CHAPTER 1
CONFIGURATION OF COMPUTERS

One mark questions:

1.	What is a motherboard?	(U)
2.	What is a microprocessor?	(U)
3.	Define a north bridge.	(K)
4.	Define a south bridge.	(K)
5.	Expand BIOS.	(U)
6.	What is a slot?	(A)
7.	Give the purpose of expansion slots.	(A)
8.	What is the purpose of AGP?	(A)
9.	Expand IDE.	(U)
10.	Expand PCI.	(U)
11.	What are ports and interfaces?	(U)
12.	How many bits of data are transferred along a serial port?	(A)
13.	Expand USB.	(U)
14.	Give one feature of USB.	(U)
15.	Name any one USB device.	(A)
16.	What is plug-and-play?	(A)
17.	Expand MIDI.	(K)
18.	Define a bus.	(U)
19.	How does the computer communicate with other devices?	(A)
20.	What is system bus?	(U)
21.	What is the function of control bus?	(K)
22.	What is a data bus?	(U)
23.	What are registers?	(K)
24.	What is the function of registers in the CPU?	(A)
25.	Define cache memory.	(U)
26.	Where is L1 cache located?	(A)
27.	Where is L2 cache located?	(A)
28.	Expand SDRAM.	(U)
29.	Give the expansion of DDRRAM.	(U)
30.	Expand SMPS.	(U)
31.	What is the use of SMPS?	(A)
32.	What is the approximate power consumed by a PC?	(A)
33.	Expand UPS.	(U)

Two marks questions:

1.	Name any two types of motherboard.	(U)
2.	Explain North Bridge.	(A)
3.	Briefly explain South Bridge.	(A)

4. Name the different I/O ports.   (U)
5. Explain parallel port.   (U)
6. Briefly explain USB port.   (U)
7. Name the two types of primary memory.   (U)
8. What are the sources of power supply to the computer?   (A)
9. Explain SMPS.   (U)
10. Explain UPS.   (U)
11. Name the two types of UPS.   (U)
12. Explain off-line UPS.   (A)
13. Explain online UPS.   (A)

Three marks questions:
1. Explain the characteristics of a motherboard.   (U)
2. Explain different types of motherboard.   (U)
3. What is a north bridge? Name the devices controlled by North Bridge.   (U)
4. What is south bridge? Name the devices controlled by south bridge.   (U)
5. Explain any three components of a motherboard.   (U)
6. Give the functions of BIOS.   (U)
7. What is a slot? Explain any two slots.   (U)
8. Explain the different types of I/O ports.   (U)
9. Write a note on serial port.   (A)
10. Write a note on parallel port.   (A)
11. Explain USB port.   (U)
12. Give the features of USB.   (U)
13. Explain cache memory.   (U)
14. Explain the different types of system bus.   (A)
15. Write a note on registers.   (U)
16. What is primary memory? Name the two types of primary memory.   (U)
17. Briefly explain RAM.   (U)
18. Briefly explain ROM.   (U)
19. Write a note on DRAM.   (U)
20. Write a note on SRAM.   (U)
21. Write a note on SMPS.   (U)

Five marks questions:
1. Explain any five components of a motherboard.   (U)
2. Explain the different slots in a motherboard.   (U)
3. Explain the different I/O ports and interfaces.   (U)
4. Explain USB.   (U)
5. What is an internal memory? Give the features of internal memory?   (U)
6. Explain cache memory.   (U)
7. Explain different types of RAM.   (U)

BOOLEAN ALGEBRA

One mark questions:

1. What is another name of Boolean algebra? (S)
2. What is the use of Boolean algebra? (A)
3. What type of problems can be solved in Boolean algebra? (A)
4. Define truth values. (A)
5. What do you understand by logic functions? (U)
6. Give an example for logic function. (A)
7. What do you mean by binary valued variables? (U)
8. What is meant by tautology? (U)
9. What is meant by fallacy? (U)
10. Prove that $1 + Y$ is tautology. (S)
11. Prove that $0 \cdot Y$ is fallacy. (S)
12. What is a truth table? (U)
13. Write Venn diagram for AND operator. (A)
14. Write Venn diagram for NOT operator. (A)
15. Write Venn diagram for OR operator. (A)
16. Which operator is complementation? (U)
17. What are postulates of Boolean algebra? (K)
18. What is proof by perfect induction? (S)
19. Write the truth table for: $X + X = X$ (A)
20. Write the truth table for: $X \cdot X = X$ (A)
21. Prove that $1 + X = 1$ (S)
22. State indempotence law. (U)
23. State involution law. (U)
24. State complementarity law. (U)
25. Draw logic diagram to represent complementarity law. (S)
26. State commutative law. (U)
27. State associative law. (U)
28. Draw logic diagram to represent associative law. (A)
29. State distributive law. (U)
30. State absorption law. (U)
31. Write the truth table for $X + Y = Y + X$ (A)
32. What is minterm? (U)
33. Find the minterm of $\overline{X}\overline{Y}Z$ (A)
34. What is maxterm? (U)
35. Find the maxterm of $X + \overline{Y} + \overline{Z}$ (A)
36. What is canonical form of Boolean expression? (U)
37. Define map rolling. (U)
38. What is K-map? (K)

39. Who introduced K-maps? (U)
40. Write the general K-map for 2 variables X and Y. (A)
41. Find the dual of $A + \bar{A}B = A + B$ (A)
42. Write the complement of $\quad \bar{A}(B\bar{C} + BC)$ (A)
43. Write the complement of $\quad A\bar{B} + \bar{C}D$ (A)
44. Write the complement of $\quad \bar{X}\bar{Y} + X\bar{Y}Z$ (A)
45. Write the complement of $\quad XY + \bar{Y}Z + Z\bar{Z}$ (A)
46. Write the complement of $\quad X+X\bar{Y} + \bar{X}\bar{Z}$ (A)

Two marks questions
1. What is tautology and fallacy? (U)
2. Name the three logical operators. (U)
3. Write the truth table of AND operator. (U)
4. Write the truth table of OR operator. (U)
5. Name the two forms of expressing Boolean functions. (A)
6. Write the truth table to the Boolean expression $\bar{X}\bar{Y} + XY$ (A)
7. Mention the different basic gates. (U)
8. Write the logic symbol and truth table of AND gate. (A)
9. Write the logic symbol and truth table of OR gate. (A)
10. Write the postulates of complement rules. (U)
11. Prove that $0 + X = X$ using proof by perfect induction method. (S)
12. Prove that $1 + X = 1$ using proof by perfect induction method. (S)
13. Prove that $0 \cdot X = 0$ using proof by perfect induction method. (S)
14. Prove that $1 \cdot X = X$ using proof by perfect induction method. (S)
15. Prove that $\quad X + \bar{X} = 1$ (S)
16. Prove that $\quad X \cdot \bar{X} = 0$ (S)
17. Prove complementarity law using truth table. (S)
18. Write the truth table for $X \cdot Y = Y \cdot X$ (A)
19. Write the truth table for $X + Y = Y + X$ (A)
20. State and prove commutative law. (U)
21. Prove algebraically $X + XY = X$ (S)
22. Draw logic diagram for $X(Y + Z) = XY + XZ$ (S)
23. Prove algebraically $X + \bar{X}Y = X + Y$ (S)
24. Prove that $X + \bar{X}Y = X + Y$ using truth table. (A)
25. Prove algebraically $X(X + Y) = X$ (S)
26. State and prove indempotence law. (S)
27. State and prove involution law. (S)
28. Prove complementarity law. (S)
29. Prove commutative law. (S)
30. Prove that $X + XY = X$ using truth table. (S)
31. The following input expression ABCD = 0010, ABCD = 1100 and ABCD = 1110.
    Write SOP expression. (A)

