

Sikkim Manipal University B.Sc(IT) C Programming and Data Structures

Part A (One mark questions)

1. The 'C' language is developed by-----

- A) Ken martin
- B) Thomson
- C) Charles babegge
- D) Dennis Ritchie

2. There are ----- number of keywords in 'C' language.

- A) 30
- B) 32
- C) 31
- D) 35

3. ----- is any well-defined computational procedure that takes a value or a set of values as input and produces an output.

- A) Algorithm
- B) Flowchart
- C) Program
- D) process

4. The algorithm should be effective that means it must have -----

- A) basic primitive
- B) basic steps
- C) complex primitive
- D) complex steps

5. Which of these statement is used for multi-way branching.

- A) switch
- B) for
- C) if
- D) auto

6. Which statement is used to end the loop and move the control to the next statement outside the loop.

- A) continue
- B) break
- C) exit
- D) switch

7. Array is also known as _____

- A) keyword

- B) reserved word
- C) subscripted variable
- D) simple variable

8. ----- is the process of re-arranging a given set of objects in a specific order.

- A) searching
- B) instantiation
- C) sorting
- D) swapping

9. Every 'C' program can be thought of as a collection of -----

- A) Keywords
- B) functions.
- C) variables
- D) constants

10. To use the library function atof() which header file must be included in the program ?

- A) math.h
- B) string.h
- C) process.h
- D) conio.h

11. Pointer arithmetic is possible for ----- and -----, but it has no meaning of ----- and -----.

- A) multiplication, division, addition, subtraction
- B) addition, subtraction, multiplication, division
- C) preincrement, predecrement, postincrement, postdecrement
- D) postincrement, postdecrement, preincrement, predecrement

12. ----- is a special type of variable which is used to hold the address of variable.

- A) structure
- B) union
- C) pointer
- D) void

13. which of the following is invalid file open mode ?

- A) wb+
- B) ab+
- C) rb+
- D) wr+

14. Which of these functions allow you to write individual characters to a stream.

- A) fputc()
- B) putc()
- C) both A) and B)
- D) none of these

15. ----- is a representation of data and the operations allowed on that data.

- A) program
- B) data structure

C) data type

D) structure

16. A data structure is said to be ----- if its elements form a sequence.

A) bipolar

B) linear

C) polar

D) scalar

17. A stack is very useful in situations when data have to be stored and then retrieved in the ----- order.

A) same

B) reverse

C) ascending

D) descending

18. ----- is useful in the evaluation of arithmetic expression.

A) stack

B) queue

C) tree

D) Graph

19. which of these principle is used in a stack ?

A) Last in first out

B) First in first out

C) Last in last out

D) None of these

20. A stack is defined formally as a list in which all insertion and deletion are made at -----

A) same time

B) same end

C) different end

D) both A) and B)

21. Linked lists permit insertion and removal of nodes at any point in the list in constant time, but do not allow-----.

A) random access.

B) displaying items

C) searching

D) all of these

22. ----- is a self-referential data type because it contains a pointer or link to another datum of the same type.

A) stack

B) Queue

C) A linked list

D) none of these

23. In a singly linked list the link field of ----- contains null pointer.

A) first node

B) any node

C) middle node

D) last node

24. In ----- the link field of last node contains null pointer.

A) stack

B) queue

C) singly linked list

D) circular linked list

25. A node which has both a parent and at least one child is called-----

A) Non leaf

B) leaf

C) root

D) root

26. A strictly binary tree in which the number of nodes at any level l is -----, the tree is said to be a complete binary tree.

A) 2^{i-1}

B) 2^i-1

C) $2^i - 1$

D) $2^i + 1$

27. In the case of AVL tree , the lookup takes ----- time.

A) $n \log n$

B) $O(\log n)$

C) $O(n \log n)$

D) $\log n$

28. A tree can also be represented using an array, which is called ----- representation

A) asymmetric

B) random

C) symmetric

D) sequential

29. When the edges in a graph have no direction, the graph is called----- graph

A) undirected.

B) simplex

C) duplex

D) nondirected

30. A directed graph is -----if at least two vertices are not connected.

A) strongly disconnected

B) weakly connected

C) weekly disconnected

D) strongly connected

31. The outdegree of a vertex in a digraph is -----

A) number of arcs leaving the vertex.

B) number of arcs entering the vertex

C) total no of vertex connected to that vertex

D) total no of vertex disconnected to that vertex

32. If every vertex of any graph has the same degree, then the graph is called -----

- A) directed graph
- B) undirected graph
- C) regular graph.
- D) subgraph

33. Most of the algorithms studied by computer scientists that solve problems are kinds of -----

-
- A) search algorithms.
 - B) sort algorithms
 - C) data structures
 - D) none of these

34. The set of all possible solutions to a problem is called the -----

- A) Database
- B) data structure
- C) search space
- D) None of these

35. Informed search algorithms use ----- functions to apply knowledge about the structure of the search space to try to reduce the amount of time spent in searching.

- A) built in
- B) heuristic
- C) user defined
- D) Complex

36. The binary search method needs no; more than ----- comparisons.

- A) $\lceil \log_2 n \rceil + 1$
- B) $\log_2 n$
- C) $\lceil \log_2 n \rceil - 1$
- D) $\lceil \log_2 n \rceil + 2$

37. Let $P=50$ after executing the following instruction what will be the value of P and Q.

$Q = P++;$

- A) $P=51$ $Q=50$
- B) $P=51$ $Q=51$
- C) $P=50$ $Q=50$
- D) $P=50$ $Q=51$

38. From the following list Identify a 'C' keyword .

- i) for
- ii) while
- iii) auto
- iv) shortest
- v) long

- A) i), ii) and v)
- B) i) and v)
- C) i) ,iii) and v)
- D) i), ii), iv) and v)

39. The pictorial representation of algorithm is called -----

- A) Dataflow
- B) process flow
- C) Flowchart
- D) processchart

40. The rectangle symbol in the flowchart represents -----

- A) Decision making
- B) start or end of flowchart
- C) Processing
- D) None of these

Part B (Two mark questions)

41. goto statement is ----- statement

- A) conditional control
- B) unconditional control
- C) looping
- D) both A) and C)

42. Which is a entry controlled loop?

- A) do while
- B) switch
- C) continue
- D) while

43. What is array ?

- A) collection of variable of different type.
- B) collection of variable of same type
- C) collection of data objects of same type
- D) collection of data objects of different type

44. C automatically converts any intermediate value to the proper types so that the expression can be evaluated without losing any significance. This conversion is called-----

- A) type casting
- B) swapping
- C) data conversion
- D) instantiation

45. The function fmod(variable/value, variable/value) returns -----

- A) remainder of two floating point value
- B) quotient of two floating point value
- C) remainder of two integer value
- D) quotient of two integer value

46. What is user defined function ?

- A) Function available in header file
- B) function available in 'C' compiler
- C) a function written by the user
- D) either A) or B)

47. The process of allocating memory at run time is called-----

- A) static memory allocation

B) dynamic memory allocation

C) pre memory allocation

D) post memory allocation

48. Which of these functions are used for dynamic memory allocation

A) calloc()

B) realloc

C) malloc()

D) all of these

49. Which of these function is used to read a string from a stream.

A) fgetc()

B) fgetws()

C) getc()

D) fputc()

50. Identify file open function.

A) fopen()

B) freopen()

C) tmpfile()

D) all of these

51. Which of the following is a nonlinear data structure. ?

A) stack

B) queue

C) linked List

D) none of these

52. Which the following is a linear data structure.

A) graph

B) tree

C) linked list

D) none of these

53. Stack can be implemented by using-----

A) arrays

B) structure

C) both A) and B)

D) Queue

54. The process of writing the operators on an expression either before operands or after operands or in between them is called -----

A) Polish Notation

B) Evaluation

C) BST

D) none of these

55. State true or false.

i. Stack works on first in first out principle

ii. Queue works on Last in first out principle

A) true, true

B) false , false

C) true , false

D) false , true

56. Which of these data structure is useful in time sharing systems where many user jobs will be waiting in the system queue for processing.

- A) stack
- B) linked list
- C) Queue
- D) all of these

57. A graph, in which there is exactly one edge between each pair of distinct vertices, is called --
-----.

- A) complete graph.
- B) regular graph
- C) subgraph
- D) digraph

58. ----- of a graph is an undirected tree consisting of only those edges necessary to connect all the nodes in the original graph.

- A) binary tree
- B) DFS tree
- C) BFS tree
- D) spanning tree

59. ----- is an in-place algorithm, but is not a stable sort.

- A) Heap sort
- B) shell sort
- C) quick sort
- D) selection sort

60. ----- is a comparison-based sorting algorithm, and is part of the selection sort family.

- A) Merge sort
- B) Quick sort
- C) Shell sort
- D) Heap sort

Part C (Four mark questions)

61. Find the value of a ,b and c after executing the following conditional expression.

Initially a=10, b=20 ,c=30

$(a > 7) ? b = b + 5 : c = c - 5;$

- A) a=10 b=25 c=30
- B) a=10 b=20 c=25
- C) a=10 b=25 c= 25
- D) a= 7 b=25 c= 25

62. Match the following

1. Flowchart i) decision making
2. Algorithm ii) connector
3. Diamond iii) procedural steps
4. small circle iv) Pictorial representation

- A) 1- ii, 2-iii, 3-iv, 4-i
- B) 1-iii, 2-I, 3-ii, 4-iv

C) 1-iv , 2-I, 3-ii, 4-iii

D) 1-iv, 2-iii 3- i, 4-ii

63. what is the output of the following program ?

```
void main()
{
int i=2;
do
{
printf("%d\t ",i);
i=i+2;
}while(i<20);
}
```

A) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

B) 2 4 6 8 10 12 14 16 18 20

C) 1 3 5 7 9 11 13 15 17 19

D) 2 4 6 8 10 12 14 16 18

64. Following are the four different storage class available in 'C'. Specify their storage accordingly.

Storage class Storage

(Auto)

1

REGISTER

(register)

2

STATIC

(Static)

3

EXTERNAL

(Extern)

4

A) 1=memory 2=cpu register 3= memory 4= memory

B) 1=cpu register 2=memory 3= memory 4= memory

C) 1=memory 2=memory 3= memory 4= cpu register

D) 1=memory 2=memory 3= memory 4= memory

65. Match the following

1. clrscr() i) < math.h>

2. scanf() ii)

3. calloc() iii) < conio.h>

4. floor() iv)

A) 1-iv 2-iii 3-ii 4-i

B) 1-iii 2-iv 3-ii 4-i

C) 1-iii 2-i 3-ii 4-iv

D) 1-iii 2-iv 3-i 4-ii

66. For the input 3 4 5 6 what will the output of the following program.

```

void main()
{
int a[4], *p, i, s=0;
p=&a[0]; /* assignment of pointer */
for(i=0; i<4; i++, p++)
{
printf("Enter value "); scanf("%d", p);
s = s + *p;
}
p--;
for(i=0; i<4; i++)
printf("%d+", *p--);
printf("\nb=%d", s);
getch();
}

```

- A) 3 4 5 6
- B) 6 5 4 3
- C) 2 3 4 5
- D) 4 5 6 7

67. State true or false

- i) Any file may be opened in binary mode
- ii) tmpfile() is a file open function
- iii) The fgetc() and getc() functions are used to read string from a stream
- iv) To close a file use fclose() function.

- A) true, true, true, true
- B) false, true, true, false
- C) true, true, false, false
- D) false, true, true, true

68. State true or false

- i. Array is an example of data structure
- ii. Tree is the linear data structure.
- iii. ADT means Advanced Data Type.
- iv. The proper choice of a data structure can lead to more efficient programs.

- A) true, true, true, false
- B) true, true, true, true
- C) false, true, false, true
- D) true, false, false, true.

69. Convert the following infix expression into postfix notation

$A + (B * C - (D / E ^ F) * G) H$

- A) A B C D E F G H ^ / * - * * +
- B) A B C * D E F ^ / G * - H * +
- C) ^ / * - * * + A B C D E F G H
- D) A H + B C * D E F ^ / G *

70 . State True or False

i. In a queue always elements are inserted from the front end and elements are deleted from the rear end.

ii. A queue can be represented using an array.

iii. In a deque insertions and deletions will be done either at the front end or at the rear end of the queue.

A) false, true, true

B) false, false, true

C) true ,true, false

D) true, true, True

71. State true or false

i. In a circular linked list the link field of the last node contains null value.

ii. In singly linked lists each node contains the address of the first node.

iii. Using singly linked lists and circular lists it is not possible to traverse the list backwards.

A) false, false ,true

B) true, true, true

C) false, true , false

D) false, false, false

72. The ----- traversal of a binary tree can be recursively defined as follows.

1. Process the root Node [N]

2. Traverse the Left subtree in preorder[L]

3. Traverse the Right subtree in preorder [R]

A) preorder

B) postorder

C) inorder

D)outorder

73. Match the following

1. adjacency list i. stack

2. adjacency matrix ii. Queue

3. breadth first traversal iii. Two dimensional array

4. depth first traversal iv. Single dimensional array

A) 1-iii, 2-iv 3-ii 4- i

B) 1-iv 2-iii 3-i 4-ii

C) 1-ii 2-iii 3-iv 4-i

D) 1-ii 2-i 3- iv 4-iii

74. State true or false

1. The file organization and searching method chosen cannot make a substantial difference to an application's performance.

2. Bubble sort has worst-case complexity of $\Theta(n^2)$.

3. Radix sort is a sorting algorithm that sorts integers by processing individual digits.

A) false, true, true

B) true, true, true

C) false, false, true

D) true, true, false

75. State true or false

1. External sorting is required when the data being sorted does not fit into the main memory of a computing device.

2. Merge sort is also one of the 'divide and conquer' class of algorithms.

3. Shell sort is also called CONCATENATE SORT.

A) false, false, false

B) true, true, true

C) false, true, false

D) true, true, false

Answer Keys

Part - A Part - B Part - C

Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key

1 D 21 A 41 B 61 A

2 B 22 C 42 D 62 D

3 A 23 D 43 C 63 D

4 A 24 C 44 A 64 A

5 A 25 A 45 A 65 B

6 B 26 B 46 C 66 B

7 C 27 B 47 B 67 C

8 C 28 D 48 D 68 D

9 B 29 A 49 B 69 B

10 A 30 B 50 D 70 A

11 B 31 A 51 D 71 A

12 C 32 C 52 C 72 A

13 D 33 A 53 C 73 A

14 C 34 C 54 A 74 A

15 B 35 B 55 B 75 D

16 B 36 A 56 C

17 B 37 A 57 A

18 A 38 C 58 D

19 A 39 C 59 A

20 B 40 C 60 D

Sikkim Manipal University B.Sc(IT) Logic Design

Part A (One mark questions)

- _____ is an Example for Octal number
 - [1011.18]₈
 - [457.16]₈
 - 6784
 - [1234.AF]₈
- _____ is the 2's complement of the binary number 1010
 - 0110
 - 1011
 - 1001
 - 0111
- Many mainframe computers, particularly IBM mainframes, use a _____ architecture.
 - little-endian
 - little-Big endian
 - Big - little-endian
 - big-endian
- For the number (432.7)₈, the equivalent binary number is
 - (10001001.111)₂
 - (1000011010.0111)₂
 - (100011010.111)₂
 - (010011010.111)₂
- _____ is an Example for Basic gate
 - XOR gate
 - NAND gate
 - NOR gate
 - AND gate
- The output of a NAND gate is HIGH only when
 - all inputs are Low
 - one or more of its inputs are Low
 - all inputs are High
 - one input is High and other input is Low
- If several different operators appear in a single boolean expression, the result of the expression depends on the _____ of the operators.
 - Precedence
 - priority
 - order
 - None of the above

8. Which one of the following is a Consensus Law?

- A) $x + y = y + x$
- B) $x(yz) = (xy)z$
- C) $xy + x'z + yz = xy + x'z$
- D) $x + (xy) = x$

9. Boolean algebra, is a discrete algebra in which the _____ can have one of two values, either 0 or 1.

- A) variables
- B) constants
- C) circuits
- D) table

10. A minterm has a value of 1 if and only if _____ of its variables are 1.

- A) all the values
- B) one value
- C) two values
- D) only three values

11. Information theory was first developed by _____

- A) Boolean
- B) Shannon,
- C) Marconi
- D) Hartley

12. Implicants that cover as many cells of the map as possible are called_____.

- A) Primary Implicants
- B) Boolean Implicants
- C) Primary cells
- D) Prime implicants.

13. An electronic multiplexer can be considered as a_____, single-output switch.

- A) multiple-input
- B) single input
- C) two input
- D) three input

14. _____ is an example for BCD code

- A)1110
- B)1111
- C)1001
- D) 1101

15. Seven-segment decoder is an example for _____

- A) Sequential circuit
- B) Memory element
- C) Arithmetic circuit
- D) Combinational circuit

16. The drawback of Half adder circuit is that in case of a multibit addition.

- A) It cannot include a carry.
- B) It can include a carry.
- C) It can include a carry only in certain situations.

D) None of the above

17. A circumstance where timing dependencies can briefly cause incorrect output is called a _____.

A) glitch

B) hazard

C) state

D) bistable

18. Which of the following statements is true

A) Flip flop is a bistable device

B) Flip flop is a monostable device

C) Flip flop is a stable device

D) Flip flop is a quasi-stable device

19. A flip flop is a circuit can one bit of information. Hence it can be used as a basic _____

A) Circuit element

B) Combinational element

C) System element

D) Memory element

20. If a trigger is received, the flip-flop outputs change their states according to defined rules, and remain in those states until _____ is received.

A) another trigger

B) another input

C) another clear input

D) None of the above

21. The serial input and outputs of a register can also be connected together to create a _____

A) Left shift register

B) Right shift register

C) Circular shift register.

D) parallel shift register

22. Which of the following statements is false?

A) Shift registers can be used also as a pulse extenders

B) Shift register is a group of flipflops and adders

C) In early computers, shift registers were used to handle data processing

D) bi-directional shift registers allow you to vary the direction of the shift register.

