting?

**Answer:** Vitamin-K

1. 99. Element ‘Cu’?

**Answer:** Copper

1. 100. Ocean between Africa and Australia?

**Answer:** Indian