32. Simplify the Boolean expression $X + \bar{X}Y + \bar{Y} + (X + \bar{Y})\,\bar{X}Y$ (S)
33. Simplify: $AB + A\bar{B} + \bar{A}C + \bar{A}\bar{C}$ (S)
34. Convert the expression $A\bar{B}\,(\bar{B} + \bar{C})$ into canonical sum-of-product form.   (S)
35. Simplify: $XY + XYZ + XY\bar{Z} + X\bar{Z}Y$ (S)

Three marks questions:

1. Write any three basic postulates of Boolean algebra.   (U)
2. State and prove any three theorems of Boolean algebra.   (U)
3. Write the principles of duality theorems.   (U)
4. Write the properties of 0 and 1 and prove them.   (U)
5. Prove that $X + (Y + Z) = (X + Y) + Z$ (S)
6. Prove algebraically that $X + (Y + Z) = (X + Y) + Z$ (S)
7. State and prove associative law and commutative law.   (U)
8. Write the truth table for $X + YZ = (X + Y)(X + Z)$ (U)
9. State and prove distributive law.   (U)
10. State and prove absorption law.   (U)
11. Write the circuit diagram for $X + \bar{X} = 1$ and $X \cdot \bar{X} = 0$.   (S)
12. Prove that $X \cdot (Y \cdot Z) = (X \cdot Y) \cdot Z$ (S)
13. Prove that $X\,(Y + Z) = XY + XZ$ (S)
14. Prove that $X + YZ = (X + Y)(X + Z)$ (S)
15. Explain with an example how to express a Boolean function in its sum-of-products form.   (U)
16. Explain with an example how to express a Boolean function in its products-of-sums form.   (U)
17. Construct a truth table for minterms and maxterms of three variables and designate the terms.   (U)
18. Draw K-map using following : $F(X, Y, Z) = \bar{X}\bar{Y}\bar{Z} + \bar{X}\bar{Y}Z + \bar{X}YZ$ (A)
19. Convert $F(X, Y, Z) = m_0 + m_1 + m_2 + m_5$ to canonical sum-of-product form.   (A)
20. Convert $F(X, Y, Z) = M(0, 1, 4, 5, 7)$ to canonical product-of-sum form.   (A)
21. Convert $F(X, Y, Z) = M(0, 2, 4, 5)$ to canonical product-of-sum form.   (A)
22. Reduce $\bar{X}\bar{Y} + \bar{X} + XY$ (A)
23. Reduce $\bar{X}\bar{Y}\bar{Z} + \bar{X}Y\bar{Z} + X\bar{Y}\bar{Z} + XY\bar{Z}$ (A)
24. Reduce the Boolean expression to the simplest form $A(B + C\,(\overline{AB + AC}\,)$ (A)
25. A truth table has output 1 for each of these inputs ABCD = 0011, ABCD = 0101, ABCD = 1000
    what are the fundamental products and write minterm expression.   (A)
26. Construct a Boolean function of three variables X, Y and Z that has an output 1
    when exactly two of X, Y and Z are having values 0, and an output 0 in all other cases.   (A)
27. Write the steps involved in minterm expansion of expression.   (S)
28. Write the truth table 3 input variable minterm.   (S)
29. Write the truth table 3 input variable maxterm.   (S)
30. Convert $F(X, Y, Z) = X + \bar{X}Y + XZ$ to canonical sum-of-product form.   (A)
31. Convert the expression $YZ + X\bar{Y}$ to canonical sum-of-product form.   (A)
32. Convert the expression $(A + C)\,(C + D)$ to canonical product-of-sum form.   (A)
33. Convert the expression $(X + Y)(Y + Z)(X + Z)$ to canonical product-of-sum form.   (A)
34. Expand the expression $F(X, Y, Z) = \pi(0, 1, 2, 4, 5)$ (A)

35. Draw a general K-map of 3 variables A, B and C. (U)
36. Draw a general K-map of 4 variables W, X, Y and Z. (U)

Five marks questions:
1. State and prove Indempotence laws. (K)
2. State and prove De Morgan's first theorem. (U)
3. State and prove absorption laws of Boolean algebra. (U)
4. Simplify using laws of Boolean algebra F = XY + XZ + XYZ (U)
5. Given the Boolean function F(X, Y, Z) = m (0, 2, 4, 5, 6) reduce it using K-map. (A)
6. Given Boolean function F(A, B, C, D) = $\sum$(5, 6, 7, 8, 9, 10, 14) reduce the function F using K-map.
   Write a logic gate diagram for the reduced SOP expression. (S)
7. Given Boolean function F(A, B, C, D) = $\sum$(0, 2, 7, 8, 10, 15) reduce the function F using K-map. (S)
8. Given Boolean function F(A, B, C, D) = $\sum$(7, 9, 10, 11, 12, 13, 14) reduce the function F using K-map. (S)
9. Given Boolean function F(W, X, Y, Z) = $\sum$(0, 4, 8, 12) reduce the function F using K-map. (S)
10. Given Boolean function F(A, B, C, D) = $\sum$(0, 4, 8, 9, 10, 11, 12, 13, 15)
    reduce the function F using K-map. (S)
11. Given Boolean function F(A, B, C, D) = $m_0 + m_1 + m_2 + m_3 + m_4 + m_5 + m_8 + m_9 + m_{10} + m_{11} + m_{13} + m_{15}$
    reduce the function F using K-map. (S)
12. Given Boolean function F(A, B, C, D) = $m_0 + m_1 + m_2 + m_6 + m_8 + m_9 + m_{10}$ reduce the
    function F using K-map. (S)
13. Given Boolean function F(W, X, Y, Z) = $m_0 + m_1 + m_2 + m_3 + m_4 + m_5 + m_6 + m_7 + m_8 + m_9 + m_{10} + m_{11}$
    reduce using K-map. (S)
14. Reduce the Boolean expression using K-map:
    F(A, B, C, D) = $m_1 + m_2 + m_3 + m_4 + m_5 + m_6 + m_7 + m_9 + m_{11} + m_{12} + m_{13} + m_{14} + m_{15}$ (S)
15. Using K-maps, simplify the expression F(W, X, Y, Z) = $m_1 + m_3 + m_5 + m_6 + m_7 + m_9 + m_{11} + m_{13}$ (S)
16. Simplify the following Boolean expression using K-map :
    F(A, B, C, D) = $\overline{A}\overline{B}CD + \overline{A}BCD + ABCD + A\overline{B}CD + AB\overline{C}D + ABCD + ABC\overline{D}$ (S)
17. Given the Boolean function F(W, X, Y, Z) = $\sum$(0, 1, 2, 3, 5, 7, 8, 9, 10, 11, 13, 15). Reduce it by using
    Karnaugh map. (S)
18. Given the Boolean function F(W, X, Y, Z) = $\sum$(0, 1, 2, 3, 4, 6, 8, 10, 12, 14). Reduce it by using K-map. (S)
19. Given the Boolean function F(A, B, C, D) = $\sum$(1, 3, 4, 5, 6, 7, 9, 11, 12, 13, 14, 15). Reduce it by using
    Karnaugh map. (S)
20. Given the Boolean function F(W, X, Y, Z) = $\sum$(0, 2, 3, 4, 7, 8, 11, 12)
    Reduce it by using Karnaugh map. (S)
21. Simplify the Boolean expression using K-map:
    F(A, B, C, D) = $m_1 + m_3 + m_4 + m_5 + m_7 + m_8 + m_9 + m_{14} + m_{15}$ (S)
22. Simplify the Boolean expression using K-map:
    F(W, X, Y, Z) = $m_0 + m_2 + m_5 + m_7 + m_8 + m_{10} + m_{13} + m_{15}$ (S)
23. Given Boolean function F(A, B, C, D) =π (0, 2, 4, 6, 8, 10, 14) use K-map to reduce the function F. (S)
24. Simplify the Boolean function using K-map: F(W, X, Y, Z) = π (0, 1, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15) (S)
25. Simplify the Boolean expression using K-map: F(W, X, Y, Z)= π(0, 2, 4, 6, 8, 10, 12, 14) (S)