23. One of the first known examples of a shift register was in the Colossus, a code-breaking machine of the _____

A) 1940s.

B) 1960s.

C) 1930s.

D) 1920s.

24. Which of the following statements is true?

A) The purpose of the parallel-in/ parallel-out shift register is to take in parallel data, shift it, then output it serially and reading all the output simultaneously.

B) Shift registers can be used as a level triggering elements

C) In case of SIPO (Serial-In Parallel-Out) shift register, clock is not required to shift the data.

D) The 74LS395 is a parallel-in/ parallel-out shift register with tristate output.

25. A _____ is a special case of shift register, where the output from the last stage is inverted and fed back as input to the first stage.

- A) Ring counter
- B) Synchronous counter
- C) Johnson counters
- D) Decade counter

26. The Reset inputs are _____ and override the clocking signal.

- A) Synchronous
- B) Asynchronous
- C) Select inputs
- D) Recent inputs

27. In ring counter, as the clock, or input, signal is received, the specified state will shift to the next device at a rate of _____

- A) 2 shifts per clock.
- B) 4 shifts per clock.
- C) 3 shifts per clock.
- D) 1 shift per clock.

28. A Modulo-n counter counts from state 0 through state _____ and then cycles back to state 0.

- A) $N+1$.
- B) $N-2$.
- C) $N+2$.
- D) $N-1$.

29. Which of the following statements is false?

- A) A major consequence of the larger scale of integration is the enormous size and complexity of our systems, and the great importance of testing.
- B) For turning traffic and pedestrians crossing the road, only green signal is made available. It means that for the remaining period these signals have to be treated as 'Yellow'
- C) A pole is a set of contacts, the switch's electrical terminals that are connected to and belong to a single circuit, usually a load.
- D) Switching a load on or off from two locations requires two SPDT switches.

30. As far as a switch is concerned, TPST means

- A) Triple Pole System Throw
- B) Triple Pole Single Toggle
- C) Triple Pole Single Throw
- D) Trip Pole Single Throw

31. The switch is referred to as a _____ when abstracted to mathematical form.

- A) Link
- B) Circuit
- C) Connector
- D) Gate

32. A pair of contacts is said to be _____ when there is no space between them, allowing electricity to flow from one to the other.

- A) 'Closed'

- B) 'Opened'
 - C) 'Disconnected'
 - D) None of the above
33. The main uses of DVD are
- A) Audio and video modification
 - B) Video and disk storage
 - C) Video and data storage
 - D) Data and instructions compression
34. POTS stands for
- A) Plain Old Telephone Systems
 - B) Paper one telephone service
 - C) Plain Old Telephone service
 - D) Plain Old Ticket System
35. _____ is the wavelength used by standard DVD lasers.
- A) 820nm
 - B) 620nm
 - C) 650 nm
 - D) 650mm
36. QAM stands for
- A) Quality Amplitude Modulation
 - B) Quadrature Amplitude Modulation
 - C) Quick Amplitude Measurement
 - D) Quadrature Amplitude modification
37. Which of the following statements is false?
- A) Quantization error is due to the finite resolution of the ADC, and is an unavoidable imperfection in all types of ADC.
 - B) All ADCs suffer from linearity errors caused by their physical imperfections, causing their output to deviate from a linear function
 - C) Digital filters can have better properties (sharper roll off, phase) than analog filters,
 - D) A very simple (non-linear) ramp-converter can be implemented with a microcontroller and one resistor and capacitor.
38. The _____ of the converter indicates the number of discrete values it can produce over the range of analog values.
- A) Mid-Tread
 - B) Distribution
 - C) Resolution
 - D) None of the above
39. A _____ oversamples the desired signal by a large factor and filters the desired signal band.
- A) Gamma Delta ADC
 - B) Sigma-Delta ADC
 - C) Gamma Delta DAC
 - D) Sigma-Delta DAC
40. Which of the following statements is true?
- A) The DAC fundamentally converts infinite-precision numbers into a continuously varying

physical quantity.

B) If there is too much noise present in the analog input, it will be possible to accurately resolve beyond a certain number of bits of resolution.

C) The ADC is usually integrated with some memory (RAM), which contains conversion tables for gamma correction, contrast and brightness, to make a device called a ADCRAM.

D) Monotonicity refers to the ability of DACs analog output to increase with an increase in digital code or the converse.

Part B (Two mark questions)

41. The hexadecimal number system consists of

A) The numbers 0 to 9 and A to F only

B) The numbers 0 to 9 and A to E only

C) The numbers 0 to 9 and A to D only

D) The numbers 0 to 8 and A to F only

42. 2's complement of a binary number is obtained by adding

A) 2 to the result of 1's complement of the given binary number

B) 0 to the result of 1's complement of the given binary number

C) $[10]_2$ to the result of 1's complement of the given binary number

D) 1 to the result of 1's complement of the given binary number

43. _____ and _____ gates are called universal gates

A) NAND ,OR

B) NAND ,NOR

C) AND,OR

D) OR ,XOR

44. NOR gate is constructed using _____ and _____ gates

A) AND, NOT

B) OR, AND

C) OR, NOT

D) XOR, NOT

45. Maurice Karnaugh developed Karnaugh maps at Bell Labs in _____ while Studying the application of digital logic to the design of _____ circuits.

A) 1963, logic

B) 1953, digital

C) 1953, telephone

D) 1963, telephone

46. In Quine-McCluskey Method the step 4 is to compare _____ in adjacent block looking for situation in which terms only differ in _____.

A) minterms, two columns

B) maxterms, one column

C) minterms, one column

D) maxterms, two columns

47. Half adder is constructed By using a _____ gate and _____ gate,

A) XOR,AND

B) NOT,AND

C) OR,AND

D) AND,NAND

48. It is important to note that a decoder that contains _____ inputs is also known as a _____

- A) enable, decoder-multiplexer
- B) enable, decoder-demultiplexer
- C) two, priority -demultiplexer
- D) active, decoder-multiplexer

49. Which of the following statements are true

- A) The first electronic flip-flop was invented in 1918 by William Eccles and F. W. Jordan, It was initially called the Eccles-Jordan trigger circuit.
- B) The first electronic flip-flop was invented in 1918 by G. W. Franklin and F. W. Jordan, It was initially called the Franklin -Jordan trigger circuit.
- C) The first electronic flip-flop was invented in 1918 by William Eccles and F. W. Jordan, It was initially called the Eccles-Jordan gate circuit.
- D) The first electronic flip-flop was invented in 1928 by William Eccles and F. W. Jordan, It was initially called the Eccles-Jordan trigger circuit.

50. Find the false statements with respect to characteristics of a memory

- 1. The device must have two stable states
- 2. There must be a way to read the state of the device
- 3. There must be a way to set the state at least once
- 4. The device must not have two stable states
- 5. The device must have no stable states

- A) 1 and 2
- B) 2 and 3
- C) 4 and 5
- D) 2 and 4

51. 74LS395 is a _____ shift register with _____ output

- A) PIPO, tristate
- B) PISO, tristate
- C) SIPO, bistate
- D) SISO, bistate

52. Which of the following statements are true

- 1. Many computer languages include instructions to 'shift right' and 'shift left' the data in a register, effectively dividing by two or multiplying by two for each place shifted.
- 2. 74LS395 clocks data on the level clock.
- 3. 74LS395 clocks data on the negative going clock, which is the high to low transition.
- 4. The XNOR and AND gates are necessary to the parallel-in/ parallel-out shift register

- A) 2 and 4
- B) 1 and 3
- C) 1 and 4
- D) 2 and 3

53. Which of the following statements are true?

- 1. A ring counter is defined as a loop of unstable devices interconnected in such a manner that the devices may be in a specified state at two times.
- 2. The 5-stage circuit uses five flip-flops, and therefore has 32 possible binary states,
- 3. Johnson counters sometimes called "walking ring" counters.

4. counter circuits are digital in nature, and count only in Hexadecimal, binary, octal or sometimes binary coded decimal and they require no clock.

- A) 1, 2 and 4
- B) 2 and 3
- C) 1 and 3
- D) 3 and 4

54. Find the false statements

1. The circuit input may not be normal CLK pulses or pulses from elsewhere in the equipment that would indicate some operation has been changed.
2. In electronics, counters can be implemented quite easily using register-type circuits such as the flip-flop, and a wide variety of designs exist.
3. Many types of counter circuits are available as digital building blocks, for example a number of chips in the 5000 series implement different counters.
4. In some cases, we want a counter that provides individual digit outputs rather than a binary or BCD output.
5. In a ring counter, as the clock, or input, signal is received, the specified state will shift to the next device at a rate of 1 shift per clock, or input, pulse.

- A) 1, 3 and 5
- B) 2 and 3
- C) 1 and 3
- D) 2, 4 and 5

55. In applications where _____ options are required mechanical switches have long been replaced by electronic switching devices which can be automated and intelligently _____.

- A) Multiple switching, controlled
- B) Single way switching, cancelled
- C) Multiplication, controlled
- D) Multiple switching, removed

56. Which of the following statements are correct?

1. In high-performance systems, eliminating redundant gates not only free up chip area, it increases power dissipation, often the limiting factor.
2. Electronic scoring circuitry is provided which is responsive to the concurrent depressing of buttons by both players indicating who has won a particular point.
3. A league and tournament system is disclosed which includes a decentralized league machine that receives data to one or more of a plurality of electronic dart games via modem or using a wireless storage device.
4. The barometer will be operated indoors. This will minimize output variations caused by temperature and will lengthen the calibration intervals.

- A) 1 and 4
- B) 2 and 4
- C) 1 and 3
- D) 3 and 4

57. Which of the following statements are true?

- i. In the summer of 1960, the name Data-Phone was introduced to replace the earlier term digital subset.

- ii. The Smartmodem and its clones aided the spread of bulletin board signals (BBSs).
- iii. Softmodem is also known as Winmodem.
- iv. Modern telecommunications and data networks also make extensive use of SL modems.

- A) i and iv
- B) i ,ii, and iv
- C) iii and iv
- D) Both i and iii

58. DVD uses _____ wavelength laser diode light as opposed to _____ for CD.

- A) 650nm, 780 nm
- B) 650nm, 700 nm
- C) 620nm, 780 nm
- D) 820nm, 780 nm

59. An 8-bit thermometer DAC would have _____ segments, and a 16-bit thermometer DAC would have _____ segments.

- A) 255, 65,535
- B) 55, 62,535
- C) 155, 65534
- D) 25, 65,535

60. Which of the following statements are correct?

1. Linear means that the range of the input values that map to each output value has no linear relationship with the output value,
2. Successive approximation works by constantly comparing the input voltage to the output of an internal digital to analog converter until the best approximation is achieved.
3. Resolution is related to the Effective Number of Bits which is a measurement of the actual resolution attained by the ADC.
4. Maximum sampling frequency is a measurement of the maximum speed at which the DACs circuitry can operate and still produce the correct output.

- A) 1 and 4
- B) 1 and 3
- C) 2 and 4
- D) 3 and 4

Part C (Four mark questions)

61. Match the following

- a) 2's complement i. A group of 8 bits
- b) Byte ii. Used to represent negative numbers
- c) Big- endian iii. A group of 4 bits
- d) Nibble iv. The byte with the largest significance is stored first

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

62. Match the following

- a) $X+X=X$ i. Absorption law
- b) $X+XY=X$ ii. Commutative law
- c) $X+0=X$ iii. Idempotent law

d) $XY= YX$ iv. Identity law first

A) a-iii, b-i, c-iv, d-ii

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii, d-iv

D) a-i, b-iii, c-iv, d-ii

63. State whether the following statements are True (T) or False (F)

a. Boolean product is sometimes called a sum of products expansion or disjunctive normal form.

b. The XNOR gate is a digital logic gate whose function is the inverse of the exclusive OR (XOR) gate.

c. Logical complement, negation, or not, is a binary operator.

d. NAND gates are generally less expensive to build than other gates.

A) a-T, b-F, c-T, d-F

B) a-F, b-F, c-T, d-F

C) a-F, b-T, c-F, d-T

D) a-T, b-T, c-F, d-F

64. Match the following

A) minterm i. xyz

B) maxterm ii. More than 6 variables

C) K-Map Method iii. $x+y+z$

D) Quine-McCluskey Method iv. four variables

A) a-iv, b-ii, c-iii, d-i

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii, d-iv

D) a-i, b-iii, c-iv, d-ii

65. Match the following

A) George Boole i. Bell Labs in 1953

B) Karnaugh maps ii. Tabulation method

C) Quine and McCluskey iii. (1815-1864),

D) Boolean sum iv. Disjunctive normal form

A) a-iv, b-ii, c-iii, d-i

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii, d-iv

D) a-i, b-iii, c-iv, d-ii

66. Match the following

A) Gray code i. many inputs to single output

B) Combinational circuit ii. Shaft encoders

C) Sequential circuit iii. memory

D) Multiplexer iv. Decoder

A) a-iv, b-ii, c-iii, d-i

B) a-ii, b-i, c-iv, d-iii

C) a-ii, b-iv, c-iii, d-i

D) a-i, b-iii, c-iv, d-ii

67. State whether the following statements are True (T) or False (F)

a. In combinational circuits output depends on the past inputs.

- b. Comparators cannot be used in a central processing unit (CPU) or microcontroller in branching software.
- c. Enable inputs must be on for the decoder to function, otherwise its outputs assume a single "disabled" output code word.
- d. An encoder has 2^n input lines and 2^n output lines.

- A) a-T, b-F, c-T, d-F
- B) a-F, b-F, c-T, d-F
- C) a-F, b-T, c-F, d-T
- D) a-T, b-T, c-F, d-F

68. State true(T) or false(F)

- a. The flip-flop is not a memory element
- b. D flip-flop is a memory element and is an example for combinational circuit
- c. The flip-flop maintains its states indefinitely until an input pulse called a trigger is received.
- d. The JK flip-flop is a tristate device and it stores bit 1 when $J=1$ and $K=0$ and $\text{clock}=1$

- A) a-T, b-F c-T d-T
- B) a-F b-T c-F, d-T
- C) a-F, b-F, c-T ,d-F
- D) a-T, b-F, c-T d-F

69. Match the following

- a) Bistable i. Logically inconsistent
- b) $S=R=0$, ii. Two stable states
- c) $S=R=1$. iii. The flip-flop toggles
- d) $J = K = 1$ iv. Cannot occur in clocked D-latch

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

70. State true (T) or false (F)

- a. One of the first known examples of a shift register was in the Colossus, a codebreaking machine of the 1990s.
- b. PISO configuration has the data input on lines D1 through D4 in serial format.
- c. Shift registers can have co parallel inputs and outputs, including serial-in, parallelout (SIPO) and parallel-in, serial-out (PISO) types.
- d. A universal shift register is a do-everything device in addition to the parallel-in/parallel-out function.

- A) a-T, b-T c-F, d-T
- B) a-T, b-F c-T, d-F
- C) a-F, b-F, c-T, d-T
- D) a-F b-T c-F, d-T

71. Match the following.

- a) code-breaking machine i. Five-stage device
- b) SIPO ii. Take in parallel data,
- c) 74LS395 iii. Data is input serially.

d) PIPO iv. Parallel-in/ parallel-out shift register

A) a-iv, b-ii, c-iii, d-i

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii, d-iv

D) a-i, b-iii, c-iv, d-ii

72. State true (T) or false (F).

In the Design of Modulo-n Counter

a. First design step 1 or so called structural refinement the black box specification is refined into a specification of a controller COL and a counter CNT.

b. The second design step 2 so called face refinement replaces each input line which carries natural numbers by an appropriate number of output lines carrying bits.

c. The controller is responsible for resetting the counter whenever the counter's most recent output was N-1 and a new count signal is received.

d. The fourth design step 4 is a combination of a structural and a behavioral refinement step.

e. The specification of the counter achieved during the third design step is split into three networks of different concurrent specifications.

A) a-T, b-F, c-T, d-T, e-F

B) a-F, b-T, c-F, d-T, e-F

C) a-F, b-F, c-T, d-F, e-T

D) a-T, b-F, c-T, d-F, e-T

73. State true or false

a. In the simplest case, a switch has two pieces of metal called contacts that touch to make a circuit, and separate to break the circuit.

b. A pole is a set of contacts, the switch's electrical terminals that are not connected to and belong to a single circuit, usually a load.

c. INA122 instrumentation amp provides a very stable gain over a wide temperature.

d. The contacts are always plated with ordinary metals. They may be designed to wipe against each other to clean off any dust.

A) a-T, b-F c-T d-T

B) a-F b-T c-F, d-T

C) a-F, b-F, c-T, d-F

D) a-T, b-F, c-T d-F

74. Match the following

a) Timer i. 74160 IC

b) 4-bit counter ii. 555 IC

c) Motorola MPX4115A iii. Instrumentation amp

d) INA122 iv. Pressure transducer

A) a-iv, b-ii, c-iii, d-i

B) a-iii, b-i, c-ii, d-iv

C) a-ii, b-i, c-iv, d-iii

D) a-i, b-iii, c-iv, d-ii

75. Match the following

a) Soft modem i. Stripped down modem

- b) Wi-Fi ii. Half duplex
- c) UMTS iii. Laptops
- d) 202 Data-phone iv. Cellular modems
- A) a-iv, b-ii, c-iii, d-i
- B) a-ii, b-i, c-iv, d-iii
- C) a-iii, b-i, c-ii, d-iv
- D) a-i, b-iii, c-iv, d-ii

Answer Keys

Part - A Part - B Part - C

Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key

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

Sikkim Manipal University B.Sc(IT) Fundamentals of IT

Part A (One mark questions)

1. _____ is the use of computers and software to manage information.
A) Information technology*
B) Computer Aided Design
C) Broadcasting
D) Webcasting
2. MIS stands for _____
A) Managerial Information System
B) Management Information System*
C) Management Information Service
D) Management Interactive System
3. In the year 1642 Blaise Pascal, at age 19, invented the _____ as an aid for his father who was a tax collector.
A) Processor
B) Tubes
C) calculating clock
D) Pascaline*
4. _____ is a device that accepts information (in the form of digitalized data) and manipulates it for some result based on a program or sequence of instructions on how the data is to be processed.
A) Computer *
B) Internet
C) Router
D) Hub
5. _____ is a system of communication.
A) Code
B) Language*
C) Data
D) Binary
6. External memory sometimes called _____
A) Backing store
B) Virtual drive*
C) Local drive
D) Magnetic drive
7. Find and Replace palette consists of _____ tabs
A) Find tab, Replace tab & Go To tab*
B) Find tab, Replace tab & Search tab
C) Find page tab, Replace page tab & Search tab

D) None of the above

8. Which is the software's found in every PC?

A) Operating procedure & Application Programs

B) Programming & Non-Programming

C) Operating Systems & Application Programs*

D) Operating systems & Memory programs

9. CAT stands for _____

A. Computerized Axial Tomography*

B. Computerized Arithmetical Tomography

C. Computerized Axial Terminology

D. Computer Aided Technology

10. _____ symbols are used to represent the numbers and hence it is called Decimal number system.

A) Ten *

B) Nine

C) Eight

D) Eleven

11. _____ of a number system is defined as the number of different digits which can occur in each position in the number system.

A) base or orbit

B) base or radix*

C) decibel or radix

D) None of the above

12. Two symbols are used to represent the numbers and hence it is called _____

A) Decimal number system

B) Binary number system*

C) Negative number system

D) None of the above

13. Convert the decimal value (72) to binary _____

A) 1001001

B) 1001011

C) 1000011

D) 1001000*

14. _____ are performed in the same manner as in decimal arithmetic.

A) Carry-forward

B) Carry-overs*

C) Take-over's

D) None of the above

15. Convert the value (1111100) base, from binary to decimal

A) 124*

B) 127

C) 129

D) 123

16. Convert the value (50) from hexadecimal to decimal.

A) 70

- B) 90
- C) 120
- D) 80 *

17. _____ is a software component of a computer system that is responsible for the management of various activities of the computer and the sharing of computer resources.

- A) Software system
- B) Operating system*
- C) UNIX System
- D) Linux System

18. _____ is nothing more than a space on the hard disk reserved to store information that is deleted so that in the event of deleting a file or folder by mistake it is possible to retrieve it.

- A) Recycle Bin *
- B) Memory
- C) Hard Disk
- D) Temp

19. _____ is special memory that operates much faster than SDRAM memory.

- A) RAM
- B) Cache memory*
- C) Flash memory
- D) Pen-drive

20. Which of the following is/are the examples of commercial software?

- A) Word Processing
- B) Database Management System
- C) Electronic Spread Sheet
- D) All A, B & C *

21. _____ is a human oriented language.

- A) High Level Language *
- B) Low Level Language
- C) Machine Language
- D) Assembly Language

22. Component/s of Operating systems is/are _____

- A) Process Management
- B) Memory Management
- C) File Management
- D) All A, B & C*

23. _____ is the publicly available worldwide system of interconnected computer networks that transmit data by packet switching over the Internet Protocol.

- A) Internet*
- B) ISP
- C) LAN
- D) GAN

24. Internet is _____

- A) "A network of games"
- B) "A network of people"
- C) "A network of MIS"

D) "A network of networks" *

25. A piece of a message transmitted over a switching network is called as _____

A) Packets*

B) Bytes

C) Data

D) Signal

26. A network within an organization is example for _____

A) Wide area network

B) Local area network*

C) Telnet

D) Ws-FTP

27. ARPANet stands for _____

A) Advanced Research Process Agency Network

B) Advanced Research Projects Agency Network*

C) Advanced Research Process Agent Network

D) Advanced Request Process Agent Network

28. _____ is made up of thousands of individual dots in rows and columns.

A) Bitmap*

B) JPEG

C) Vector

D) Both A and B

29. _____ is a single graphics file that depicts movement, for instance, a man walking, a butterfly flapping its wings etc.

A) Masking

B) Animation*

C) Video

D) Audio

30. Color palette of PowerPoint includes _____ tabs

A) Standard & Custom*

B) CMYK & RGB

C) CMYK & MOD

D) RGB & Grayscale

31. _____ aligns the contents of a document from the left edge to the right edge of the page.

A) Right

B) Left

C) Justify *

D) Strikethrough

32. Which keyboard shortcut bolds selected text? Answer 2

A) Ctrl+B*

B) Alt+B

C) File/Format/Bold

D) None of the above

33. How can you highlight text without using the mouse?

A. It is impossible

- B. Use the F5 key
 - C. Use the arrow keys while holding down a Ctrl key
 - D. Use the arrow keys while holding down a Shift key*
34. Bullets and numbering palette of Ms-word consists of _____ tabs
- A) Bulleted tab & Outline numbered tab
 - B) Bulleted tab, Numbered tab & Outline numbered tab*
 - C) Numbered tab & Outline numbered tab
 - D) Ordered bullet tab & Un-ordered bullet tab
35. What is the native file format for MS Excel?
- A. .doc
 - B. .txt
 - C. .xls *
 - D. .ess
36. What is the shortcut key when you want to go to the next spread sheet?
- A) Ctrl+page down *
 - B) Shift+page down
 - C) Alt+Shift+ page down
 - D) Ctrl + Shift + Page down
37. MS Excel is distributed by which company?
- A) Microsoft*
 - B) IBM
 - C) SUNJAVA
 - D) Oracle
38. The format of the sum function is_____
- A) = SUM(Starting cell address * Ending cell address)
 - B) = SUM (cell address - Ending cell address)
 - C) = SUM(Starting cell address: Ending cell address)*
 - D) = SUM(cell address + Ending cell address)
39. Which of the following is/are Logical Functions?
- A) IF():
 - B) Sumif()
 - C) COUNTIF():
 - D) All A, B & C *
40. _____ list is a collection of some commonly used words, which can be reproduced by dragging fill handle.
- A) Custom list*
 - B) Data list
 - C) User list
 - D) Custom Data
- Part B (Two mark questions)
41. Fifth Generation Computer uses_____ & _____ technology
- A) Microelectronic technologies & Parallel processing*
 - B) Dual core & Multiprocessing
 - C) Pentium-II & Pentium-IV
 - D) Multi Chip set & Multi-processor

42. Match the following:

Set-A

- 1) My Computer
- 2) My Documents
- 3) Windows Movie Maker

Set-B

- a) Gives you access to your computer's disk drives and files
- b) Gives access to a folder created by Windows XP which is used (by default) to store any documents on your hard drive
- c) Opens Windows XP's movie editing software

- A) 1-a, 2-b, 3-c*
- B) 1-c, 2-b, 3-a
- C) 1-b, 2-a, 3-c
- D) 1-b, 2-c, 3-a

43. Identify the true statements

- 1) Users interact with operating systems through Command Line Interfaces (CLIs) or Graphical User Interfaces known as GUIs.
- 2) Multitasking operating system aims at executing real-time applications
- 3) POST means, Power On Self Test

- A) 1 & 2
- B) 2 & 3
- C) 1 & 3
- D) 1, 2 & 3*

44. Identify the components of computer.

- 1) Power Supply
- 2) Microprocessor
- 3) Memory
- 4) Drive controllers

- A) 1, 2, 3 & 4*
- B) 2, 3 & 4
- C) 1, 3 & 4
- D) 1, 2 & 4

45. Which if the following are the types of expansion buses?

- 1) ISA
- 2) EISA
- 3) MCI
- 4) PCI
- 5) AGP

- A) 1, 2, 3 & 4
- B) 2, 3, 4 & 5
- C) 1, 2, 3, 4 & 5*
- D) 1, 3, 4 & 5

46. Identify the missing component from the images file.

- A) Microprocessor*
- B) Motherboard

C) RAM

D) Power supply

47. Characteristics of hard drives are _____

1) Size

2) Recovery

3) Speed

4) Reliability

5) Conversion

A) 1, 2 & 3

B) 1, 3 & 4 *

C) 3, 4 & 5

D) 1, 2, 4 & 5

48. Advantages of Low Level language

1. Processing speed is high because it is one-to-one language.

2. Translation of program is not required.

3. It occupies less memory space.

A) 1 & 2

B) 2 & 3

C) 1 & 3

D) 1, 2 & 3 *

49. Examples of High Level Language

1) BASIC

2) PASCAL

3) FOTRAN

4) COBOL

5) ALGOL

A) 1, 2, 3 & 5

B) 2, 3, 4 & 5

C) 1, 2, 3, 4 & 5*

D) 1, 2, 4 & 5

50) Match the following

Set-A

1) Absolute Loader

2) Bootstrap Loader

3) Relocatable Loader

Set-B

a) A primitive type of loader which performs only loading function)

b) This loader function is to load the operating system and transfer a control to it.)

c) This function is for relocating and loading)

A) 1-a, 2-b, 3-c*

B) 1-b, 2-a, 3-c

C) 1-c, 2-b, 3-c

D) 1b, 2-c, 3-a

51. Functional categories of 4GL are _____

1) Report Generators – [Helping preparing reports]

2) Retrieval and update languages – assist users in making queries or modifications to data in files or database.

3) Decision Support tools – Help users analyze data.

4) Graphic generators – Assist with graph preparation.

A) 1, 3 & 4

B) 1, 2, 3 & 4*

C) 2, 3 & 4

D) 1, 2 & 3

52. Identify the true statements

1. A router is a computer networking device that forwards data packets toward their destinations through a process known as routing.

2. SLIP and PPP are two popular protocols that allow home computer users to connect their computers to the Internet as peer hosts.

3. Speeds available are 9600 BPS, 28800 BPS, 33600 BPS etc.

A) 1 & 2

B) 1 & 3

C) 2 & 3

D) 1, 2 & 3 *

53. Uses of Internet _____

1) Information search

2) Electronic Mail

3) Chat

4) Data share

5) Education

A) 1, 2, 3 & 4

B) 2, 3 & 4

C) 1, 3 & 4

D) 1, 2, 3, 4 & 5 *

54. Identify the common sound file formats.

1) .MIDI

2) .WAV

3) .MP3

4) .RAM

A. 1, 2, 3 & 4*

B. 2, 3 & 4

C. 1, 3 & 4

D. 1, 2 & 4

55. Match the following:

Set-A

1) 15 frames of animation

2) 8 frames of animation

3) 4 frames of animation

Set-B

a) 22 Kbytes - with a 56K modem this would take only 4 seconds to load

b) 47 Kbytes - with a 56K modem this would take about 8 seconds to load

c) 90 Kbytes - with a 56K modem it would take about 15 seconds to load.

- A) 1-a, 2-b, 3-c
- B) 1-c, 2-b, 3-a*
- C) 1-b, 2-c, 3-a
- D) 1-c, 2-a, 3-b

56. Formatting options of Font style consists of _____

- A) Bold, Italics, Underline & Shadow*
- B) Bold, Italics, Underline & Tables
- C) Bold, Italics, Hyperlinks & Shadow
- D) Bold, Italics, Underline & Anchors

57. Library Management, payroll system, production and planning, Inventory Management are examples of _____ software

- A) System Utility software
- B) Programming software
- C) Application software*
- D) Game software

58. CPU consists of _____

- 1) Main memory
- 2) Control unit
- 3) Arithmetic Logical Unit
- 4) Input unit

A) 2, 3 & 4

B) 1, 2 & 3*

C) 1, 3 & 4

D) 1, 2, 3 & 4

59. A range of software's are used for _____

- 1) Business
- 2) Communication
- 3) Entertainment
- 4) Sports
- 5) Finance

A) 1, 2, 3

B) 1, 2, 3, 4 & 5 *

C) 2, 3, 4 & 5

D) 1, 3, 4 & 5

60. Which of the following options will appear in Start Menu of Windows operating system?

- 1) Log-off
- 2) All program
- 3) Search
- 4) Control Panel
- 5) Turn off computer

A) 1, 2, 3, 4 & 5 *

B) 2, 3, 4 & 5

C) 1, 3, 4 & 5

D) 1, 2, 4 & 5

Part C (Four mark questions)

61. Match the following

Set-A

1. First Generation
2. Second Generation
3. Third Generation
4. Fourth Generation

Set-B

- a. Microprocessors
- b. Integrated Circuits
- c. Transistors
- d. Vacuum Tubes

A) 1-a, 2-b, 3-c, 4-d

B) 1-d, 2-c, 3-b, 4-a *

C) 1-c, 2-a, 3-d, 4-b

D) 1-b, 2-d, 3-a, 4-c

62. Computer languages are broadly classified into _____

1. Machine-level language
2. Assembly-level language
3. High level-language
4. Fourth generation languages

A) 1, 2, 3 & 4 *

B) 2, 3 & 4

C) 1, 3 & 4

D) 1, 2 & 3

63. Main functions of Operating System are _____

1. act as an interface between the user and the computer
2. monitor the use of the resources
3. control and coordinate Input and Output devices
4. manage the program and data files
5. help the application programs to execute the commands

A) 1, 2, 3 & 4

B) 2, 3, 4 & 5

C) 1, 2, 3, 4 & 5*

D) 1, 3, 4 & 5

64. Identify the types of Operating Systems _____

- 1) Real-time OS
- 2) Multi-user and Single-user OS
- 3) Multi-tasking and Single-tasking OS
- 4) Distributed OS
- 5) Embedded System OS

?? 1, 2, 3, 4 & 5*

?? 2, 3, 4 & 5

?? 1, 3, 4 & 5

?? 1, 2, 3 & 4

65. Match the following

Set-A

- 1) Bit
- 2) Byte
- 3) Hertz
- 4) Gigabyte (Gb)

Set-B

- a. A logical data unit which has a possible value of 0 or 1.
- b. A unit of data storage consisting of 8 bits.
- c. A unit of frequency describing the number of electrical cycles that occur in a second.
- d. A unit of data storage consisting of about 1000 megabytes.

- A) 1-d, 2-c, 3-b, 4-a
- B) 1-a, 2-b, 3-c, 4-d*
- C) 1-c, 2-a, 3-d, 4-b
- D) 1-b, 2-d, 3-a, 4-c

66. Identify the missing parts.

- A) Tracks & Sector
- B) Head & Reader
- C) Electrical cable & Spindle*
- D) Head & Changer

67. Match the following:

Set-A

- 1) DVD Drive
- 2) Zip drives
- 3) Tape drive backup kits

Set-B

- a) Capacity 3G to 40G
- b) Removable cartridge storage device
- c) Drives use the ATAPI interface.

- A) 1-a, 2-b, 3-c
- B) 1-c, 2-b, 3-a *
- C) 1-b, 2-a, 3-c
- D) 1-a, 2-c, 3-b

68. Facilities offered by Operating Systems are_____

- 1) It communicates with the computer operator by means of the console unit or keyboard.
- 2) It controls the flow of jobs by loading and unloading of programs.
- 3) It undertakes error diagnosis and recovery techniques in case of error conditions.
- 4) It allocates peripherals to programs and checks their availability.
- 5) OS warns the operator when peripheral units require alteration.
- 6) OS supervises operation including compilation and execution of programmer

- A) 1, 2, 3, 4 & 5
- B) 2, 3, 4, 5 & 6
- C) 1, 2, 3, 4, 5 & 6*
- D) 1, 2, 5 & 6

69. Identify the basic units of MS Word

1. Title Bar
2. Menu Bar
3. Standard tool bar
4. Formatting toolbar
5. Editing area
6. Scroll Bars

A) Except 4

B) 1, 2, 3, 4, 5 & 6 *

C) 3, 4, 5 & 6

D) 1, 2, 4, 5 & 6

70. Which of the following menus are available in MS-Excel?

1) File

2) Edit

3) View

4) Tables

5) Insert

6) Format

7) Tools

A) 1, 2, 3, 4, 5 & 6

B) 1, 2, 3, 6 & 7

C) 1, 2, 3, 5, 6 & 7*

D) 1, 2, 4, 5 & 7

71. Match the following

Set-A

1) Average():

2) Max ():

3) Count ():

4) Countblank ():

Set-B

a) Counts empty cells in a specified range of cells.

b) Counts the number of cells that are not empty in the specified range.

c) Function returns the largest value in the given range of cells.

d) This function calculates and returns the arithmetic mean of the numeric values in the given range of cells.

A) 1-a, 2-b, 3-c, 4-d

B) 1-d, 2-c, 3-b, 4-a*

C) 1-b, 2-a, 3-c, 4-d

D) 1-c, 2-d, 3-a, 4-b

72. Multimedia consists of _____

1) Text

2) Graphics

3) Sound

4) Animations

5) Video

- A) 1, 2, 3 & 5
- B) 1, 2, 3, 4 & 5*
- C) 2, 3, 4 & 5
- D) 1, 3, 4 & 5

73. Identify the tabs which you will find in fill effects palette of PowerPoint.

- 1) Gradient
- 2) Texture
- 3) Pattern
- 4) Picture
- 5) Symbol

- A) 1, 2, 3 & 4 *
- B) 2, 3, 4 & 5
- C) 1, 3, 4 & 5
- D) 1, 2, 3 & 5

74,. Match the following

Set-A

- 1) Packets
- 2) Intranet
- 3) Local area network
- 4) Networks

Set-B

- a) Systems of interconnected components
- b) Piece of a message transmitted over a network
- c) Network covering home and office
- d) network used internally in an organization

- A) 1-b, 2-d, 3-c, 4-a *
- B) 1-a, 2-b, 3-c, 4-d
- C) 1-c, 2-a, 3-b, 3-d
- D) 1-d, 2-c, 3-a, 4-b

75. Match the following

Set-A

- 1) Modems
- 2) Optical Fiber
- 3) Hub
- 4) Internet Service Providers

Set-B

- a) Cheapest way to surf the Internet
- b) Devices that convert digital signals to analog signals, and vice versa.
- c) Medium for telecommunication and networking
- d) Concentrator that joins multiple clients by means of a single link to the rest of the LAN.