CHAPTER 3
LOGIC GATES

One mark questions:
1. What is a logic gate? (K)
2. What is truth table? (K)
3. Write the standard symbol for NOT gate. (U)
4. Write the truth table for NOT gate. (U)
5. Which gate is called as inverter? (A)
6. Define AND gate. (U)
7. Write the standard symbol for AND gate. (A)
8. Define OR gate. (U)
9. Write the standard symbol for OR gate. (A)
10. What are universal gates? (U)
11. What is the output of the two input NAND gate for the inputs A=0, B=1? (A)
12. What are the values of the inputs to a three input NAND gate, if its output is 1? (A)
13. What are the values of the inputs to a three input AND gate, if its output is 1? (A)
14. What are the values of the inputs to a three input OR gate, if its output is 0? (A)
15. What are the values of the inputs to three input NAND gate, if its output is 0? (A)
16. What are the values of the inputs to three input NAND gate, if its output is 1? (A)
17. What is NOR gate? (U)
18. Write the standard symbol for NOR gate. (U)
19. What is NAND gate? (U)
20. Write the standard symbol for NAND gate. (A)
21. What is XOR gate? (A)
22. Write the standard symbol for XOR gate. (A)
23. What is XNOR gate? (A)
24. Write the standard symbol for XNOR gate. (A)
25. For the truth table given below, what type of logic gate does the output F represent? (S)

X	Y	F
0	0	1
0	1	1
1	0	1
1	1	0

26. For the truth table given below, what type of logic gate does the output F represent? (S)

X	Y	F
0	0	0
0	1	1
1	0	1
1	1	0

27. For the truth table given below, what type of logic gate does the output X represent?　　　　(S)

X	Y	X
0	0	0
0	1	1
1	0	1
1	1	1

28. For the truth table given below, what type of logic gate does the output X represent?　　　　(S)

X	Y	X
0	0	0
0	1	0
1	0	0
1	1	1

29. For the truth table given below, what type of logic gate does the output X represent?　　　　(S)

X	Y	X
0	0	1
0	1	0
1	0	0
1	1	0

Two marks questions:
1. Mention the types of logic gates.　　　　(K)
2. Mention the Basic logic gates.　　　　(K)
3. Which gates are called universal gates and why?　　　　(S)
4. Mention the derived gates.　　　　(U)
5. Mention different universal gates.　　　　(U)
6. Write the standard symbol and truth table for NOT gate.　　　　(A)
7. Write the standard symbol and truth table for AND gate.　　　　(A)
8. Write the AND gate rule.　　　　(S)
9. Write the standard symbol and truth table for OR gate.　　　　(S)
10. Write the OR gate rule.　　　　(S)
11. Write the standard symbol and truth table for NOR gate.　　　　(S)
12. Write the standard symbol and truth table for NAND gate.　　　　(S)
13. Write the standard symbol and truth table for XOR gate.　　　　(S)
14. Write the standard symbol and truth table for XNOR gate.　　　　(S)

Three Marks questions:
1. Explain NOT gate.　　　　(S)
2. Explain working with AND gate.　　　　(A)
3. Write the truth table of three inputs AND gate.　　　　(S)

4. Explain OR gate. (S)
5. Write the truth table three input variable using OR gate. (S)
6. Explain NOR gate. (S)
7. Write the truth table three input variable using NOR gate. (S)
8. Explain the working of NAND gate. (A)
9. Write the truth table for three input variable using NAND gate. (S)
10. Explain XOR gate. (S)
11. Write the truth table three input variable using XOR gate. (S)
12. Explain XNOR gate. (S)
13. Write the truth table three input variable using XNOR gate. (S)
14. Mention the design rules of NAND-to-NAND logic network. (U)
15. Mention the design rules of NOR-to-NOR logic network. (U)
16. Draw the diagram of a digital circuit for the function : $F(X, Y, Z) = XYZ + XZ + \overline{X}\overline{Y}Z$ (S)
17. Design a circuit to realize the following: $F(A, B, C) = AB + \overline{A}C + \overline{B}\overline{A}C$ (S)
18. Draw the diagram of digital circuit for the function: $F(X, Y, Z) = (X + Y)(X + \overline{Z})(\overline{Y} + Z)$ (S)
19. Draw the diagram of a digital circuit for:
    $F(A, B, C, D) = AB + BC + CD$ using NAND-to-NAND logic. (S)
20. Draw the circuit diagram for $F = A\overline{B}C + \overline{C}B$ using NAND-to-NAND logic only. (S)
21. Draw the diagram of digital circuit for the function $F(X, Y, Z) = YZ + XZ$ using NAND gates only. (S)

Five marks questions:
1. Explain any two basic gates with example and truth table. (K)
2. Explain any two derived gates with truth table. (K)
3. Explain universal gates with truth table. (K)
4. Explain logical AND gate, logical OR gate. (U)
5. Explain logical NOR and logical NAND gates. (U)
6. Explain logical XOR and logical XNOR gates. (U)
7. Draw the diagram of a digital circuit for the following function
    a) $XYZ + XZ + \overline{X}\overline{Y}Z$ b) $AB + A\overline{C} + \overline{B}\overline{A}C$ (S)
8. Realize the basic gates by using only NAND gate. (S)
9. Realize logical NOT gate and logical AND gate using NAND gate. (S)
10. Design to implement logical OR gate and logical AND gate using NOR logical gate. (S)
11. Explain NAND-to-NAND rules and NOR-to-NOR rules of logic network. (U)

CHAPTER 4
DATA STRUCTURES

One mark questions:

1. What is data structure?   (U)
2. What is primitive data structure?   (U)
3. Give an example for primitive data structure.   (U)
4. What is non-primitive data structure?   (U)
5. Give an example for non-primitive data structure.   (U)
6. What is linear data structure?   (U)
7. Give an example for linear data structure.   (U)
8. Define traversing an array.   (U)
9. Define searching.   (U)
10. Define sorting.   (U)
11. Define inserting.   (U)
12. Define deleting.   (U)
13. What is an array?   (U)
14. What is a stack?   (U)
15. What is push in stack?   (U)
16. What is pop in stack?   (U)
17. Which order stack follows?   (U)
18. Give an example for static memory representation.   (U)
19. Give an example for dynamic memory representation.   (U)
20. What is a queue?   (U)
21. Which order does the queue data structure follow?   (U)
22. What is enqueue?   (U)
23. What is dequeue?   (U)
24. What is linked list?   (U)
25. How do we establish linearity in linked list?   (U)
26. Name the type of memory allocation use by the linked list.   (U)
27. What is non-linear data structure?   (U)
28. Give an example for non-linear data structure.   (U)
29. What is a node?   (U)
30. What is parent node?   (U)
31. What is a child node?   (U)
32. What is the height of a tree?   (U)
33. What is the depth of a tree?   (U)
34. What is a root node?   (U)
35. What is internal node?   (U)
36. What is binary tree?   (U)
37. What is a complete tree?   (U)
38. What is a graph?   (U)

39. Name the data structure that is called LIFO list.   (A)
40. Name the data structure that is called FIFO list.   (A)
41. Which operator is used to allocate the memory dynamically?   (A)

Two marks questions:
1. What are the two types of data structures?   (U)
2. Mention the different operations performed on primitive data structure.   (U)
3. What is linear and non-linear data structure?   (U)
4. What is an array? Mention the different types of arrays.   (U)
5. Mention two types of searching techniques.   (U)
6. Write any two applications and arrays.   (A)
7. What are PUSH and POP operations on stacks?   (U)
8. Write the memory representation of queues using arrays.   (A)
9. What is the purpose of new and delete operators?   (U)
10. Mention the various operations performed on stacks.   (A)
11. Mention the various operations performed on queues.   (A)
12. What are enqueue and dequeue in queues?   (A)
13. What are the different types of linked lists?   (A)

Three marks questions:
1. Give the memory representation of one-dimensional array.   (A)
2. Write an algorithm for traversing an array.   (A)
3. Write the memory representation arrays in row-major order.   (A)
4. Write the memory representation arrays in column-major order.   (A)
5. Consider the array A of order 25 x 4 with base value 2000 and one word per
    memory location. Find the memory address of A[12][3] in row-major order.   (A)
6. Consider the array A of order 25x4 with base value 2000 and one word per
    memory location. Find the address of A[12][3] in column-major order.   (A)
7. What are the advantages of arrays?   (A)
8. What are the disadvantages of arrays?   (U)
9. Explain the memory representation stacks using array.   (U)
10. Write an algorithm for push operation.   (U)
11. Write an algorithm for POP operation.   (U)
12. Write any three applications of stacks.   (A)
13. Write any three applications of queues.   (A)
14. Explain the memory representation of queues using array.   (U)
15. Explain types of linked list.   (U)
16. Define the following: a. Tree   b. Graph   c. Root node.   (U)

Five marks questions:
1. What is primitive data structure? Explain the different operations performed
    on primitive data structure.   (U)
2. Explain the different operations performed on linear data structure.   (U)

3. Write an algorithm for searching an element using linear search method.   (A)
4. Write an algorithm for searching an element using binary search method.   (A)
5. Write an algorithm for inserting an element into the array.   (A)
6. Write an algorithm for deleting an element from the array.   (A)
7. Explain the different operations performed on stacks.   (A)
8. Write the applications of stacks.   (A)
9. What is a queue? Explain different types of queues.   (U)
10. Explain the different operations performed on queues.   (U)
11. Write an algorithm to insert an item into the queue.   (A)
12. Write an algorithm to delete an item from the queue.   (A)
13. Write the applications of queues.   (A)
14. What are the operations performed on the linked list?   (U)
15. Define the following :   a. Root Node   b. Leaf Node   c. Height
                             d. Depth   e. Internal node.   (U)

CHAPTER 6
BASIC CONCEPTS OF OOP

One mark questions:

1. What is an object? (U)
2. What is a class? (U)
3. What is data abstraction? (U)
4. What is meant by data encapsulation? (U)
5. What are methods? (K)
6. Define inheritance. (U)
7. What is a base class? (U)
8. What is a derived class? (U)
9. What do you mean by overloading? (U)
10. Mention the types of overloading. (K)
11. What is function overloading? (K)
12. Define polymorphism? (K)
13. What is dynamic binding? (K)
14. What is message passing? (K)

Two marks questions:

1. What is base class and derived class? (U)
2. What is super class and subclass? (U)
3. What is the significance of Class in OOP? (U)
4. Explain the term polymorphism. (U)
5. Give any two advantages of OOP. (A)
6. Give any two applications of OOP. (A)
7. Mention any two limitations of OOP. (U)

Three marks questions:

1. Explain any three features of OOP. (U)
2. What is inheritance? Mention its types. (U)
3. Define overloading. Mention its types. (U)
4. Mention any three High level languages that follow the OOP. (U)
5. Mention any three advantages of OOP. (A)
6. Differentiate between class and objects. (A)
7. Give any three applications of OOP. (A)
8. Write the limitations of OOP. (A)

Five marks questions:

1. Explain any five characteristics /features/ basic concepts of OOP. (U)
2. Define: a. Object b. Class c. Data abstraction d. data encapsulation e. Polymorphism (U)
3. What are the advantages OOP over earlier programming methods? (U)
4. Define OOP. Write the limitations of OOP. (U)
5. Mention the different applications of OOP. (A)

6.   What are the advantages of OOP over procedural programming?   (U)

CHAPTER 7
CLASSES AND OBJECTS

One mark questions:

1. What is an object?   (K)
2. What is a class?   (K)
3. What does the class definition specify?   (S)
4. What does the class declaration specify?   (S)
5. Why are access specifier used?   (U)
6. Mention any one access specifier?   (U)
7. Which is the default access specifier?   (U)
8. Which operator is used to access members of a class?   (U)
9. Which type of data members can be accessed outside the class?   (U)
10. What is the use/significance of scope resolution operator?   (U)
11. What is an array of objects?   (U)
12. Can an array be a member of a class?   (U)
13. What are data members?   (U)
14. What is the use of member-functions?   (U)
15. What are access specifiers?   (U)
16. How do you access a member function of a class?   (U)
17. What are class instances called as?   (U)
18. Write the syntax to declare an object of a class.   (U)
19. Give an example for object declaration.   (U)

Two marks questions:

1. What is the difference between class definition and class declaration?   (U)
2. Write the syntax of class definition.   (U)
3. Why are access specifiers used? Mention the different access specifiers.   (U)
4. How do you access the class member? Explain with syntax.   (U)
5. Describe the significance of scope resolution operator.   (U)
6. How do you define a member function outside the class definition? Write the syntax. (U)
7. Describe how to create an object with syntax and example.   (U)
8. Explain with suitable example how arrays can be used as data member of a class.   (U)
9. Discuss private access specifier.   (K)
10. Explain public access specifier with example.   (K)
11. Explain protected access specifier.   (K)
12. How are objects passed as an argument to a function? Give an example.   (A)
13. What are member functions? Name two methods to define member functions.   (U)
14. Give an example to define a member function inside the class.   (U)
15. Give an example to define a member function outside the class.   (U)
16. Explain array of objects with an example.   (U)
17. How do you access the class members? Explain with syntax and example.   (U)

18. Write the characteristics of a member function defined outside the class.   (K)
19. What is the significance of a class in OOP?   (U)
20. How do you define an array of objects?   (U)
21. Explain how to define objects of a class with example.   (U)
22. Write the difference between class definition and class declaration.   (U)