- A) 1-a, 2-b, 3-c, 4-d
- B) 1-b, 2-c, 3-d , 4-a*
- C) 1-c, 2-a, 3-b, 4-d
- D) 1-d, 2-c, 3-a, 3-b

Subject Name: BT0062 - Fundamentals of IT

Answer Keys

Part - A Part - B Part - C

Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key

1 A 21 A 41 A 61 B

2 B 22 D 42 A 62 A

3 D 23 A 43 D 63 C

4 A 24 D 44 A 64 A

5 B 25 A 45 C 65 B

6 B 26 B 46 A 66 C

7 A 27 B 47 B 67 B

8 C 28 A 48 D 68 C

9 A 29 B 49 C 69 B

10 A 30 A 50 A 70 C

11 B 31 C 51 B 71 B

12 B 32 A 52 D 72 B

13 D 33 D 53 D 73 A

14 B 34 B 54 A 74 A

15 A 35 C 55 B 75 B

16 D 36 A 56 A

17 B 37 A 57 C

18 A 38 C 58 B

19 B 39 D 59 B

20 D 40 A 60 A

Sikkim Manipal University B.Sc(IT) DBMS

Part A (One mark questions)

1. The basic component of a file in a file system is a _____.
 - A) Data item
 - B) Field
 - C) Record
 - D) Tuple
2. Database Management System is a _____ system to facilitate the creation and maintenance of a computerized database.
 - A) Physical
 - B) Software
 - C) Hardware
 - D) Knowledge
3. UoD stands for _____.
 - A) Un ordered Discourse
 - B) Union of Discourse
 - C) Universe of Discourse
 - D) None of the above
4. The E-R data model based on a perception of real world that consists of a set of basic objects called _____.
 - A) Classes
 - B) Entities
 - C) Objects
 - D) Attributes
5. The _____ level is at the highest level of database abstraction where only those portions of the database of concern to a user or application program are included.
 - A) External
 - B) Conceptual
 - C) Internal
 - D) Physical
6. At _____ level of database abstraction all the database entities and the relationships among them are included.
 - A) Physical
 - B) Conceptual
 - C) External
 - D) Internal
7. In MySQL architecture, the function of the _____ is to keep copies of data for retrieval later, in case of a loss of data.
 - A) Transaction Manager
 - B) Buffer Manager
 - C) Recovery Manager
 - D) Query Engine
8. _____ is a family of products that meet the data storage requirements of the largest data processing systems and commercial web sites.
 - A) Microsoft Windows XP
 - B) Microsoft Windows ME
 - C) Microsoft Windows Vista

D) Microsoft SQL Server 2000

9. In _____ data model, the objects are represented by record structures grouped in filestructures.

- A) Primitive
- B) Classic
- C) Semantic
- D) Network

10. A _____ is a collection of tuples, each of which contains values for a fixed number of attributes.

- A) Association
- B) Relation
- C) Aggregation
- D) None of the above

11. _____ is a set of principles concerned with how data is structured.

- A) Data integrity
- B) Data manipulation
- C) Data definition
- D) Data control

12. _____ is a set of principles concerned with how data is operated upon.

- A) Data definition
- B) Data control
- C) Data integrity
- D) Data manipulation

13. _____ is the fastest among the storage devices.

- A) Cache
- B) Main memory
- C) Flash memory
- D) Magnetic disk

14. The contents of _____ are usually lost if a power failure or system crash occurs.

- A) Magnetic disk
- B) Main memory
- C) CD / DVD
- D) Tape storage

15. _____ loses its contents when the power of the device is removed.

- A) Non-volatile storage
- B) Volatile storage
- C) CD
- D) Magnetic disk

16. _____ retains its contents even when the power of the device is removed.

- A) Cache
- B) Volatile storage
- C) Non-volatile storage
- D) RAM

17. A _____ is a collection of relations with distinct relation names.

- A) Domain
- B) Instance
- C) Schema
- D) Relational database

18. The main construct for representing data in the relational model is a _____.

- A) Attribute

B) Relation

C) Tuple

D) Domain

19. A _____ is a column or a set of columns that refers to a primary key in the same table or another table.

A) Primary key

B) Foreign key

C) Candidate key

D) Concatenated key

20. SQL is the _____ standard language for interacting with a RDBMS.

A) OSI

B) ISI

C) ISO

D) IEEE

21. SQL stands for _____.

A) Structured Query Language

B) Standard Query Language

C) Simple Query Language

D) None of the above

22. SQL commands can be roughly divided into _____ major categories with regard to their functionality.

A) Two

B) Three

C) Four

D) Five

23. _____ function is used to find number of values in a column.

A) SUM

B) TOTAL

C) ADD

D) COUNT

24. _____ function is used to find total of all the values in a column.

A) SUM

B) COUNT

C) ADD

D) AVG

25. Union operation is represented by _____ symbol.

A) U

B) μ

C) \boxplus

D) \boxminus

26. The _____ operation removes common tuples from the first relation.

A) Union

B) Difference

C) Cartesian Product

D) Projection

27. TRC stands for _____.

A) Tuple Relation Calculation

B) Triple Relational Calculus

C) Tuple Relational Calculus

D) Triple Relation Calculation

28. In the atomic formula clauses, the quantifiers "For any" and "For all" are said to _____ the variable R.

- A) Destroy
- B) Bind
- C) Separate
- D) None of the above

29. Y is said to be functionally dependent on X if _____.

- A) Y has only one value corresponding to the value of X
- B) Y has two values corresponding to the value of X
- C) Y has three values corresponding to the value of X
- D) Y has four values corresponding to the value of X

30. $X \twoheadrightarrow Y$ indicates that functional dependency may also be based on a composite attribute.

State True or False.

- A) False
- B) True
- C) Either A) or B)
- D) Unpredictable

31. Given a relation, if the value of an attribute X uniquely determines the value of all other attributes in a row, then X is said to be _____.

- A) Primary key
- B) Foreign key
- C) Relation key
- D) Key

32. Let X and Y be the two attributes of a relation. The functional dependency can be written as _____.

- A) $X \twoheadrightarrow Y$
- B) $X \twoheadrightarrow \twoheadrightarrow Y$
- C) $X == Y$
- D) $X \rightarrow Y$

33. A distributed database system consists of a collection of sites, each of which maintains a _____ database system.

- A) Local
- B) Remote
- C) Administrator
- D) None of the above

34. The site of a distributed database system that may be distributed physically over a large geographical area is called _____.

- A) Short-haul network
- B) Long-haul network
- C) Medium-haul network
- D) Large-haul network

35. The frequency with which a link or site fails is measured by _____.

- A) Availability
- B) Efficiency
- C) Reliability
- D) Affectivity

36. The cost of physically linking the sites in the system is _____.

- A) Hardware cost

- B) Software cost
- C) Communication cost
- D) Installation cost

37. CAD is an example for _____.

- A) Design databases
- B) Multimedia databases
- C) Knowledge databases
- D) None of the above

38. Artificial intelligence and expert systems fall under _____.

- A) Design databases
- B) Knowledge databases
- C) Multimedia databases
- D) None of the above

39. Pick out the object oriented programming language.

- A) BASIC
- B) FORTRAN
- C) C++
- D) COBOL

40. The combination of attributes and methods is called _____.

- A) Class
- B) Entity
- C) Software
- D) Object

Part B (Two mark questions)

41. _____ were among the first to use databases in a geographically distributed manner.

- A) Railways
- B) Waterways
- C) Airlines
- D) Roadways

42. _____ data independence implies that application programs need not be changed if fields are added to an existing record.

- A) Physical
- B) Static
- C) Dynamic
- D) Logical

43. _____ level is at the lowest level of abstraction, closest to the physical storage method used.

- A) Physical
- B) Conceptual
- C) Internal
- D) External

44. In MySQL architecture _____ interfaces with the operating system to write data to the disk efficiently.

- A) Query Engine
- B) Buffer Manager
- C) Transaction Manager
- D) Storage Manager

45. _____ model organizes data in a tree structure.

- A) Hierarchical

B) Object/Relational

C) Network

D) Object-Oriented Model

46. _____ model was formally defined by Conference on Data Systems Languages (CODASYL) in 1971.

A) Hierarchical

B) Object/Relational

C) Object-Oriented

D) Network

47. _____ is also called as Electrically Erasable Programmable Read-Only Memory (EEPROM).

A) Main memory

B) Cache

C) Flash memory

D) Magnetic disk

48. _____ is referred to as sequential access storage.

A) Optical storage

B) Magnetic disk storage

C) Cache

D) Tape storage

49. An instance of a relation is a set of _____.

A) Fields

B) Tuples

C) Columns

D) Values

50. Tuples can also be called as _____.

A) Fields

B) Values

C) Columns

D) Records

51. CREATE statement is a _____ statement.

A) Data Manipulation

B) Data Control

C) Data Definition

D) All of the above

52. SELECT statement is a _____ statement.

A) Data Control

B) Data Definition

C) Table Control

D) Data Manipulation

53. _____ of two relations is the concatenation of tuples belonging to the two relations.

A) Difference

B) Join

C) Cartesian Product

D) Union

54. _____ yields a vertical subset of the relation.

A) Projection

B) Difference

C) Join

D) Selection

55. A query is evaluated on a given _____ of the database.

- A) Table
- B) Instance
- C) View
- D) Row

56. DRC stands for _____.

- A) Discrete Relational Calculus
- B) Domain Relation Calculation
- C) Discrete Relation Calculation
- D) Domain Relational Calculus

57. The aim of the database system is to reduce redundancy, meaning that information is to be stored _____.

- A) Only once
- B) Twice
- C) Thrice
- D) Multiple times

58. Multiple copies of the same fact may lead to update _____.

- A) Records
- B) Anomalies
- C) Fields
- D) Databases

59. In the relational model, the problem of redundancy and inconsistency can be remedied by _____.

- A) Joining
- B) Union
- C) Decomposition
- D) Intersection

60. Removing more than one independent multi-valued dependency from a relation by splitting relation is called _____.

- A) 4NF
- B) 5NF
- C) 1NF
- D) BCNF

Part C (Four mark questions)

61. Match the following:

Set A Set B

- 1. Design databases a. Oracle, Sybase, Informix
- 2. Multimedia databases b. AI and Expert systems
- 3. Knowledge databases c. images, graphics, audio and video
- 4. RDBMS d. CAD / CAM / CASE

- A) 1-d, 2-c, 3-b, 4-a
- B) 1-a, 2-c, 3-b, 4-d
- C) 1-b, 2-d, 3-a, 4-b
- D) 1-c, 2-a, 3-d, 4-b

62. Match the following:

Set A Set B

- 1. Encapsulation a. combination of attributes and methods
- 2. Inheritance b. same function with different outputs
- 3. Polymorphism c. code reuse

4. Object d. data hiding

- A) 1-a, 2-c, 3-b, 4-d
- B) 1-d, 2-c, 3-b, 4-a
- C) 1-b, 2-d, 3-a, 4-b
- D) 1-c, 2-a, 3-d, 4-b

63. Match the following:

Set A Set B

- 1. Installation cost a. the degree to which data can be accessed despite failure of some links or sites
- 2. Communication cost b. the frequency with which a link or site fails
- 3. Reliability c. cost in time and money to send a message from site A to site B
- 4. Availability d. cost of physically linking the sites in the system

- A) 1-b, 2-d, 3-a, 4-b
- B) 1-a, 2-c, 3-b, 4-d
- C) 1-d, 2-c, 3-b, 4-a
- D) 1-c, 2-a, 3-d, 4-b

64. Match the following:

Set A Set B

- 1. Replication a. splits the relation by decomposing the scheme R of relation r in a special way
- 2. Fragmentation b. splits the relation by assigning each tuple of r to one or more fragments
- 3. Horizontal Fragmentation c. the relation is partitioned into several fragments
- 4. Vertical Fragmentation d. the system maintains several identical copies of the relation

- A) 1-c, 2-a, 3-d, 4-b
- B) 1-a, 2-c, 3-b, 4-d
- C) 1-b, 2-d, 3-a, 4-b
- D) 1-d, 2-c, 3-b, 4-a

65. Match the following:

Set A (Input Relation) Set B (Transformation)

- 1. All relations a. remove dependency of an attribute of a multi-attribute key on an attribute of another (overlapping) multiattribute key
- 2. 1NF b. remove dependency of non-key attribute on other nonkey attributes
- 3. 2NF c. remove dependency of non-key attribute on part of a multi-attribute key
- 4. 3NF d. eliminate variable length records

- A) 1-d, 2-c, 3-b, 4-a
- B) 1-a, 2-c, 3-b, 4-d
- C) 1-b, 2-d, 3-a, 4-b
- D) 1-c, 2-a, 3-d, 4-b

66. Data modeling is preceded by _____ and analysis.

- A) Design
- B) Planning
- C) Implementation
- D) Testing

67. Match the following:

Set A (Input Relation) Set B (Output Relation)

1. All relations a. BCNF
2. 1NF b. 3NF
3. 2NF c. 2NF
4. 3NF d. 1NF

- A) 1-b, 2-d, 3-a, 4-b
B) 1-a, 2-c, 3-b, 4-d
C) 1-d, 2-c, 3-b, 4-a
D) 1-c, 2-a, 3-d, 4-b

68. If a query language can express all the queries that we can express in relational algebra, it is said to be _____.

- A) relationally complete
B) relationally incomplete
C) Any of the above
D) None of the above

69. _____ yields a horizontal subset of a relation.

- A) Join
B) Projection
C) Union
D) Selection

70. Match the following:

Set A Set B

1. 1:1 a. An entity in A is associated with any number of entities in B, and an entity in B, is associated with any number of entities in A.
2. 1:N b. An entity in A is associated with at most one entity in B, and an entity in B, however can be associated with any number of entities in A.
3. N:1 c. an entity in A is associated with any number of entities in B, and an entity in B, however can be associated with at most one entity in A.
4. N:N d. an entity in A is associated with at most one entity in B, and an entity B is associated with at most one entity in A.

- A) 1-d, 2-c, 3-b, 4-a
B) 1-a, 2-c, 3-b, 4-d
C) 1-b, 2-d, 3-a, 4-b
D) 1-c, 2-a, 3-d, 4-b

71. In MySQL architecture, the function of the _____ is to facilitate concurrency in data access.

- A) Buffer Manager
B) Transaction Manager
C) Storage Manager
D) Query Engine

72. The type of relationship between a department and the courses offered by that department is _____.

- A) Many to one
B) One to one
C) One to many
D) Many to many

73. _____ is the smallest unit of information that can be read from or written to disk.

- A) Sector
- B) Track
- C) Block
- D) None of the above

74. A _____ is a column or a combination of columns that is used to uniquely identify each row in a table.

- A) Primary key
- B) Foreign key
- C) Candidate key
- D) Concatenated key

75. A _____ is a virtual table that is one that does not actually exist.

- A) Database
- B) View
- C) Record
- D) Field

Answer Keys

Part - A Part - B Part - C

Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key Q. No. Ans. Key

1 A 21 A 41 C 61 A

2 B 22 B 42 D 62 B

3 C 23 D 43 C 63 C

4 B 24 A 44 D 64 D

5 A 25 A 45 A 65 A

6 B 26 B 46 D 66 B

7 C 27 C 47 C 67 C

8 D 28 B 48 D 68 A

9 A 29 A 49 B 69 D

10 B 30 B 50 D 70 A

11 C 31 C 51 C 71 B

12 D 32 D 52 D 72 C

13 A 33 A 53 C 73 A

14 B 34 B 54 A 74 A

15 B 35 C 55 B 75 B

16 C 36 D 56 D

17 D 37 A 57 A

18 B 38 B 58 B

19 B 39 C 59 C

20 C 40 D 60 D

Sikkim Manipal University B.Sc(IT) Computer Organization and Architecture

Part A (One mark questions)

1. Binary equivalent of decimal number 34 is
 - A) 110110
 - B) 100010
 - C) 110010
 - D) 101010
2. Decimal equivalent of binary number 11100 is
 - A) 18
 - B) 26
 - C) 28
 - D) 34
3. 1's compliment of binary number 10101 is
 - A) 01010
 - B) 10010
 - C) 01101
 - D) 00101
4. 2's compliment of binary number 1000100 is
 - A) 0001110
 - B) 1110000
 - C) 0001111
 - D) 0111100
5. What is micro operation?
 - A) The operations executed on data stored in registers
 - B) The operations executed on data stored in CD ROM
 - C) The operations executed on data stored in micro chips
 - D) The operations executed on data stored in RAM
6. What is the function of Memory address register?
 - A) The register that holds an address for the memory unit
 - B) The register that holds data
 - C) The register that holds an address of the data
 - D) The register that holds an address of Program counter
7. Choose the statement that holds good for the symbolic form $R_2 \leftarrow R_1$
 - A) Denotes a transfer of the content of register R1 into register R2
 - B) It designates a replacement of the content of R2 by the content of R1.
 - C) The content of the source register R1 does not change after the transfer.
 - D) ALL the above
8. The list of instructions is called _____.
 - A) Software
 - B) Program
 - C) Coding
 - D) Application
9. The internal storage of a computer is called _____.
 - A) CPU
 - B) ALU
 - C) Memory
 - D) Control Unit
10. _____ is called the father of computers.
 - A) Pascal

- B) Gottfried Leibniz
- C) Joseph Marie Jacquard
- D) Charles Babbage

11. _____ registers enable the machine or assembly language programmer to minimize main memory references.

- A) User-visible
- B) Control
- C) Status
- D) Data

12. _____ registers can be assigned to a variety of functions by the programmer.

- A) Data
- B) General Purpose
- C) Address
- D) Control

13. _____ contains the address of an instruction to be fetched.

- A) Instruction Register
- B) Memory Address Register
- C) Program Counter
- D) Memory Buffer Register

14. The location of the memory is provided by the input called as _____.

- A) Address
- B) Number
- C) List
- D) Data

15. We usually refer to each of the interface of the external device as a _____.

- A) Socket
- B) Port
- C) Input
- D) Output

16. DMA stands for _____.

- A) Direct Memory Address
- B) Digital Memory Access
- C) Direct Memory Access
- D) Digital Memory Address

17. The CPU instructions are represented in _____ code.

- A) Binary
- B) Decimal
- C) Octal
- D) Hexa-decimal

18. The CPU instructions are written in _____ language.

- A) Machine
- B) Assembly
- C) High-Level
- D) C

19. _____ specifies the operation to be performed.

- A) Machine code
- B) CPU code
- C) Opcode
- D) ALU code

20. A simple C or BASIC instruction may require _____ machine instructions.

- A) 5
- B) 7

C) 9

D) 3

21. "LOAD A" is a/an _____ address instruction.

A) One

B) Two

C) Three

D) Zero

22. _____ memory systems are directly accessible by the CPU.

A) RAM

B) Floppy

C) Hard disk

D) CD ROM

Ans: A) RAM

23. The external memory systems are accessible by the CPU through _____.

A) ALU

B) I/O module

C) Control Unit

D) DMA

Ans: B) I/O module

24. Magnetic Tapes are examples of _____ memory.

A) CPU's local

B) Internal

C) External

D) Control

25. Which one of the following is not a common word length?

A) 32

B) 8

C) 16

D) 12

26. _____ connects an external device to the System Bus.

A) I/O module

B) DMA

C) ALU

D) Control Unit

Ans: A) I/O module

27. A system should have _____ in order to connect to another system.

A) Keyboard

B) Network Interface Card

C) Mouse

D) Monitor

28. A System is connected to the Internet through _____.

A) Keyboard

B) Mouse

C) MODEM

D) Joystick

29. A _____ converts electrical signals to binary data and vice versa.

A) Modem

B) NIC

C) Switch

D) Transducer

30. _____ is responsible for moving data to memory or I/O modules

A. Control unit

- B. Logic Unit
- C. Processing Unit
- D. Mathematical unit

31 Computers are built using _____ circuits that operate on information represented by electrical signals

- A. binary
- B. Logic
- C. Character
- D. System

32. The infinite precision ten's complement of -2 is _____

- A. 8
- B. 18
- C. 98
- D. +2

33. When does overflow occur in binary arithmetic operation?

- A. Overflow can occur only when adding two numbers that have the Positive sign only.
- B. Overflow can occur only when adding two numbers that have the Negative sign only.
- C. Overflow can occur only when adding two numbers that have the same sign .
- D. overflow occur whenever carry bit is one

34. The binary addition result of 1011 and 0010

- A. 1101
- B. 0101
- C. 0011
- D. 1100

35. The rate at which the CPU can execute instructions is limited by the _____

- A. memory cycle time
- B. i/o cycle time
- C. number of memory blocks
- D. number of i/o operations

36. Main memory consists _____ number of addressable words

- A. $2n$
- B. $10n$
- C. 2^n
- D. 10^n

37. In which design CPU and main memory are directly connected to the system bus

- A. Look-through design
- B. Look-aside Design
- C. Cache -memory design
- D. None of the above

38. DMA module consists of

- A. Control logic, address register, 2 bit data register, data count
- B. Control logic, address register, data register, data count
- C. Control logic, 2 bit-address register, data register, data count
- D. motherboard, address register, data register, data count

39. Peripheral component interconnect accomplishes DMA by using _____

- A. Bus master
- B. Data master
- C. Address Master
- D. Memory device

40. Which is the slowest DMA transfer Mode?

- A. Single transfer mode
- B. double transfer mode
- C. block transfer mode

D. Demand transfer mode

Part B (Two mark questions)

41. 2's compliment representation of -19 is

A) 11101101

B) 01011010

C) 1010110

D) 0010101

42. Decimal equivalent of hexadecimal number 638F is

A) 25485

B) 25484

C) 25486

D) 25487

43. Which of the following is not a Micro operation? (2 marks)

A) Direct Memory access

B) Arithmetic micro operations

C) Logic micro operations

D) Shift micro operations

44. What is the content of register R3 after the execution of the systement

R3 ? $R1 + R2 + 1$ if $R1=0010$ $R2=1100$ (2 marks)

A) 0100

B) 0110

C) 1100

D) 1010

45. State True or False.

1. A Personal Computer (PC) is a microcomputer.

2. Minicomputers are widely used in payroll, scientific applications etc.

A) 1-True, 2-True

B) 1-True, 2-False

C) 1-False, 2-True

D) 1-False, 2-False

46. State True or False.

1. Mainframes are used for weather forecasting and aircraft simulations.

2. Supercomputers are larger than mainframes.

A) 1-True, 2-True

B) 1-False, 2-True

C) 1-True, 2-False

D) 1-False, 2-False

47. State True or False.

1. Sign Flag contains the sign bit of the result of the last arithmetic operation.

2. Zero Flag is set when the result is 0.

A) 1-True, 2-False

B) 1-False, 2-True

C) 1-True, 2-True

D) 1-False, 2-False

48. State True or False.

1. Carry Flag is reset if an operation resulted in a carry.

2. Equal Flag is set if logical comparison results in equality.

A) 1-True, 2-True

B) 1-False, 2-True

C) 1-True, 2-False

D) 1-False, 2-False

49. If a computer memory has 64K, 32-bit words, then the data bus will be _____ wide and the address bus will

be _____ wide.

- A) 16-bits, 16-bits
- B) 16-bits, 32-bits
- C) 32-bits, 32-bits
- D) 32-bits, 16-bits

50. State True or False.

1. In Serial mode only one bit can be transmitted at a time.
2. In Parallel mode multiple bits can be transmitted simultaneously.

- A) 1-False, 2-True
- B) 1-True, 2-False
- C) 1-True, 2-True
- D) 1-False, 2-False

51. State True or False.

1. "MOVE Y, A" is a two address instruction.
2. "MUL T, D, E" is a three address instruction.

- A) 1-True, 2-True
- B) 1-True, 2-False
- C) 1-False, 2-True
- D) 1-False, 2-False

52. State True or False.

1. EBCDIC character set is used in PC.
2. International Reference Alphabet is referred to as ASCII.

- A) 1-True, 2-True
- B) 1-False, 2-True
- C) 1-True, 2-False
- D) 1-False, 2-False

53. ASCII encoded characters are usually stored and transferred as _____ per character.

- A) 16-bits
- B) 32-bits
- C) 8-bits
- D) 4-bits

54. The unit of data transferred from external memory are termed as _____.

- A) Blocks
- B) Words
- C) Sectors
- D) Lines

55. State True or False.

1. CPU's local memories are in the form of registers.
2. RAM is an example for internal memory.

- A) 1-True, 2-True
- B) 1-True, 2-False
- C) 1-False, 2-True
- D) 1-False, 2-False

56. State True or False. (2 marks)

1. 9 bits word length is common in computers.
2. For internal memory, unit of transfer is equal to the number of data lines into and out of the memory module.

- A) 1-True, 2-True
- B) 1-False, 2-True
- C) 1-True, 2-False
- D) 1-False, 2-False

57. The Finite Precision Three digit Ten's complement of -2 and +5 is _____.

- A) 008, 005

B) 998, 095

C) 998, 005

D) 008, 095

58. State True or False.

1. Sensors and actuators are human readable devices.

2. NIC is a communication device.

A) 1-True, 2-True

B) 1-False, 2-True

C) 1-True, 2-False

D) 1-False, 2-False

59. In _____ the CPU is bypassed and the data are directly transferred from external device to the system memory

A) Programmed I/O

B) Interrupt driven I/O

C) DMA

D) Non-programmed I/O

60. There are three standard mapping functions they are

A. indirect mapping, Associative mapping and Block set associative mapping

B. Direct mapping, Associative mapping and Block set associative mapping

C. Direct mapping, register set mapping and Block set associative mapping

D. Indirect mapping, cache memory mapping and associative mapping

Part C (Four mark questions)

61. Match the following

Decimal digit

Excess-3 gray

a

2

i

0101

b

3

ii

0111

c

5

iii

1100

d

7

iv

1111

A) a-i, b-iii, c-ii, d-iv

B) a-ii, b-i, c-iii, d-iv

C) a-ii, b-iii, c-i, d-iv

D) a-iv, b-iii, c-ii, d-i

62. Match the following:

Set A Set B

1. Fetch Instructions a. performing arithmetic or logical operations on data

2. Interpret Instructions b. reading data from memory or I/O module

3. Fetch Data c. decoding instructions

4. Process Data d. reading instructions from memory

A) 1-d, 2-c, 3-b, 4-a

B) 1-a, 2-c, 3-b, 4-d

C) 1-b, 2-d, 3-a, 4-b

D) 1-c, 2-a, 3-d, 4-b

63. Match the following:

Set A Set B

1. CPU a. communication mechanism between CPU, Memory & I/O

2. Memory b. used to move data from the computer and its external environment

3. I/O interface c. used to store instructions, data and results

4. System interconnection d. heart of the computer

A) 1-d, 2-c, 3-b, 4-a

B) 1-a, 2-c, 3-b, 4-d

C) 1-b, 2-d, 3-a, 4-b

D) 1-c, 2-a, 3-d, 4-b

64. Match the following:

Set A Set B

1. Control unit a. means for communication among various units

2. ALU b. internal memory for CPU

3. Registers c. performs the computers data processing Functions

4. CPU interconnections d. d. controls the operations of the CPU

A) 1-a, 2-c, 3-b, 4-d

B) 1-d, 2-c, 3-b, 4-a

C) 1-b, 2-d, 3-a, 4-b

D) 1-c, 2-a, 3-d, 4-b

65. Match the following:

Set A Set B

1. Fetch Instructions a. performing arithmetic or logical operations on Data

2. Interpret Instructions b. reading data from memory or I/O module

3. Fetch Data c. decoding instructions

4. Process Data d. reading instructions from memory

A) 1-d, 2-c, 3-b, 4-a

B) 1-a, 2-c, 3-b, 4-d

C) 1-b, 2-d, 3-a, 4-b

D) 1-c, 2-a, 3-d, 4-b

66. Match the following:

Set A Set B

1. Memory to CPU a. processor sends data to external device

2. CPU to Memory b. processor reads data from external device

3. I/O to CPU c. processor writes data to memory

4. CPU to I/O d. processor reads data from memory

A) 1-b, 2-d, 3-a, 4-b

B) 1-a, 2-c, 3-b, 4-d

C) 1-d, 2-c, 3-b, 4-a

D) 1-c, 2-a, 3-d, 4-b

67. Match the following:

Set A Set B

1. Dedicated Bus Type a. Responsible for allocating bus timings

2. Multiplexed Bus Type b. Same bus used for multiple purposes

3. Bus Controller c. Permanently assigned to one function

- A) 1-a, 2-b, 3-c
- B) 1-c, 2-b, 3-a
- C) 1-b, 2-a, 3-c
- D) 1-b, 2-c, 3-a

68. Match the following:

Set A (Addressing Modes) Set B (Algorithm)

- 1. Immediate a. EA = R
- 2. Direct b. EA = (A)
- 3. Indirect c. EA = A
- 4. Register d. Operand = A

- A) 1-d, 2-c, 3-b, 4-a
- B) 1-a, 2-c, 3-b, 4-d
- C) 1-b, 2-d, 3-a, 4-b
- D) 1-c, 2-a, 3-d, 4-b

69. Match the following:

Set A (Addressing Modes) Set B (Algorithm)

- 1. Register Indirect a. EA = Top of Stack
- 2. Displacement b. EA = A + (R)
- 3. Stack c. EA = (R)

- A) 1-a, 2-b, 3-c
- B) 1-c, 2-b, 3-a
- C) 1-b, 2-a, 3-c
- D) 1-b, 2-c, 3-a

70. State True or False:

- 1. The inputs to the ALU are the control signals generated by control unit.
- 2. The ALU output is a register called Flag Register.
- 3. ALU directly interacts with memory.
- 4. Control Unit is responsible for moving data to memory or I/O module.

- A) 1-True, 2-True, 3-False, 4-True
- B) 1-True, 2-False, 3-True, 4-False
- C) 1-False, 2-True, 3-False, 4-True
- D) 1-False, 2-False, 3-True, 4-False

71. Match the following:

Set A (Device) Set B (Data Rate)

- 1. Keyboard a. 100 KB/sec
- 2. Mouse b. 8 KB/sec
- 3. Telephone channel c. 100 bytes/sec
- 4. Laser printer d. 10 bytes/sec

- A) 1-c, 2-a, 3-d, 4-b
- B) 1-a, 2-c, 3-b, 4-d
- C) 1-b, 2-d, 3-a, 4-b
- D) 1-d, 2-c, 3-b, 4-a

72. The inputs to the ALU are the _____ generated by the control unit of CPU, and the _____ of the CPU where the operands for the manipulation of data are stored . The output is a register called _____ which reflects the result and the _____ of the CPU where the result can be stored.

- A. Logic signals, registers, status word, registers
- B. Control signals, registers, flag register, registers
- C. Control signals, registers, accumulator, registers
- D. Logic signals, registers, status word, flip flop

73. 00010100 X 00011110=?

- A. 0000001001011011
- B. 0000001001011111
- C. 0000011001011000
- D. 0000001001011001

74. State True or False

1. Virtual memory decreases the effective size of the main memory.
 2. The mechanism that translates virtual addresses into physical address is usually implemented by hardware components only
 3. The memory control circuitry translates the address specified by the program into an address that can be used to access the physical memory.
- A) 1-False, 2-True, 3-False,
 - B) 1-True, 2-False, 3-True,
 - C) 1-False, 2-False, 3-True,
 - D) 1-True, 2-True, 3-False,

75. State True or False

1. DMA controller typically shares the system memory and I/O bus with the CPU and has both bus master and slave capability.
 2. For demand mode transfers, the DMA controller performs DMA transfers at the fastest possible rate as long as the I/O device asserts its DMA request.
 3. The current count register determines the number of transfers remaining and is automatically decremented after each transfer.
- A) 1-False, 2-True, 3-False
 - B) 1-True, 2-True, 3-True
 - C) 1-True, 2-False, 3-True
 - D) 1-True, 2-True, 3-False

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

B

21

A

41

A

61

B

2

C

22

A

42

D

62

A
3
A
23
B
43
A
63
A
4
D
24
C
44
B
64
B
5
A
25
D
45
A
65
A
6
A
26
A
46
B
66
C
7
D
27
B
47
C
67
B
8
B
28
C
48
B
68
A
9
C
29

D
49
D
69
B
10
D
30
A
50
C
70
A
11
A
31
A
51
A
71
D
12
B
32
C
52
B
72
B
13
C
33
C
53
C
73
D
14
A
34
A
54
A
74
C
15
B
35
A
55
A
75

B
16
C
36
C
56
B
17
A
37
B
57
C
18
B
38
B
58
B
19
C
39
A
59
C
20
D
40
A
60
B

Sikkim Manipal University B.Sc(IT) Technical Communication

Part A (One mark questions)

1. Identify the primary tool of the technical writer

- A. Microsoft Word
- B. RoboHelp
- C. English
- D. FrameMaker

2. To analyze your audience, _____ plays a vital role.

- A. Audience Profile Sheet
- B. Personal experience
- C. Field survey
- D. Opinion poll

3. _____ is used as a proxy for noun.

- A. proper noun
- B. Pronoun
- C. Adjective
- D. Article

4. Structures have _____ while functions have instructions

- A. Inscription
- B. Verticality
- C. Description
- D. Linearity

5. _____ is a process that ensures that the information you have written is accurate and functional.

- A. Research
- B. Tooling
- C. Validation
- D. Reading

6. Public relations and the Social Web explores the way in which communication is changing. Identify the tense of the sentence.

- A. Simple present tense
- B. Present continuous tense
- C. Present perfect tense
- D. Present perfect Continuous tense

7. While writing a list, one should avoid including _____ in the list.

- A. Noun items
- B. Less than 10 items
- C. More than 10 items
- D. Verb items

8. According to Pfeiffer and Boogerd, _____ has to be identified in planning multicultural situation for each audience

- A. Experience
- B. Purpose
- C. Software
- D. Opinion

9. Identify the digestible unit of information

- A. Data
- B. Structure
- C. Hierarchy
- D. Chunk

10. Identify the adjective in the sentence, 'Each candidate has to answer the exam.'

- A. Each
- B. Candidate
- C. Answer
- D. Exam

11. The use of loaded words to get reader's attention is told in a dramatic way. This is called _____

- A. Using discriminatory language
- B. Using logical fallacies
- C. Using rhetoric sentences
- D. Sensationalizing

12. Indicate the noun in the following:

This is silk. See how shiny and soft it is!

- A. Shiny
- B. Soft
- C. Silk
- D. This

13. Before the final printing of the document, _____ have to be checked for mistakes in the final corrections

- A. Galley
- B. Printing masters
- C. Margins
- D. Manuscripts

14. Which of the following should be avoided in technical communication?

- A. Brevity
- B. Verbosity
- C. Accuracy
- D. Honesty

15. Articles are not used in the following instance

- A. Beginning of a sentence
- B. Before names of academic subjects
- C. When the nouns end with letter 's'
- D. Before common noun

16. Convert the following negative sentence into positive construction: Williams was accused by management of making predictions that were not accurate.

- A. Williams was accused by management of making predictions that were inaccurate
- B. Williams was not accused by management of making predictions that were accurate
- C. Williams was accused by management of making predictions that were not accurate
- D. Williams was accused by management of not making predictions that were not accurate

17. _____ is a long metal tray used for holding type that is ready for printing.