Five marks questions:
 1. Explain the class definition with syntax and example.   (U)
 2. Explain the access specifiers with example.   (U)
 3. How do we define member functions? Explain any one with example.   (U)
 4. Explain how do we define member function inside the class definition. Give example.   (U)
 5. Explain how do we define member function outside the class definition. Give example. (U)
 6. What are member functions? Write the characteristics of member functions.   (U)
 7. How do you create an object of a class? Explain with a programming example.   (U)
 8. Explain arrays as member of the class with suitable programming example.   (U)
 9. What is array of objects? Explain with an example.   (U)
10. Describe how the objects can be used as function arguments.   (U)

CHAPTER 8
FUNCTION OVERLOADING AND MEMBER FUNCTIONS

One mark questions:

1. What is function overloading?   (U)
2. What is polymorphism?   (U)
3. Mention any one advantage of function overloading.   (U)
4. How does the compiler distinguish between overloaded functions?   (U)
5. Define compile-time polymorphism.   (U)
6. What is the other name for function overloading?   (U)
7. Mention any one limitation of function overloading.   (U)
8. What is inline function?   (U)
9. Write any one advantage of inline functions.   (U)
10. What is the disadvantage of an inline function?   (U)
11. Mention any one limitation of inline function.   (U)
12. What is a friend function?   (U)
13. How do you declare a friend function?   (U)
14. How do you identify whether the function is inline function?   (U)
15. Write an example to declare friend function.   (U)
16. How does a friend function access the data member?   (U)
17. Where do you declare a friend function?   (U)

Two marks questions:

1. Write any two needs of function overloading.   (A)
2. What are the limitations of overloading?   (U)
3. Give two reasons when inline functions may not work?   (S)
4. Write any two characteristics of friend functions.   (U)
5. Write the syntax of a friend function.   (U)
6. When does the inline function not process?   (A)

Three marks questions:

1. Why do we need function overloading?   (A)
2. Briefly explain inline function.   (U)
3. What are the advantages of inline functions?   (U)
4. What is friend function? Write the syntax of a friend function.   (U)
5. What is the need of having a friend function?   (A)
6. Why inline function may not work sometimes?   (A)

Five marks questions:

1. What is function overloading? Mention its advantages.   (U)
2. What is function overloading? Write the need for function overloading.   (U)
3. What is function overloading? Explain with a programming example.   (U)
4. Explain with a programming example to overload a function with different number of arguments.   (U)

5. Explain with a programming example to overload a function with different data type of arguments. (U)
6. What is an inline function? Explain with programming example. (U)
7. What is inline function? Write the advantages of inline functions. (U)
8. What is a friend function? What are the characteristics of a friend function? (U)
9. Explain friend function with syntax and example. (U)

CHAPTER 9
CONSTRUCTORS AND DESTRUCTORS

One marks questions:

1. What is a constructor?   (U)
2. What is the need of constructors?   (U)
3. Name the access specifier used to declare a constructor?   (U)
4. How many types of constructors are there?   (U)
5. What is a default constructor?   (U)
6. What is a zero argument constructor?   (U)
7. What is the drawback of default constructor?   (U)
8. What is a parameterized constructor?   (U)
9. Write any one feature of parameterized constructor.   (U)
10. Name any one method to invoke parameterized constructors.   (U)
11. How do we call a constructor explicitly?   (S)
12. How do we call a constructor implicitly?   (S)
13. When is = (Assignment) used with constructor?   (U)
14. What is a copy constructor?   (U)
15. Write the syntax of declaration of copy constructor.   (U)
16. What is meant by constructor overloading?   (U)
17. What is a destructor?   (U)
18. Which operator is used with destructor?   (U)
19. Give one difference between default and parameterized constructors.   (U)

Two marks questions:

1. What is a constructor? Mention its types.   (U)
2. Write the features of default constructors.   (U)
3. Mention the disadvantages of default constructors.   (U)
4. What are parameterized constructors? How are they invoked?   (U)
5. Write the features of parameterized constructors.   (U)
6. When do you use the copy constructor?   (U)
7. Write the features of copy constructor.   (U)
8. Why are constructors needed in a program? Justify.   (A)
9. Write the syntax and example of default constructor.   (U)
10. Which are the different methods to invoke parameterized constructor?   (U)
11. Write an example to show the use of parameterized constructor through explicit call.   (U)
12. When is copy constructor used in a program?   (U)
13. Write syntax and example of copy constructor.   (U)
14. Write short notes on constructor overloading.   (U)
15. Why are destructors used?   (U)
16. Write the syntax of destructors.   (U)
17. Write down the features of destructors.   (U)

18. Give an example for destructors.						(U)

Three marks questions:
1.	Write any three rules to define constructors.				(U)
2.	Write the features of default constructors.				(U)
3.	What are parameterized constructors? How are they invoked?		(U)
4.	Write the features of parameterized constructors.			(U)
5.	When do you use the copy constructor?				(U)
6.	Write the example to declare the constructor inside the class definition.	(U)
7.	What is default constructor? Write its syntax and example.		(U)
8.	Which are the different methods to invoke parameterized constructor?	(U)
9.	Write an example to show the use of parameterized constructor through explicit call.	(U)
10.	When is copy constructor used in a program? Give an example.		(U)
11.	Write short notes on constructor overloading.				(U)
12.	Write a short note on destructors.					(U)

Five marks questions:
1.	Write the rules to be followed while creating constructor? Give example	(U)
2.	What are constructors? Explain any one type with example.		(U)
3.	What are the different types of constructors? Explain anyone.		(U)
4.	What is a default constructor? Explain with syntax and an example.	(K)
5.	Explain parameterized constructor with programming example.		(U)
6.	Illustrate how to invoke parameterized constructor explicitly.		(U)
7.	Illustrate how the parameterized constructor is used with implicitly.	(K)
8.	With an example show how constructors are used with an = operator.	(U)
9.	Explain copy constructor with an example.				(U)
10.	Explain destructors with syntax and an example.			(U)
11.	Explain the constructor overloading with a programming example.	(S)

CHAPTER 10
INHERITANCE

One marks questions:

1.	What is inheritance?	(U)
2.	How is inheritance implemented in C++?	(U)
3.	What is a base class?	(U)
4.	What is derived class?	(U)
5.	Give any one advantage of inheritance?	(U)
6.	What is singe level inheritance?	(U)
7.	What is multilevel inheritance?	(U)
8.	What is hierarchical inheritance?	(U)
9.	What is hybrid inheritance?	(U)
10.	What is multiple inheritance?	(U)
11.	When is it necessary to use inheritance?	(A)
12.	What is visibility mode?	(U)
13.	What is a super class?	(U)
14.	What is a subclass?	(U)

Two marks questions:

1.	Write any two advantages of inheritance.	(U)
2.	Mention any two types of inheritance?	(U)
3.	What is single inheritance? Give an example.	(U)
4.	What is multilevel inheritance? Give an example.	(U)
5.	What is hierarchical inheritance? Give an example.	(U)
6.	What is hybrid inheritance? Give an example.	(U)
7.	What is multiple inheritance? Give an example.	(U)
8.	Write the syntax to define a derived class.	(U)

Three marks questions:

1.	Write any three advantages of inheritance.	(U)
2.	Mention any three types of inheritance?	(U)
3.	Mention the types of inheritance. Explain any one.	(K)
4.	Write the syntax and example to define a derived class.	(U)
5.	Write an example for the use of constructors in single level inheritance.	(A)
6.	Explain public inheritance.	(U)
7.	Explain private inheritance.	(U)
8.	Explain protected inheritance.	(U)

Five marks questions:

1.	Explain the different types of inheritance.	(U)
2.	What are the advantages of inheritance?	(U)
3.	What is visibility mode? Explain private and public inheritance.	(A)

4. What is inheritance? Explain any two types of inheritance. (U)
5. What is inheritance? Explain multiple and multilevel inheritance. (U)
6. What is inheritance? Explain any hierarchical and hybrid inheritance. (U)

CHAPTER 11
POINTERS

One marks questions:

1. What do you mean by a pointer?   (K)
2. Give any one advantage of pointer?   (U)
3. Give the declaration of a pointer?   (U)
4. Which is address-of operator?   (U)
5. Which is the pointer operator?   (K)
6. How do you initialize pointer?   (K)
7. What is static memory allocation?   (U)
8. What is dynamic memory allocation?   (U)
9. What is a free-store?   (U)
10. What is the use of new operator in C++?   (U)
11. What is the use of delete operator in C++?   (U)
12. Why are pointer used?   (U)
13. What is the size of a pointer variable?   (A)
14. What is the other name for pointer operator?   (A)
15. What does a pointer variable store?   (A)
16. Under what circumstances we can subtract one pointer from another?   (A)
17. How do you access an array through pointers?   (K)
18. float a;   p=&a;   What is the size of p?   (A)

Two marks questions:

1. What is a pointer? Give the declaration of a pointer.   (U)
2. Give any two advantages of pointers?   (A)
3. What is address-of operator? Give example.   (U)
4. What is pointer operator? Give example.   (U)
5. How do you declare a pointer? Give example.   (U)
6. How do you initialize pointer? Give example.   (U)
7. Give any two differences between static and dynamic memory allocation.   (U)
8. Briefly explain static memory allocation.   (A)
9. Briefly explain dynamic memory allocation.   (A)
10. What is the use of NEW and DELETE operators?   (U)
11. What is an array of pointers? Give example.   (U)
12. What is new operator in C++? Give example.   (S)
13. What is delete operator in C++? Give example.   (S)
14. What is the relationship between array and pointers?   (A)
15. What is the relationship between string and pointers?   (A)
16. What is the relationship between object and pointers?   (U)
17. What is memory leak?   (U)
18. Name any two arithmetic operations that can be performed on pointers.   (U)

19. Give any two arithmetic operators that can be used on pointers.   (A)
20. What are the operations that cannot be performed on pointers?   (A)

Three marks questions:

1. What is a pointer? Give the declaration and initialization of a pointer.   (U)
2. Give any three advantages of pointers?   (A)
3. Write any three operations that can be performed on pointers.   (A)
4. Give any three differences between static and dynamic memory allocation.   (A)
5. Briefly explain static memory allocation.   (A)
6. Briefly explain dynamic memory allocation.   (A)
7. What is an array of pointers? Explain with an example.   (U)
8. What is the relationship between array and pointers?   (U)
9. What is the relationship between string and pointers?   (U)
10. What is the relationship between object and pointers?   (U)
11. Give any three arithmetic operators that can be used on pointers.   (A)
12. What are the operations that cannot be performed on pointers?   (A)

Five marks questions:

1. Write the advantages of pointers?   (A)
2. Explain pointer and address-of operators with suitable programming example.   (S)
3. Explain the relationship between pointers and arrays with suitable programming example. (S)
4. Explain the relationship between pointers and strings with suitable programming example. (S)
5. Explain pass-by-reference-with suitable example.   (A)
6. Explain pass-by-pointer with suitable example.   (A)

CHAPTER 12
DATA FILE HANDLING

One marks questions:

1. What is a stream?   (U)
2. Name the streams generally used for file I/O.   (U)
3. What are output streams?   (U)
4. What are input streams?   (U)
5. What is a data file?   (U)
6. Write the member functions belonging to fstream class.   (U)
7. What is ifstream class?   (U)
8. What is ofstream class?   (U)
9. Write any one member function belong to ofstream class.   (U)
10. Write any one member function belong to ifstream class.   (U)
11. Name the stream class for file input in C++.   (U)
12. Name the stream class for file output in C++.   (U)
13. Mention the types of file.   (U)
14. What is text file?   (U)
15. What is binary file?   (U)
16. What is the use of ios :: in?   (U)
17. What is the use of ios::out?   (U)
18. What is the use of ios::app?   (U)
19. What is the use of write( ) function?   (U)
20. What is the use of writeln( ) function?   (U)
21. What is the use of get( ) function?   (U)
22. What is the use of put( ) function?   (U)
23. What is the use of getline( ) function?   (U)
24. What is the use of read( ) function?   (U)
25. What is the use of seekp( ) function?   (U)
26. What is the use of seek( ) function?   (U)
27. What is the use of eof( ) function?   (U)

Two marks questions:

1. Name the streams generally used for file I/O.   (U)
2. What are input and output streams?   (U)
3. Mention the methods of opening file within C++.   (U)
4. Write the member functions belong to fstream class.   (U)
5. Differentiate between ifstream and ofstream classes.   (K)
6. Differentiate between read( ) and write( ) functions.   (K)
7. Differentiate between get( ) and getline( ) functions.   (K)
8. Write the member functions associated with ofstream class.   (U)
9. Write the member functions belong to ifstream class.   (U)

10. Name the stream classes supported by C++ for file input and output. (A)
11. What are the advantages of saving data in binary file? (U)
12. What are the advantages of saving data in Text file? (U)
13. Which are the character I/O operations used in files? (U)
14. Why are get() and put()functions used? (U)
15. What is the use of seekg( ) and seekp() functions? (U)
16. Why are tellg( ) and tellp( ) member functions used? (A)
17. What is significance of fsream.h header file? (A)
18. Differentiate between ifstream and ofstream classes. (K)
19. Explain any two file modes. (U)
20. Differentiate between ios::in and ios::out. (U)

Three marks questions:
1. What is a stream? Name the streams generally used for file I/O. (U)
2. Write the member functions belong to fstream class. (U)
3. Explain: a. get( )   b. getline( )   c. read( ) (U)
4. Mention the three modes of opening a file. (U)
5. Explain get( ) in data files. (U)
6. Explain put( ) in data files. (U)
7. Explain write( ) member function. (U)
8. Explain read( ) member function. (U)
9. Explain close( ) member function. (U)
10. Write the syntax and example of close( ). (U)
11. Explain different file modes. (K)

Five marks questions:
1. What is a data file? Explain different types of data files. (U)
2. Explain input and output operations on text files. (U)
3. What are basic operations on binary files in C++? (U)
4. What is a file pointer? Explain the different member functions
   to manipulate data files. (A)
5. Define the following terms: a. get( )   b. getline( )   c. read( )
                                 d.   write( )   e.   put( ) (U)
6. Define the following terms: a. eof( )   b. seekg( )   c. seekp( )
                                 d.   tellg( )   e.   tellp( ) (U)

CHAPTER 13
DATABASE MANAGEMENT SYSTEM

One mark questions:

1. Define data. (U)
2. What is information? (U)
3. What is a file? (U)
4. What is a database? (U)
5. Define tuple. (U)
6. What is a domain? (U)
7. What is DBMS? (U)
8. Name different RDBMS software's. (U)
9. Define data abstraction. (U)
10. Name any one DBMS user. (A)
11. Define data independence. (U)
12. What is serial file organization? (U)
13. What is sequential file organization? (U)
14. What is ISAM? (U)
15. What is logical one-tier architecture? (U)
16. Define a database model? (U)
17. How is the data organized in hierarchical data model? (U)
18. How is the data organized in network data model? (A)
19. How is the data organized in relational data model? (A)
20. What is root node? (U)
21. What is record type? (U)
22. Define an entity. (U)
23. Define an attribute. (U)
24. What is relationship? (U)
25. Write symbol of entity in E-R diagram. (U)
26. Write symbol of attribute in E-R diagram. (U)
27. Write symbol of relationship in E-R diagram. (U)
28. Define cardinality. (U)
29. What is generalization? (U)
30. What is specialization? (U)
31. What is aggregation? (U)
32. Define a key. (U)
33. Define a primary key. (U)
34. Define candidate key. (U)
35. Define alternate key. (U)
36. Define foreign key. (U)
37. What is data-warehouse? (K)
38. What is data mining? (K)

Two marks questions:

1. Write any two applications of database. (U)
2. Give the difference between data and information. (U)
3. Write any differences between manual and electronic data processing. (U)
4. Mention stages of data processing cycle. (U)
5. Write any two advantages of DBMS. (U)
6. Mention different DBMS users. (U)
7. Briefly explain serial file organization. (U)
8. Briefly explain sequential file organization. (U)
9. Briefly explain logical two-tier architecture. (U)
10. Write an advantage and disadvantage of hierarchical model. (U)
11. Write an advantage and disadvantage of network model. (U)
12. Give the difference between generalization and specialization. (U)
13. Define primary key and secondary key. (U)
14. Mention the stages of data warehouse. (U)
15. Write any two advantages of data warehouse. (U)
16. Mention the stages of data mining. (U)

Three marks questions:

1. Write any three differences between manual and electronic data processing. (U)
2. Define the following terms:
   a. Data   b. Database   c. Information (U)
3. Explain three levels of data abstraction. (U)
4. Mention different DBMS users. (U)
5. Explain random access file organization. (U)
6. Explain ISAM. (U)
7. Explain database logical architecture. (U)
8. Briefly explain three-tier logical architecture. (U)
9. Briefly explain hierarchical model. (U)
10. Briefly explain network model. (U)
11. Briefly explain relational model in detail. (U)
12. Define entity, attribute and relation with respect to E-R diagram. (U)
13. Write the symbols of entity, attribute and relations. (U)
14. Define: a. Candidate key   b. Alternate key   c. Foreign key (U)
15. Briefly explain the stages of data warehouse. (U)
16. Write any three advantages of data warehouse. (U)
17. Write any three disadvantages of data warehousing. (U)

Five marks questions:

1. Write the different applications of database. (U)
2. Give the differences between manual and electronic data processing. (U)
3. Explain the stages of data processing cycle. (U)

4. What are the advantages of DBMS? (U)
5. What is data abstraction? Explain any two levels of data abstraction. (U)
6. Define and explain data Independence (U)
7. Explain hierarchical data model. (U)
8. Explain network data model. (U)
9. What is data warehouse? Explain the stages of data warehouse. (U)
10. Explain the components of data warehouse. (U)
11. Write the advantages of data warehouse. (U)
12. Explain the stages of data mining. (U)

CHAPTER 14
STRUCTURED QUERY LANGUAGE

One mark questions:

1.	Write anyone RDBMS software.	(U)
2.	What is a query?	(U)
3.	Expand SQL.	(U)
4.	Why is SQL used?	(U)
5.	Expand DDL.	(U)
6.	What is DDL?	(U)
7.	Expand DML.	(U)
8.	What is DML?	(U)
9.	Name the command for data query language.	(U)
10.	What are constraints?	(U)
11.	What is the use of NOT NULL constraint?	(U)
12.	What is the use of unique key?	(U)
13.	Write the syntax of CREATE command.	(U)
14.	Write the syntax of DROP command.	(U)
15.	Write the syntax of INSERT command.	(U)
16.	Write syntax of UPDATE command.	(U)
17.	Write the syntax of DELETE command.	(U)
18.	What is the use of COMMIT command?	(U)
19.	What is the use of GRANT command?	(U)
20.	What are privileges?	(A)
21.	What is dual table in Oracle?	(U)

Two marks questions:

1.	Name the commands of DDL in SQL.	(A)
2.	Give the difference between char and varchar datatypes.	(A)
3.	Write the syntax and example of CREATE command.	(U)
4.	Write the syntax and example of DROP command.	(U)
5.	Write the syntax and example of INSERT command.	(U)
6.	Write the syntax and example of UPDATE command.	(U)
7.	Write the syntax and example of DELETE command.	(U)
8.	Give the difference between DROP and DELETE commands.	(U)
9.	Give the difference between ALTER and UPDATE commands.	(U)
10.	Write the syntax and example of SELECT command.	(U)
11.	What are ORDERBY and GROUPBY clauses in SQL?	(U)
12.	What is the use of GRANT and REVOKE commands.	(U)
13.	Write any two single-row built-in functions in SQL.	(U)
14.	Write any two group built-in functions in SQL.	(U)
15.	Give an example of dual table in SQL.	(U)

Three marks questions:

1. Write any three functions of DDL.   (U)
2. Define the basic commands of DDL.   (U)
3. Write the syntax for basic commands of DDL.   (K)
4. Define the basic commands of DML.   (U)
5. Write the syntax for basic commands of DML.   (K)
6. Explain any three data types used SQL.   (U)
7. Explain any three arithmetic operators used in SQL.   (U)
8. Explain any three comparison operators used in SQL   (U)
9. Explain any three logical operators used in SQL   (U)
10. Explain any three group functions in SQL.   (K)
11. Explain any three single-row functions.   (K)

Three marks questions:

1. Explain the functions of DDL.   (U)
2. Explain the arithmetic operators of SQL with suitable example. (A)
3. Explain the comparison operators of SQL with suitable example. (S)
4. Explain the logical operators of SQL with suitable example. (S)

Five marks questions:

1. Explain SQL constraints.   (S)
2. What is DML? Explain the different DML commands with an example (S)
3. Explain group functions of SQL.   (U)
4. Write the differences between order by and Group by with examples (S)

CHAPTER 15
COMPUTER NETWORK

One mark questions:

1. Define computer network. (U)
2. What is ARPANET? (U)
3. Expand ARPANET. (U)
4. Define protocol. (A)
5. What is TCP/IP? (U)
6. Expand TCP/IP. (U)
7. Expand HTTP. (U)
8. What is FTP? (U)
9. Expand FTP. (U)
10. Define SMTP. (U)
11. Define the term workstations (nodes). (U)
12. What is server? (U)
13. What is LAN? (U)
14. What is MAN? (U)
15. What is WAN? (U)
16. What is topology of networking? (U)
17. Write any one advantage of star topology. (U)
18. Write any one advantage of ring topology. (U)
19. Define Bandwidth. (U)
20. What is radio wave? (U)
21. What is transmitter? (U)
22. What is receiver? (U)
23. What is circuit switching? (U)
24. What is simplex communication mode? (U)
25. What is half duplex communication mode? (U)
26. What is full duplex communication mode? (U)
27. Give an example for simplex communication mode. (U)
28. Give an example for half duplex communication mode. (U)
29. Give an example for full duplex communication mode. (U)
30. What is data communication? (U)
31. What is the use of modem? (U)
32. What is a hub? (U)
33. What is a bridge? (U)
34. What is mobile computing? (U)
35. What is SIM card? (U)
36. What is SMS? (U)
37. Expand Wi-Fi. (U)
38. What is chatting? (U)