- A. Blocks
- B. Sheet

C. Vat

B. Galley

18. _____ is the weakness of SDLC

A. Complex steps

B. User input is limited

C. Control

D. Instructions

19. Which of the following is the third step in SDLC phase?

A. Implementation

B. Requirement analysis and design

C. Testing

D. Monitoring

20. In _____ phase the designs are translated into code.

A. Testing

B. Maintenance

C. Feasibility

D. Implementation

Part B (Two mark questions)

21. Lists can be made using _____ or _____

A. capitals or bold

B. dash or asterisk

C. bold or italics

D. bullets or numbers

22. Technical document often differ in _____ and _____ from other non-fiction prose.

A. Style and format

B. Language and grammar

C. Print and Binding

D. Alignment and Language

23. Say whether True or False

i) Technical writer is one who explains the product to the end user. ii) Only the advertisement agencies hire technical writers

A. i) True ii) True

B. i) True ii) False

C. i) False ii) False

D. i) False ii) True

24. Identify True sentences

i) Technical communicators should avoid sexist language ii) Presenting something as proof when it is only an evidence is called sensationalising iii) Sometimes loaded words are used to distort the message which is considered unethical

A. Only i and ii are True

B. Only i and iii are True

C. Only ii and iii are True

D. All i, ii and iii are True

25. Fill in the blanks

i) _____ designed the product, so they know everything about it. ii) _____ have technical knowledge of

the product, but of a more practical nature.

- A. i) technicians ii) experts
- B. i) executives ii) technicians
- C. i) non-specialists ii) experts
- D. i) experts ii) technicians

26. Structures have ____; whereas functions have _____.

- A. instruction; descriptions
- B. Audience analysis; specific ideas
- C. specific ideas; audience analysis
- D. Descriptions; instructions

27. Identify the True and False Statements

i) If you want technical explanation from an SME, request for the same in an e-mail ii) Set up official meetings with SME to ask all relevant questions.

- A. i- True ii - False
- B. i- False ii - True
- C. i- True ii - True
- D. i- False ii – False

28. _____ and _____ can be put together to make a clause

- A. letters and sentences
- B. words and phrases
- C. sentences and paragraphs
- D. alphabet and grammar

29. Name the type of questions that are very significant in an SME interview.

- A. Close ended questions
- B. Open ended questions
- C. Plain questions
- D. Argumentative questions

30. i) _____ is a major branch of philosophy encompassing right conduct and good life

ii) _____ is an example of the sort of ethical code that technical communicators might follow.

- A. i- Legal studies; ii- TWA code
- B. i – Ethics; ii- STC code
- C. i- Law; ii- ASNE code
- D. i- Value studies; ii- Editor's Guild code

31. Identify the equivalent word which should be used instead of the long phrase, i) for the reason that; ii)

Based on the fact that

- A. i - for; ii-if
- B. i – because; ii-In case
- C. i – by; ii – although
- D. i- during; ii-like

Part C (Four mark questions)

32. Identify the type of tenses

i) The world of communications is changing beyond recognition ii) Rob Brown graduated from York University.

iii) More than one writer has created an article

iv) Radio stations have started broadcasting video feeds via their websites.

- A. i- present continuous ii- simple past iii- present perfect

iv- present perfect continuous

B. i- simple present ii- present perfect iii- simple past

iv- past perfect

C. i- present continuous ii- past perfect iii- simple present

iv- past perfect continuous

D. i- present perfect continuous ii- simple present iii- past perfect

iv- past perfect continuous

33. Identify the True (T) and False (F) statements

i) Line editing is also called macro editing

ii) The technical editor need not read all sections for the content compatibility

iii) you can rely on spell checkers in the word-processing programmes while proofreading for the accuracy of spellings

iv) Proof reading symbols are placed in the middle of the text.

A. i-T; ii-F; iii-T; iv-F

B. i-F; ii-T; iii-F; iv-T

C. i-T; ii-F; iii-F; iv-F

D. i-F; ii-F; iii-F; iv-F

34. Match the following structures with their characteristics

i) Horizontal structure - emphasizes dependencies within the process

ii) Vertical structure - single information chunk in the form of instruction

iii) Linear structure - It has a dependency on the first action

iv) non-linear structure - It doesnt require dependency

A. i-b; ii-d; iii-a; iv-c

B. i-c; ii-d; iii-b; iv-a

C. i-a; ii-b; iii-c; iv-d

D. i-d; ii-c; iii-b; iv-a

35. Match the following transitional phrases with their meaning:

i) likewise a) generalises or summarises

ii) on the other hand b) provides examples

iii) in brief c) contradicts the idea

iv) such as d) indicates similarity

A. i-a; ii-b; iii-c; iv-d

B. i-d; ii-c; iii-a; iv-b

C. i-d; ii-c; iii-b; iv-a

D. i-c; ii-d; iii-a; iv-b

36. Fill in the blanks with appropriate prepositions

There are a number of things you can do with Face book; you can list events, you can create a group, for example based around a particular area of interest, or you could work on developing an application.

A. i- at ii- on iii- with iv- in

B. i- of ii- in iii- of iv- with

C. i-of ii-with iii-around iv- on

D. i- at ii- in iii- around iv- in

37. Identify the ethical codes as given in the Society for Technical Communication's Annual Report

i) I will use language and visuals with precision

- ii) I will prefer simple direct expression of ideas
- iii) Satisfy my need for giving information to the audience
- iv) Respect the work of colleagues
- v) Strive continually to improve my professional competence

- A. Only i, ii, iii and iv
- B. Only ii, iii, iv and v
- C. Only i, ii, iv and v
- D. Only i, iii, v and v

38. Identify grammatically correct sentences:

- i) Neither the program head not his team wants to leave the campus
- ii) The accuracy of titles and illustration captions has to be checked very carefully
- iii) Technical documents differ in style and format.
- iv) The editor has to check for the corrections
- v) main issues is favoured in macro editing
- vi) One-to-one proof reading takes far more time than most people realize

- A. Only i, ii, iii and iv
- B. Only ii, iii, iv and vi
- C. Only i, iii, iv and vi
- D. Only i, iii, v and vi

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

C

12

C

21

D

1

A

2

A

13

B

22

A

2

A
3
B
14
B
23
B
3
C
4
C
15
B
24
B
4
B
5
C
16
A
25
D
5
C
6
A
17
D
26
D
6
C
7
C
18
B
27
B
7
C
8
B
19
A

28

B

9

D

20

D

29

B

10

A

30

B

11

D

31

A

Sikkim Manipal University B.Sc(IT) Multimedia Systems

Model Question Paper

Subject Code: BT0077

Subject Name: Multimedia Systems

Credits: 2 Marks: 70

Part A (One mark questions)

1. In _____, Guglielmo Marconi sent his first wireless radio transmission at Pontecchio, Italy.

- A) 1890
- B) 1895
- C) 1990
- D) 1898

2. _____ can be incorporated into a multimedia project in the form of photographs or designs.

- A) Graphics
- B) sound
- C) Moving images
- D) None of the above

3. Graphics that contain movement are often referred to as _____.

- A) animation
- B) motion
- C) Premier Adobe
- D) Flash

4. _____ is principally comprised of tone, line and (sometimes) an awareness of 'perspective' (the illusion of three-dimensional space).

- A) Diagram
- B) Chatting
- C) Drawing
- D) None of the above

5. A _____ has length, width, tone, and texture.

- A) Point
- B) Colour
- C) Line
- D) None of the above

6. _____ refers to the surface quality of an actual or represented substance.

- A) Drawing
- B) Mass
- C) Shading
- D) Texture

7. _____ is the degree of purity of a hue.

- A) Saturation
- B) Chroma
- C) Shade
- D) None of the above

8. _____ is the color of nature, fertility and life.

- A) White

- B) Yellow
- C) Dark blue
- D) Green

9. The _____ model is based on the light-absorbing quality of ink printed on paper.

- A) RGB model
- B) HSB model
- C) CMYK
- D) None of the above

10. _____ is the design and use of typefaces as a means of visual communication from calligraphy to the ever-developing use of digital type.

- A) Typing
- B) Typology
- C) Typography
- D) Extreme kerning

11. _____ refers to scaling the size of type in a non-uniform manner by making alterations in character shapes and spacing.

- A) Optical scaling
- B) Tracking
- C) Kerning
- D) None of the above

12. _____ is the art of writing script in such a way as to express the beauty of what is being written in the formation of the letters themselves.

- A) TrueType
- B) Calligraphy
- C) TTF
- D) Legibility

13. _____ is used to create eye movement and direction.

- A) Symmetry
- B) Balance
- C) Rhythm
- D) None of the above

14. _____ is a matter of relationships namely relationships of height, width, depth and surrounding space.

- A) Unity
- B) Proportion
- C) Emphasis
- D) Rhythm

15. The amount of open space around an object creates a factor called _____.

- A) Design
- B) harmony
- C) scale
- D) gravity

16. _____ is defined as the number of pixels displayed per unit of printed length in an image and is typically measured in pixels per inch.

- A) Image resolution

- B) Image size
- C) Monitor resolution
- D) Output resolution

17. JPG compression analyzes images in blocks of _____ pixels in size and selectively reduces the detail within each block.

- A) 8X16
- B) 16X16
- C) 8X8
- D) 4X4

18. The number of pixels or dots displayed per unit of length on the monitor, usually measured in _____.

- A) lines per meter (lpm)
- B) dots per meter (dpm)
- C) dots per centimeter(dpc)
- D) dots per inch (dpi)

19. JPEG stands for

- A) Joint Photographic Experts Grade
- B) Joint Photo Experiment Group
- C) Joint Photographic Enlarge Group
- D) Joint Photographic Experts Group

20. _____ format is a cross-platform format used for time-based data, such as video and audio.

- A) Raw
- B) QuickTime Movie
- C) Scitex Continuous Tone
- D) PIXAR

Part B (Two mark questions)

21. Which of the following statements are true?

- i. The concept of animation is a key component of newsmidia.
- ii. GIF (Graphics Interchange Format) is another software product that can be utilised to program animation.
- iii. A network that generates a hotspot basically consists of a wireless router and handset.
- iv. All wireless networks generate RF waves and hotspots.

- A) i and iii
- B) i, ii and iii
- C) ii and iv
- D) ii and iii

22. _____ signifies space whereby objects are located in front of one another and _____ signifies space whereby modelling is done with light and dark shades.

- A) Overlap, Shading
- B) Linear perspective, Shading
- C) Shading, Overlap,
- D) Overlap, Linear perspective

23. _____ mode uses up to _____ shades of gray.

- A) Grayscale , 526
- B) Grayscale , 256
- C) Bitmap, 512

D) Lab, 512

24. State True(T) or False(F)

- i. Kerning and tracking can also be applied to text to create special text effects for headlines, subheads, newsletter nameplates, and logos.
- ii. Exaggerated tracking can produce an effective and eye-catching title.

A) i -T , ii-F

B) i -T , ii-T

C) i -F , ii-F

D) i -F , ii-T

25. State True (T) or False (F)

- i) Informal balance is achieved when all the elements of a page are of equal weights and are placed symmetrically on the page.
- ii) Balance is concerned with the distribution of visual interest, which means dealing with what is located where in a composition.

A) i -T , ii-F

B) i -T , ii-T

C) i -F , ii-F

D) i -F , ii-T

26. The 12 bit scanner divides the scanned density range into smaller steps, 4096 steps in _____ bits instead of 256 steps in _____ bits.

A) 10, 7

B) 11, 8

C) 12, 8

D) 12, 7

27. Which of the following statements are true?

- i. The GIF file format supports 8-bit images (up to 1056 colors).
- ii. GIF images can be used to create simple animations
- iii. GIFs use a lossless compression scheme
- iv. GIFs are saved with a .gbf extension.

A) i and iii

B) i, ii and iii

C) ii and iv

D) ii and iii

28. IM is an acronym for _____ and a _____ is a web space that is developed by a group of people.

A) Instant Merging, wiki

B) Instant Messaging, bookmarking

C) Instant Messaging, wiki

D) Inner Mesh, WEC

29. Select the various elements of drawing from the following.

i) Point

ii) Line

iii) Shapes

iv) Memory device

v) Plane

vi) Input device

A) i, ii, iii, v

B) i, ii, vi

C) i, ii, v, vi

D) i, ii, iii, iv, v and vi

30. State True (T) or False (F)

i) Color Yellow is favored by well-balanced people.

ii) Red, white and some green and Purples are considered to be warm colours.

A) i -T , ii-F

B) i -T , ii-T

C) i -F , ii-F

D) i -F , ii-T

31. State True (T) or False (F)

i) The earlier forms of writings were on stone and cave walls comprising of cuneiforms images.

ii) PostScript Type 12 fonts are considered the industry standard and are the most reliable when printing to high-end digital devices such as image setters and digital presses.

A) i -T , ii-T

B) i -F , ii-F

C) i -T , ii-F

D) i -F , ii-T

Part C (Four mark questions)

32. Match the following important events in relation to Multimedia

a) 1945 i. Email

b) 1971 ii. Microsoft, Internet Explorer

c) 1983 iii. Bush wrote about Memex

d) 1996 iv. Backer: Electronic Book

A) a-iii, b-i, c-iv, d-ii

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii ,d-iv

D) a-i, b-iii, c-iv, d-ii

33. State whether the following statements are True (T) or False (F)

a) Common tools used for drawing upon a two-dimensional surface include pencil, coloured pencils, graphite, charcoal, compressed charcoal, ink, pastel, wax crayon and oil pastel.

b) Points are not used in drawings to give shadow and shading effects.

c) Drawings is more or less based on the usage of line.

d) Drawing is the act of creating a representation of any subject by the use of lines and/or value.

A) a-T, b-F, c-T, d-F

B) a-T, b-F, c-T, d-T

C) a-F, b-T, c-F, d-T

D) a-T, b-T, c-F, d-F

34. Match the following

a) HSB i. A hue produced by the addition of white

b) Tint ii. Purity of the colour

c) Saturation iii. Hue, saturation, brightness

d) CIE iv. $L^*a^*b^*$

A) a-iii, b-i, c-iv, d-ii

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii ,d-iv

D) a-i, b-iii, c-iv, d-ii

35. State whether the following statements are True (T) or False (F)

a) The life of the fonts lies in typecases and texts

b) Users can permanently customize the kerning information for a font using a font editor kerning utility.

c) Custom kerning data is preserved when fonts are embedded in an word document.

d) Type 3 fonts are the original non Adobe Post Script font description standard.

A) a-T, b-F, c-T, d-F

B) a-T, b-F, c-T, d-T

C) a-F, b-T, c-F, d-T

D) a-T, b-T, c-F, d-F

36. Match the following

a) Rhythm i. Denominator of the arts.

b) computers ii. a matter of relationship

c) Asymmetrical Balance iii. IBM

d) Scale iv. No mirror images in a composition

A) a-iii, b-i, c-iv, d-ii

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii ,d-iv

D) a-i, b-iii, c-iv, d-ii

37. State whether the following statements are True (T) or False (F)

a) Image resolution and pixel dimensions are not interdependent

b) The amount of detail in an image depends on its pixel dimensions.

c) Most desktop laser printers have a resolution of 1200 dpi and image setters have a resolution of 800 dpi or higher.

d) Most ink jet printers have an approximate resolution of 300 to 600 dpi and produce good results when printing images up to 150 ppi.

A) a-T, b-F, c-T, d-F

B) a-F, b-F, c-T, d-T

C) a-T, b-T, c-F, d-F

D) a-F, b-T, c-F, d-T

38. Match the following

a) TIFF i. Standard Windows format for audio/video data

b) AVI ii. Flexible bitmap image format

c) PICT iii. Default file format for newly created images

d) PSD iv. Format widely used among Mac OS graphics

A) a-iii, b-i, c-iv, d-ii

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii ,d-iv

D) a-i, b-iii, c-iv, d-ii

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

B

21

C

32

A

2

A

22

A

33

B

3

A

23

B

34

C

4

C

24

B

35

C

5

C

25

D

36

D

6

D

26

C

37

D

7

A

27
D
38
B
8
D
28
C
9
C
29
A
10
C
30
C
11
A
31
C
12
B
13
C
14
B
15
C
16
A
17
C
18
D
19
D
20
B

Sikkim Manipal University B.Sc(IT) OOPS with Java

Model Question Paper

Subject Code: BT0074 Book ID : B1002

Subject Name: OOPS with Java

Credits: 4 Marks: 140

Part A (One mark questions)

- _____ is the ability of a Java application to perform multiple tasks at the same time.
A) multiprogramming
B) multithreading
C) multiprocessing
D) multitasking
- Java is designed for the distributed environment of the Internet, because it handles _____ protocols.
A) UDP
B) TCP/IP
C) FTP
D) TEL
- _____ is the earlier name of Java.
A) Oak
B) Basic
C) C
D) Perl
- Which property does not hold good for Java?
A) object oriented
B) secure
C) dynamic
D) complex
- A compiler converts the Java program into an intermediate language representation called _____.
A) bytecode
B) byte
C) byteclass
D) bytejava
- _____ operator is used to create an object.
A) class
B) new
C) print
D) main
- Which of the following is NOT a Java Keyword?
A) abstract
B) native
C) package
D) synchronize
- Java platform consists of JVM and a package of readymade software components. This package is known as _____.
A) Java API
B) JVM API
C) JM API
D) API
- Which of the following is not a looping statement _____?

- A) for
- B) switch
- C) while
- D) do-while

10. _____ is a multi-way branch statement.

- A) switch
- B) continue
- C) break
- D) label

11. Choose the proper operator precedence while evaluating an expression.

- 1. comparison operators
- 2. logical operators
- 3. increment operators
- 4. arithmetic operators

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

12. The _____ statement is used inside the switch to terminate the sequence.

- A) break
- B) jump
- C) exit
- D) goto

13. A class that is inherited is called a _____.

- A) superclass
- B) subclass
- C) subsetclass
- D) relativeclass

14. A/An _____ determines the features of a class that may be used by other classes.

- A) specifier
- B) inheritance
- C) implementation
- D) access specifier

15. Which property of Java allows the creation of hierarchical classifications?

- A) interface
- B) inheritance
- C) robust
- D) distributed

16. Which of the following is WRONG statement with respect to rules for overriding methods?

- A) The method name and the order of arguments should be identical to that of the super class method
- B) The return type of both the methods must be the different
- C) The overriding method cannot be less accessible than the method it overrides
- D) An overriding method cannot raise more exceptions than those raised by the super class

17. The class at the top of the exception classes' hierarchy is called _____.

- A) common
- B) throwable
- C) NULL
- D) catch

18. Find the keyword which is not used to implement exception.

- A) try
- B) catch
- C) finally
- D) access

19. Which of the following is not an exception in Java?

- A) Arithmetic Exception
- B) Nullpointer Exception
- C) ArrayoutofBounds Exception
- D) Logical Exception

20. Which of the following definitions hold good for exception?

- A) Abnormal event that occurs during program execution and disrupts the normal flow of Instruction
- B) The unexpected situations that may occur during program execution
- C) The term exception denotes an exception event.
- D) All the above

21. What are the two basic units of execution?

- A) Multitasking and Multiprocessing
- B) Synchronizing and interrupt
- C) Multitasking and Synchronizing
- D) Processes and threads

22. The argument to sleep() specifies the delay period in _____.

- A) microseconds
- B) milliseconds
- C) seconds
- D) minutes

23. Objects with methods that can be invoked across JVM are called _____.

- A) remote objects
- B) distributed objects
- C) virtual objects
- D) None of the above

24. The _____ class defines a remote object implementation class that implements a single remote interface and no other interfaces.

- A) Boolean
- B) byte
- C) task
- D) compute engine

25. Which of the following is a connection based protocol?

- A) TCP
- B) UDP
- C) HTP
- D) All the above

26. _____ is an independent, self-contained message sent over the network whose arrival, arrival time and content are not guaranteed.

- A) task
- B) thread
- C) datagram
- D) applet

27. JSP combines _____ and new scripting tags.

- A) HTTP

B) HTML

C) XML

D) WML

28. To test JSP we can use _____.

A) Java web server

B) GUI

C) Java beans

D) None of the above

29. Which contains the class libraries that will create servlets?

A) JSDK

B) MS

C) BMS

D) BDMS

30. A call to _____ establishes the MIME type of the HTTP response.

A) getwriter()

B) setContentType()

C) contenttype()

D) writer()

31. Builder tools discover a bean's features by a process known as _____.

A) reflection

B) manipulation

C) both A and B

D) introspection

32. How many components are there in JDBC?

A) 2

B) 3

C) 4

D) 5

33. JDBC supports _____.

A) one-tier processing model

B) two-tier processing model

C) three-tier processing model

D) both B and C

34. CORBA stands for _____.

A) Common Operation Request Broker Architecture

B) Common Object Request Bean Architecture

C) Common Object Request Broker Architecture

D) Component Object Request Broker Architecture

35. _____ defines an architecture for distributed objects.

A) CORBA

B) JDBC

C) COBRA

D) None of the above

36. _____ is a technology used in Java programming for objects interacting on different platforms across a network.

A) Java IDL

B) Java OMG

C) Java TCP

D) Java ORB

37. Servlets provide an efficient replacement for _____ scripts.

- A) CGI
- B) GCI
- C) API
- D) PIC

38. The term AJAX is used to _____.

- A) describe a set of technologies that allow users to provide browsing experience
- B) describe a set of technologies that allow browsers to provide users with a more natural browsing experience
- C) describe a set of technologies that allow users to use JSP
- D) none of the above

39. Choose the CORRECT statement.

- A) To write JSP code you require a browser
- B) To test the JSPs you need a server engine
- C) JSPs look like HTML script
- D) JSP combines HTML and JDK tools

40. Choose the WRONG Statement.

- A) Java is inherently suited for large client/server applications
- B) A servlet is a small pluggable extension to a server that enhances the server's functionality
- C) Java does not support networking.
- D) When you use servlet to create dynamic content for a web page or otherwise extend the functionality of a web server.

Part B (Two mark questions)

41. _____ is a highly optimized set of instructions designed to be executed by the Java run-time system, which is called the _____.

- A) Bytecode, Java Virtual Machine
- B) Data Code, Java machine
- C) Source code, Microsystems
- D) Bytecode, Microsystems

42. Which of the following is not a Java buzzword?

- 1. Simple
- 2. Servlets
- 3. Portable
- 4. Object-oriented
- 5. Applets
- 6. Multithreaded

- A) 4 and 6 only
- B) 1 and 3 only
- C) 5 and 6 only
- D) 2 and 5 only

43. Two kinds of data types in Java are _____ and _____

- A) primitive, standard
- B) primitive, abstract
- C) abstract, derived
- D) constants, variables

44. Which of the following is not a Java data type?

- 1. byte
- 2. register
- 3. long
- 4. nibble

5. int

6. char

A) 4 and 5 only

B) 1 and 3 only

C) 5 and 6 only

D) 2 and 4 only

45. The output of the following program is _____.

A) The sum of Two number is: 30

B) The sum of Two number is: 20

C) The sum of Two number is: 10

D) The sum of Two number is: 40

46. What is the output of the following program?

A) This program prints the value of i from 0 to 10 B) This program prints the value of i from 1 to 100 C) This program

prints the value of i from 1 to 9 D) This program prints the value of i from 1 to 10

47. The _____ keyword is used to derive a class from a superclass. The _____ keyword is used to declare classes that define common properties and behavior of other classes

A) public, friend

B) abstract, extends

C) extends, abstract

D) friend, public

48. A class can be declared as _____ if you do not want the class to be subclassed. Using the _____ keyword we can abstract a class interface from its implementation

A) protected, interface

B) final, interface

C) public, friend

D) final, protected

49. The term exception denotes an _____ event. Java handles exceptions in the _____ way.

A) exceptional, object-oriented

B) traditional, object-oriented

C) exceptional, procedural

D) friend, public

50. Identify the situations in which a null exception is NOT thrown.

1. Using an object without allocating memory for it.

2. Calling the methods of a null object.

3. Accessing or modifying the attributes of a null object.

4. Attempt to access an array element beyond the index of the array

A) 1

B) 3

C) 4

D) 2

51. The two major classes for byte streams are _____ and _____.

A) Input,Output.

B) byteStream,bitStream.

C) InputStream,OutputStream.

D) stringStream ,stingStream.

52. State True and False.

1. A Thread can voluntarily relinquish control

2. A thread can be preempted by a higher-priority thread

A. 1-T,2-F

B. 1-T,2-T

C. 1-F,2-F

D. 1-F,2-T

53. A class that implements a remote interface should at least do the following:

1. Declare the remote interfaces being implemented
2. Define the constructor for each remote object
3. Provide an implementation for each remote method in the remote interfaces

A. 1, 2

B. 2, 3

C. 1, 2, 3

D. None of the above

54. Which of the following method does not belong to graphics class?

A. Text

B. pixel

C. Lines

D. Circle and ellipse.

55. Which of the steps are required for creating distributed applications Using RMI?

1. Designing and implementing the components of your distributed application.
2. Compiling sources.
3. Making classes network accessible.
4. Starting the application.

A. 1, 2

B. 2, 3

C. 1, 2, 3

D. 1,2,3,4

56. What is the function of the last statement in the while loop?

```
while ((userInput = stdin.readLine()) != null) {  
    out.println(userInput);  
    System.out.println("echo: " + in.readLine());  
}
```

A. reads a line of information from the Buffered Reader which is not connected to the socket.

B. reads a line of information from the socket.

C. reads a line of information from the BufferedReader connected to the socket.

D. syntax error

57. The _____ is used to handle the errors that may occur during the invocation of a Remote method. Remote Method Invocation uses _____ Protocol.

A) Interface, TCP

B) Exception, TCP

C) Exception, UDP

D) Interface, UDP

58. State True or False

1. Java IDL is based on the COBOL

2. The stub and the skeleton communicate through Application layer.

A. 1-T,2-T

B. 1-T,2-F

C. 1-F,2-F

D. 1-F,2-T

59. Which of the following method can be used to move the cursor

1. next()

2. previous()

3. first()

4. last()

A. 1, 2

B. 1, 2, 3, 4

C. 1, 2, 3

D. 2, 3

60. The basic idea behind 3-tier architecture is that to separate _____ from the user interface.

A. application logic

B. presentation logic

C. server logic

D. client logic

Part C (Four mark questions)

61. Match the following:

Set-A Set-B

a. Applications i. They are programs that do not need a browser for execution.

b. Applets ii They are collections of classes that can be shared by other Java programs

c. Servlets iii. This program extends the functionality of Web servers.

d. Packages iv. They are Programs that run off a Web page. A) a-iv, b-ii, c-iii, d-i B) a-i, b-iv, c-iii, d-ii C) a-iii, b-i, c-ii ,d-iv D)

a-i, b-iii, c-iv, d-ii

62. Match the following:

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

D) a-i, b-iii, c-iv, d-ii 63. State True or False. 1. The data members and methods of a class are defined inside the class body 2. The syntax used to declare a class variable is: 3. An access Specifier defines where a method can be accessed A)

1-T, 2-T, 3-F B) 1-F, 2-T, 3-F C) 1-T, 2-T, 3-T D) 1-T, 2-F, 3-T

64. What is the output of the following program?

A) ABCDEF

ABCDEF

B) ABCDEF

ABC

C) ABC

DEF

D) ABCDEF

CDE 65. Which statements in the program will result in syntax error?

1. class Box {

2. double width;

3. double height;

4. double depth;

5. Box(double w double h double d)

6. {

7. width w;

8. height = h;

9. depth = d;

10. }

11. public String toString() {

12. return "Dimensions are " + width + " by " +

13. depth + " by " + height + ".";

14. }

15. }

```

16. class toStringDemo() {
17. public static void main(String args[] ) {
18. Box b = new Box(10; 12; 14);
19. String s = "Box b: " + b; // concatenate Box object
20. System.out.println(b); // convert Box to string
21. System.out.println(s);
22. }
23. } A) 5, 7, 16, 18 B) 8, 9, 19, 20 C) 12,13,16,20 D) 5, 8, 13, 19

```

66. Find the relationship?

- A) 1= Is-A, 2 = A-Kind-of ,3 = Is-A
- B) 1= Is-A, 2 = Is-A, 3 = A-Kind-of
- C) 1= A-Kind-of, 2 = A-Kind-of , 3 = Is-A
- D) 1= Is-A, 2 = Is-A, 3 = Is-A

67. This program will results in Error during Compilation because

```

class A {
int i;
private int j;
void setij(int x, int y) {
i = x;
j = y;
}
}
class B extends A {
int total;
void sum() {
total = i + j; }
}
class Access {
public static void main(String args[]) {
B subOb = new B();
subOb.setij(10, 12);
subOb.sum();
System.out.println("Total is " + subOb.total);
}}

```

- A) Syntax error B) Since i is public C) Since Class B cannot extends A D) Since j is declared as private

68. State true or false.

- a. Running out of memory is an unexpected situation during program execution
- b. The try statement can be nested
- c. A try block must have at least one catch block that follow it immediately
- d. Three classes are derived from Throwable class

- A) a-T,b-T,c-F,d-F
- B) a-T,b-T,c-F,d-T
- C) a-F,b-T,c-T,d-F
- D) a-T,b-T,c-T,d-F

69. Match the following Method Explanation

```

A
void write (int n)
i

```

Writes the specified byte of data to the output stream.

B

void write (byte [] b)

ii

Writes a segment of an array to the output streams.

C

void write (byte [] b, int off, int len)

iii

Writes an array of bytes to the output stream.

D

void flush ()

iv

Force writes whenever the data accumulates in the output stream.

A) a-iv, b-ii, c-iii, d-i B) a-iv, b-i, c-iii, d-ii C) a-iii, b-i, c-ii, d-iv D) a-i, b-iii, c-ii, d-iv 70. Match the following.

Service

Description

a. Object life cycle

i. Defines how CORBA objects are created, removed, moved, and copied

b. Naming

ii. Defines how CORBA objects can have friendly symbolic names

c. Events

iii. Decouples the communication between distributed objects

d. Relationships

iv. Provides arbitrary typed n-ary relationships between CORBA objects

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

71. AJAX incorporates:

1. Standards-based presentation using XHTML and CSS

2. Dynamic display and interaction using the Document Object Model

3. Asynchronous server communication using XMLHttpRequest

4. JavaScript binding everything together A) 1,2 B) 2,3 C) 3,4 D) 1,2,3,4

72. Match the following i. ActionEvent object a. generated when scrollbars and other elements are used ii. AdjustEvent object b. generated when a component is activated iii. ContainerEvent object c. generated when components are added iv. FocusEvent object d. generated when a component receives Focus for input A) i-d, ii-c, iii-a, iv-b B) i-d, ii-b, iii-a, iv-c C) i-b, ii-c, iii-a, iv-d D) i-b, ii-a, iii-c, iv-d

73. State True or False.

1. Model components provide a "model" of the business logic or data behind a Struts program.

2. Model components do not provide interfaces to databases or back-end systems.

3. Model components are generally standard Java classes. A. 1-T, 2-T, 3-F B. A. 1-T, 2-T, 3-T C. A. 1-F, 2-T, 3-F D. A. 1-T, 2-F, 3-T

74. Find the WRONG statements from the List

The BeanBox allows you to:

1. Drop beans onto a composition window.

2. Create directory for remote user

3. Resize and move beans around.

4. Connect a bean event source to an event handler method.

5. Efficiently construct applications

6. Save and restore sets of beans.

7. Make applets from beans.

8. Generate events that are sent to other objects

9. Get an introspection report on a bean.

10. Add new beans from JAR files. A) 1, 3, 5 B) 4,6, 8 C) 2, 5, 8 D) 2, 4, 6 75. Which of the following are 2-tier systems disadvantage?

1. The processing load is given to the PC while more powerful server acts as a traffic controller between the application and the database.

2. Maintenance is the greatest problem.

3. In case of a 2-tier architecture system, it is necessary to go to each client machine and make the necessary modifications to the programs loaded on them. A) 1 only B) 2 only C) 3 only D) All the above

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

B

21

D

41

A

61

B

2

B

22

B

42

D

62

B

3

A

23

A

43

B

63

D

4

D

24

D

44

D

64
D
5
A
25
A
45
A
65
A
6
B
26
C
46
A
66
A
7
D
27
B
47
C
67
D
8
A
28
A
48
B
68
D
9
B
29
A
49
A
69
D
10
A
30
B
50
C
70

D
11
D
31
D
51
C
71
D
12
A
32
C
52
B
72
D
13
A
33
D
53
C
73
D
14
D
34
C
54
B
74
C
15
B
35
A
55
D
75
D
16
B
36
A
56
C
17
B

37

A

57

B

18

D

38

B

58

C

19

D

39

C

59

B

20

D

40

C

60

A

Sikkim Manipal University B.Sc(IT) RDMS with SQL

Model Question Paper

Subject Code: BT0075

Subject Name: RDBMS and MySQL

Credits: 4 Marks: 140

Part A (One mark questions)

1. MySQL Server works in _____
 - A. client/server
 - B. specification gap embedded systems
 - C. both A) and B)
 - D. None of the above.
2. MySQL clients can be written in _____
 - A. only C language
 - B. any languages which provide C bindings
 - C. only Java
 - D. assembly language
3. MySQL programs can be invoked with the _____ option to obtain online assistance.
 - A. --help
 - B. -?
 - C. -h
 - D. both A) and B)
4. The number of indexes allowed per table in MySQL are _____.
 - A. 24 B. 36
 - C. 64
 - D. any number
5. In MySQL, which of the following indicates the maximum display width for integer data types?
 - A. M B. N
 - C. O
 - D. P
6. In MySQL, for a medium-sized integer, the signed range is _____.
 - A. -32768 to 32767 B. -8388608 to 8388607
 - C. -2147483648 to 2147483647
 - D. 0 to 65535
7. FLOAT (p) syntax is provided for _____ compatibility.
 - A. OOPS B. hardware
 - C. ODBC
 - D. Operating System (OS)
8. CHAR(30) can hold up to _____ characters
 - A. 30 B. 60
 - C. 15
 - D. 45
9. Which of the following is a synonym for CREATE DATABASE?
 - A. USE SCHEMA B. SHOW SCHEMA

C. CREATE SCHEMA

D. SELECT SCHEMA

10. CREATE INDEX is mapped to an _____ statement to create indexes.

A. ALTER TABLE B. CREATE TABLE C. MERGE TABLE D. SHOW TABLE

11. Which of the following keywords prevent an error from occurring if the table exists?

A. IF EXISTS B. IF NOT EXISTS C. IF CREATED D. IF NOT CREATED

12. In MySQL, Inserting a negative number is regarded as inserting a _____

A. inserting negative number B. inserting positive number C. very large negative number D. very large positive number

13. Which of the following command is used to enter data into the tables of a database?

A. INSERT B. MOVE C. COPY

D. SELECT

14. What happens when we do not surround string values with quotation marks while inserting into a table?

A. MySQL will treat them as numeric values B. MySQL will treat them as OUTFILE C. MySQL will treat them as field names.

D. MySQL will treat them as wildcard.

15. Which of the following is used as a dummy table name in situations where no tables are referenced?

A. DUAL B. DUMMY C. VIRTUAL D. SAME

16. Which of the following is NOT the valid type of Joins?

A. INNER

B. OUTER (LEFT, RIGHT, FULL) C. CROSS

D. UNION

17. Which of the following type of join returns a Cartesian product.(i.e. it combines every row from the left table with every row in the right table)?

A. INNER

B. OUTER (LEFT, RIGHT, FULL)

C. CROSS

D. UNION

18. UNION is used to combine the result from multiple _____ statements into a single result set.

A. SELECT

B. USE

C. FROM

D. WHERE

19. Which of the following operator is used to test the match of data within the result set available and perform the outer query operation accordingly?

A. SOME

B. ANY

C. IN

D. OUT

20. The _____ operator can be used to check if a subquery produces any results at all.

A. ALL

B. EXISTS

C. ANY

D. SOME

21. Which of the following operator is the opposite of the = operator which is used to test whether the two

sides of an expression are unequal?

- A. the != operator
- B. the <> operator
- C. the == operator
- D. the => operator

22. For functions that operate on string positions, the first position is numbered _____

- A. 0
- B. 1
- C. 2
- D. 3

23. Which of the following functions returns the length of the string str in bits?

- A. BIT_LENGTH(str)
- B. CHAR_LENGTH(str)
- C. LENGTH(str)
- D. CONCAT(str1,str2,...)