39.	What is video conference?	(U)
40.	What is network security?	(U)
41.	What are Cookies?	(U)
42.	What are Hackers?	(U)
43.	What is cyber law?	(U)
44.	What is a virus?	(U)
45.	Name any one antivirus software.	(U)

Two mark questions:

1.	Mention the advantages or goals of networking.	(U)
2.	Mention the disadvantages of networks.	(U)
3.	Mention the needs or service of networks.	(A)
4.	Briefly explain HTTP.	(U)
5.	Briefly explain FTP.	(U)
6.	Write any two advantages of FTP.	(A)
7.	Expand SLIP and PPP.	(A)
8.	Differentiate between dedicated and non-dedicated server.	(A)
9.	Write any two differences between LAN and WAN.A	(U)
10.	Explain ring topology.	(U)
11.	Explain star topology.	(U)
12.	Explain linear bus topology.	(U)
13.	Mention the types of cables used in networking?	(U)
14.	Mention two types of twisted pair cables.	(U)
15.	Explain the types of co-axial cable.	(U)
16.	Write the differences between unshielded twisted and shielded twisted pairs.	(U)
17.	Explain briefly about radio wave?	(U)
18.	What is transmitter and receiver.	(U)
19.	Name the different switching techniques.	(U)
20.	Explain circuit switching.	(U)
21.	Explain message switching.	(U)
22.	Explain packet switching.	(U)
23.	What is the difference between circuit and message switching?	(U)
24.	Define the term repeaters, multiplexers.	(U)
25.	How a router functions?	(U)
26.	Define Gateway.	(U)
27.	Write the difference between gateway and router?	(U)
28.	Define the term SIM and GSM.	(U)
29.	Write the difference between Wifi and Wifi hotspot?	(U)
30.	Mention different protection methods.	(U)
31.	Mention different firewall techniques.	(U)
32.	What are hackers and crackers?	(U)
33.	Classify types of virus.	(U)

34. Write any two virus prevention methods. (U)
35. Mention any two antivirus software. (U)
36. List the characteristics of virus. (U)

Three mark questions

1. Mention different network goals. (U)
2. Explain the needs of networking. (A)
3. Explain TCP / IP. (U)
4. What is server? Explain the types of server. (U)
5. Write any three differences between LAN and W(U)AN.
6. What is topology of networking? Explain ring topology. (U)
7. What is topology of networking? Explain star topology. (U)
8. What is topology of networking? Explain linear bus topology. (U)
9. Explain the different types of cables used in data transmission. (U)
10. What are the advantages of twisted pair cable? (A)
11. Explain switching technique. (U)
12. Explain communication modes. (U)
13. Give the examples for simplex, half duplex and full duplex communication mode. (A)
14. What is modem? Explain its working. (U)
15. Explain any three applications of networking. (A)
16. Compare Wifi, Wifi hotspot and Wi-max. (A)

Five mark questions:

1. What is computer network? Mention different network goals. (U)
2. Mention different network services (need for network). (U)
3. Mention the types of network? Explain any two. (U)
4. What is topology? Explain any two topologies of networking. (U)
5. Explain different network cables. (U)
6. Explain transmission technique/switching technique. (U)
7. Explain various networking devices. (U)
8. Explain the hardware requirement for networking. (U)
9. Define the following:
    a. Modem   b. Hub   c. Repeater   d. Bridge   e. Router   (U)
10. Explain the application of networking in detail. (U)
11. Explain protection methods or network security. (U)
12. What is computer security? Explain different protection method. (U)
13. What is a virus? Explain different types of virus. (U)
14. Explain the measures to prevent virus. (U)

CHAPTER 16
INTERNET AND OPEN SOURCE SOFTWARE

One mark questions:

1. What is open source software?   (U)
2. What is free software?   (U)
3. What is FLOSS?   (U)
4. What is FSF?   (U)
5. What is W3C?   (U)
6. What is proprietary software?   (U)
7. What is freeware?   (U)
8. What is shareware?   (U)
9. Expand WWW.   (U)
10. What is WWW?   (U)
11. What is Telnet?   (U)
12. What is WEB Browser?   (U)
13. What is Web Server?   (U)
14. What is Web Page?   (U)
15. Expand URL.   (U)
16. What is E-Commerce?   (U)
17. Expand IPR.   (U)

Two mark questions:

1. Write any two criteria of OSS.   (U)
2. What is OSS and Floss?   (U)
3. Mention any two web browsers.   (U)
4. Mention any two types of E-commerce.   (U)
5. Write any two applications of E-commerce.   (U)
6. Write any two services of E-commerce.   (U)

Three mark questions:

1. Write any three criteria of open source software.   (U)
2. Briefly explain internet.   (U)
3. Briefly explain Telnet.   (U)
4. Write any three services used in E-commerce.   (U)
5. Explain types of E-commerce.   (U)
6. What are the advantages of E-commerce?   (A)

Five mark questions:

1. Explain open source software.   (U)
2. Define the following:
       a. FLOSS   b. FSF c. Proprietary software   d. Shareware   e. W3C   (K)
3. Explain URL.   (A)

4. What is E-commerce? Explain types of E-commerce.   (U)
5. Write the technologies and services used in E-commerce.   (U)
6. Write any five advantages of E-commerce application.   (U)

CHAPTER 17
WEB DESIGNING

One mark questions:

1. What is HTML?   (U)
2. Expand HTML.   (U)
3. Write any one text formatting tag.   (U)
4. What is the extension name for hypertext markup language?   (U)
5. What is web hosting?   (U)
6. What is free hosting?   (U)
7. What is virtual hosting?   (U)
8. What is dedicated hosting?   (U)
9. What is co-location hosting?   (U)
10. Expand XML.   (U)
11. What is XML?   (U)
12. Expand DHTML.   (U)
13. What is DHTML?   (U)
14. What is web scripting?   (U)

Two marks questions:

1. What is hypertext markup language? Give its extension name.   (U)
2. Write any two text formatting tags.   (U)
3. Explain any two resizing text tags.   (U)
4. Give the types of web hosting.   (U)
5. Write any two features of DHTML.   (U)
6. Mention the types of web scripting.   (U)

Three marks questions:

1. Write the structure of HTML program.   (U)
2. Explain any three text formatting tags.   (U)
3. Explain any three resizing text tags.   (U)
4. Explain any three text layout tags.   (U)
5. What is web hosting? Mention the types of web hosting.   (U)
6. Explain any three types of web hosting.   (U)
7. What is DHTML? Write any two parameters used in DHTML.   (U)
8. Write any three features of DHTML.   (U)

Five marks questions:

1. What is HTML? Explain the structure of HTML.   (A)
2. What is web hosting? Explain the types of web hosting.   (A)
3. What is DHTML? Write the features of DHTML.   (A)
4. Explain web scripting.   (A)