24. Which of the following text searches interprets the search string using the rules of a special query language?

- A. A Boolean search
- B. A natural language search
- C. A query expansion search
- D. both (B) and (C)

25. MySQL uses implied Boolean logic where + stands for _____

- A. NOT
- B. OR
- C. AND
- D. ADD

26. CAST (str AS BINARY) is the same thing as _____

- A. CAST(expr AS CHAR)
- B. BINARY str
- C. CONVERT(... USING ...)
- D. CONVERT(expr,type)

27. The MySQL statement SET autocommit=0 is used to _____ autocommit mode.

- A. enable
- B. disable
- C. start
- D. RESET

28. In general, some statements which cannot be rolled back are _____

- A. data definition language (DDL) statements
- B. ROLLBACK statement
- C. Modifications to non-transactional tables
- D. Both (A) and (C)

29. Which of the following is not an Administrative statement?

- A. CACHE INDEX
- B. ANALYZE TABLE
- C. OPTIMIZE TABLE
- D. LOAD DATA INFILE

30. To redefine the MySQL delimiter, use the _____ command.

- A. delimiter
- B. dorepeat()
- C. CALL
- D. START

31. What does the statement "SHOW CREATE FUNCTION func_name" display?

- A. displays information about stored functions.
- B. displays information about user defined functions.
- C. displays information about status of system
- D. all of the above.

32. The _____ statement may only be used inside a BEGIN ... END compound statement and must be at its start, before any other statements.

- A. DECLARE
- B. SELECT
- C. CASE
- D. LEAVE

33. In MySQL, the ITERATE statement can only appear within LOOP, REPEAT, and _____ statements.

- A. IF
- B. LEAVE
- C. CASE
- D. WHILE

34. Which of the following is the correct mysql program to connect to the server as the MySQL root user?

- A. shell> mysql –user = mysql
- B. shell> mysql –user = root mysql
- C. shell> mysql = root mysql
- D. shell> user = root mysql

35. To set up the custom accounts without GRANT, we can use _____ statements to modify the grant tables directly.

- A. UPDATE
- B. USAGE
- C. INSERT
- D. SELECT

36. With the _____ privilege, you can read any file into a database table.

- A. FILE
- B. PROCESS
- C. GRANT
- D. SELECT

37. Which of the following options for mysqld concerning Security do not allow TCP/IP connections over the network?

- A. --skip-name-resolve
- B. --skip-networking
- C. --ssl*
- D. --local-infile[={0|1}]

38. The server writes information to _____ when clients connect or disconnect, and it logs

each SQL statement received from clients.

- A. General Query Log
- B. Error log
- C. Binary log
- D. slow query log

39. If you specify no filename for the general query log, the default name is _____ in the data directory.

- A. user_name.log
- B. host_name.log
- C. file_name.log
- D. super_user.log

40. Which of the following log contains all statements that update data?

- A. General Query Log
- B. Error log
- C. Binary log
- D. slow query log

Part B (Two mark questions)

41. In MySQL, which of the following command is used to show the metadata regarding the table created? (1-17-A)

- A. DESC B. SHOW
- C. SELECT
- D. CREATE

42. In MySQL, which of the following command is used to select a database already present in the databases?

- A. USE B. SHOW
- C. SELECT
- D. CREATE

43. BLOB columns are treated as _____ whereas TEXT columns are treated as _____

- A. non-binary strings (character strings), binary strings (byte strings)
- B. binary strings (byte strings), non-binary strings (character strings)
- C. binary strings (byte strings), binary strings (byte strings)
- D. non-binary strings (character strings), non-binary strings (character strings)

44. In MySQL, an enumeration value of ENUM type must be a _____

- A. quoted string literal
- B. non-quoted string literal
- C. quoted non-string literal
- D. non-quoted non-string literal

45. KEY is normally a synonym for _____ and the key attribute PRIMARY KEY can also be specified as just _____ when given in a column definition.

- A. INDEX, KEY
- B. SYNTAX, UNIQUE
- C. UNIQUE, KEY
- D. INDEX, UNIQUE

46. What happens if a storage engine specified is not available?

- A. MySQL uses the default engine instead
- B. error occurs
- C. MySQL automatically creates new engine

D. MySQL uses other engine.

47. Retrieving Information from a Table, _____ is used to retrieve rows selected from one or more tables, and _____ can include statements and subqueries.

A. DESC, LOAD B. SELECT, UNION

C. UNION, DESC

D. LOAD, SELECT

48. MySQL extends the GROUP BY clause so that you can also specify _____ AND _____ after columns named in the clause.

A. SELECT, UNION B. AUTOINCREMENT, AUTODECREMENT

C. ASC, DESC

D. MOVE, LOAD

49. You can delete a table with the _____ command, whereas _____ is used to join tables within a database.

A. DROP TABLE, JOIN B. DELETE, JOIN.

C. REPLACE, UNION

D. TRUNCATE, UNION

50. The actual syntax for subqueries in a SELECT statement's FROM clause. Is:

A. SELECT [AS] name FROM (subquery)

B. SELECT ... FROM (subquery)

C. SELECT ... FROM (subquery) [AS] name ...

D. none of the above.

51. The _____ syntax returns the position of the first occurrence of substring substr in string str. The _____ syntax returns the position of the first occurrence of substring substr in string str, starting at position pos.

A. SUBSTRING(str,pos), SUBSTRING(str FROM pos)

B. INSERT(str,pos,len,newstr), LTRIM(str)

C. LOCATE(substr,str), LOCATE(substr,str,pos)

D. INSTR(str,substr), BIN(N)

52. State True or False. 1. In MySQL, PASSWORD() does not perform password encryption in the same way that Unix passwords are encrypted.

2. In MySQL, PASSWORD() encryption is both-way (and hence reversible). A. 1-T, 2-F B. 1-F, 2-T C. 1-F, 2-F D. 1-T, 2-T

53. Match the „Group by functions' and their meaning used in MySQL.

1. COUNT(expr)

i. Returns a count of the number of non-NULL values in the rows retrieved by a SELECT statement.

2. COUNT(DISTINCT expr,[expr...])

ii. Returns a count of the number of different non-NULL values.

A. 1-ii, 2-i

B. 1-i, 2-ii,

C. 1-i, 2-i

D. 1-ii, 2-ii

54. Which of the following statement rolls back a transaction to the named savepoint?

A. ROLLBACK TO SAVEPOINT

B. ROLLBACK

C. SAVEPOINT

D. COMMIT TO SAVEPOINT

55. State True or False.

1. The main reasons to use LOCK TABLES are for emulating transactions or to get more speed when updating tables.

2. When you use LOCK TABLES, you must lock all tables that you are going to use in your queries.

A. 1-T, 2-F

B. 1-T, 2-T

C. 1-F, 2-F

D. 1-F, 2-T

56. On execution of the SHOW FUNCTION STATUS statement, the same fields or columns as that of _____ are displayed.

A. SHOW CREATE PROCEDURE

B. SHOW CREATE FUNCTION.

C. SHOW PROCEDURE STATUS

D. ALTER PROCEDURE

57. Which of the following statement is correctly used while Declaring Cursors?

A. DECLARE cursor_name CURSOR FOR sql_statement

B. DECLARE CURSOR

C. DECLARE CURSOR FOR sql_statement

D. DECLARE cursor_name CURSOR

58. What is the reason for using FLUSH PRIVILEGES when you create accounts with INSERT ?

A. To tell the client to re-read the grant tables.

B. To tell the server to re-read the grant tables.

C. To tell the server to do nothing

D. To synchronize client and server.

59. State True or False.

1. The SUPER privilege can be used to terminate client connections, change server operation by changing the value of system variables, and control replication servers.

2. The GRANT statement does NOT support resource control options for limiting the extent of server use allowed to an account.

A.1-T, 2-T

B. 1-T, 2-F

C. 1-F,2-T

D. 1-F, 2-F

60. State True or False.

1. By default, the binary log is not synchronized to disk at each write.

2. When the slow query log is enabled, output is written to any destinations specified by the --log-output option or log_output system variable.

A.1-T, 2-T

B. 1-T, 2-F

C. 1-F,2-T

D. 1-F, 2-F

Part C (Four mark questions)

61. Which of the following command enables us to load the data into the specified database table?

A. LOAD DATA INFILE

- B. USE DATA INFILE
- C. COPY DATA INFILE
- D. MOVE DATA INFILE

62. Which of the following are the date and time types for representing temporal values?

- A. DATETIME, DATE, TIMESTAMP, TIME, and YEAR. B. DATE, TIME, and YEAR only.
- C. DAY, DATE, TIME, and YEAR only
- D. DATETIME, TIMESTAMP only.

63. Match the following about syntax in MySQL.

1. CREATE TABLE Syntax

i. change the overall characteristics of a database

2. ALTER DATABASE Syntax

ii. creates a table with the given name

3. ALTER TABLE Syntax

iii. obtain the information on the structure of a table

4. DESCRIBE syntax

iv. allows you to add, remove, or modify table fields or indices without the need to re-create the entire table

A. 1-ii, 2-i, 3-iii, 4-iv

B. 1-iv, 2-iii, 3-ii, 4-i

C. 1-ii, 2-i, 3-iv, 4-iii

D. 1-iii, 2-ii, 3-iv, 4-i

64. Which of the following query is correct to retrieve a list of only those accounts with balances lower than \$1000.00.?

A. mysql> SELECT accountName, accountBalance FROM accounts WHERE accountBalance < 1000;

B. mysql> SELECT FROM accounts WHERE accountBalance < 1000 and accountName, accountBalance;

C. mysql> SELECT accounts WHERE accountBalance < 1000 FROM accountName, accountBalance;

D. mysql> SELECT accountBalance < 1000 FROM accounts and accountName, accountBalance;

65. Which of the following is the correct form of DO syntax and TRUNCATE syntax?

A. DO expr and TRUNCATE tbl_name

B. DO [expr] ... and TRUNCATE [TABLE]

C. DO expr [, expr] ... and TRUNCATE [TABLE] tbl_name

D. None of the above.

66. State True or False.

1. A row subquery is a subquery variant that returns a single row and can thus return more than one column value

2. Subqueries with ANY, IN, and SOME can be used in cases where a set of values need to be compared and the output determined.

A. 1-F, 2-T,

B. 1-T, 2-F

C. 1-F, 2-F

D. 1-T, 2-T

67. Match the meta characters and their meaning used in MySQL.

1. +

i. Match at the end of a string

2. ?

ii. Match one or more occurrences of the preceding character

3. \$

iii. Match zero or one occurrences of the preceding character

A. 1-ii, 2-i, 3-iii

B. 1-i, 2-ii, 3-iii

C. 1-ii, 2-iii, 3-i

D. 1-iii, 2-ii, 3-i

68. Match the following about functions used in MySQL.

1. COUNT(expr)

i. Executes the expression expr repeatedly count times

2. COUNT(DISTINCT expr,[expr...])

ii. Returns a count of the number of non-NULL values in the rows retrieved by a SELECT statement.

3. BENCHMARK(count,expr)

iii. Returns a count of the number of different non-NULL values.

A. 1-iii, 2-i, 3-ii

B. 1-i, 2-ii, 3-iii

C. 1-ii, 2-iii, 3-i

D. 1-iii, 2-ii, 3-i

69. State True or False.

1. WRITE locks normally have higher priority than READ locks, to ensure that updates are processed as soon as possible

2. You should use HIGH_PRIORITY WRITE locks only if you are sure that there will eventually be a time when no threads will have a READ lock.

3. You can lock all tables in all databases with read locks with the FLUSH TABLES WITH READ

4. If you use ALTER TABLE on a locked table, it may become locked.

A. 1-T, 2-T, 3-F, 4-T

B. 1-T, 2-T, 3-T, 4-T

C. 1-T, 2-F, 3-T, 4-F

D. 1-T, 2-T, 3-T, 4-F

70. Match the following regarding the stored procedure used in MySQL.

1. Stored Procedure

i. These statements cause the output to display the metadata regarding the procedures and functions created.

2. Show Procedure Status

ii. This statement invokes a stored procedure that was defined previously with CREATE PROCEDURE

3. CALL Statement

iii. refers collectively to standalone stored functions, standalone procedures, packaged functions, and procedures.

A. 1-iii, 2-i, 3-ii

B. 1-i, 2-ii, 3-iii

C. 1-ii, 2-iii, 3-i

D. 1-iii, 2-ii, 3-i

71. State true or false statements related to control statement in MySQL.

1. The syntax of a CASE statement inside a stored procedure differs slightly from that of the SQL CASE

expression.

2. The statements within a WHILE statement are repeated as long as the search_condition is true.

3. Multiple cursors may be defined in a routine, but each must NOT have a unique name.

4. Cursor CLOSE Statement closes a previously opened cursor.

A. 1-F, 2-F, 3-T, 4-T

B. 1-T, 2-T, 3-F, 4-T

C. 1-T, 2-F, 3-T, 4-F

D. 1-T, 2-T, 3-F, 4-F

72. Which of the following mysqladmin command can be used for assigning the accounts Password in MySQL?

A. shell> mysqladmin -h host_name password "newpwd"

B. shell> mysqladmin -u user_name password "newpwd"

C. shell> mysqladmin -u user_name -h host_name password "newpwd"

D. shell> mysqladmin password "newpwd"

73. Which of the following statement is correct if you want a user to have the ability to create new users that have those privileges that the user has the right to grant?

A. GRANT INSERT ON mysql.user TO 'user_name'

B. GRANT INSERT(user) ON mysql.user TO 'user_name'@'host_name';

C. GRANT TO 'user_name'@'host_name';

D. GRANT ON mysql.user TO 'host_name';

74. State true or false statements related to security Issues with LOAD DATA LOCAL.

1. By default, all MySQL clients and libraries in binary distributions are compiled with the --enable-local-infile option, to be compatible with MySQL 3.23.48 and before.

2. You can disable all LOAD DATA LOCAL commands from the server side by starting mysqld with the --local-infile=0 option.

3. If you use LOAD DATA LOCAL in Perl scripts or other programs that read the [client] group from option files, you can add the local-infile=1 option to that group.

4. Even if LOAD DATA LOCAL INFILE is disabled, either in the server or the client, a client that attempts to issue such a statement receives NO error message:

A. 1-F, 2-F, 3-T, 4-T

B. 1-T, 2-T, 3-T, 4-F

C. 1-T, 2-F, 3-T, 4-F

D. 1-T, 2-T, 3-F, 4-F

75. Find TRUE statements about Log File maintenance.

1. You should not remove binary logs until you are certain that their contents have been processed by all slaves

2. You can force MySQL to start using new log files by issuing a FLUSH LOGS statement or executing mysqladmin flush-logs or mysqladmin refresh.

3. The server does NOT create a new binary log file when you flush the logs.

4. If the server was given an error log filename with the --log-error option, it renames the error log with the suffix -old and creates a new empty error log file.

A. 1,2,3

B. 2,3,4

C. 1,3,4

D. 1,2,4

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

C

21

B

41

A

61

A

2

B

22

B

42

A

62

A

3

D

23

A

43

B

63

C

4

C

24

A

44

A

64

A

5

A

25
C
45
A
65
A
6
B
26
B
46
A
66
D
7
C
27
B
47
B
67
C
8
A
28
B
48
C
68
C
9
C
29
D
49
A
69
C
10
A
30
A
50
C
70

A
11
B
31
B
51
C
71
B
12
D
32
A
52
A
72
C
13
A
33
A
53
B
73
B
14
C
34
B
54
A
74
B
15
A
35
C
55
B
75
D
16
D
36
A

56
C
17
C
37
B
57
A
18
A
38
A
58
B
19
C
39
B
59
B
20
B
40
A
60
A

Sikkim Manipal University B.Sc(IT) TCP/IP

Model Question Paper

Subject Code: BT0076

Subject Name: TCP/IP

Credits: 4 Marks: 140

Part A (One mark questions)

1. ARPA stands for.....

- a) Advanced Research Projects Agency
- b) Advanced Research Protocol Agency
- c) Advanced Research Protocol algorithm
- d) Advanced Research Projects Algorithm

2. In 1975 the ARPANET was converted from an experimental network to an operational network, and the responsibility for administering the network was given to the

- a) ARPA
- b) DARPA
- c) DCA
- d) NSF

3. Theinterconnect U.S. government networks.

- a) NAs
- b) FIXs
- c) CIX
- d) MAEs

4. A.....is an implementation of the same protocol in the equivalent layer on a remote system.

- a) layer
- B) protocol stack
- c) peer
- d) Physical layer

5. is the protocol that hides the underlying physical network by creating a virtual network view.

- a) TCP
- b) IP
- c) UDP
- d) ARP

6. The IP datagram header has a minimum length of octets.

- a) 16
- b) 18
- c) 20
- d) 24

7. In case of IP datagram the TOS field value 0010 means.....

- a) Minimize delay
- b) Maximize throughput
- c) Minimize monetary cost
- d) Maximize reliability

8. IGMP stands for.....

- a) Internet gateway message protocol
- b) Internet gateway management protocol
- c) Internet group management protocol
- d) Internet group management protocol

9. Routing domains exchange routing information with other domains using

- a) Gateway to Gateway Protocol (GGP).
 - b) Exterior Gateway Protocol (EGP)
 - c) Interior Gateway Protocol (IGP)
 - d) Border Gateway Protocol (BGP).
10. NAP stands for.....
- a) Network Access Points
 - b) Network Access Protocol
 - c) Node Access points
 - d) Node Access Protocols
11. A mechanism to map IP addresses onto the addresses of the underlying network is called.....
- a) EGP
 - b) ARP
 - c) NCP
 - d) RARP
12. On UNIX systems, port numbers are defined in the file.
- a) /etc/protocols
 - b) /etc/dev
 - c) /etc/services
 - d) /etc/opt
13. The function of IP address is
- a) host identification
 - b) network interface identification
 - c) location addressing
 - d) all of the above
14. The size of unique IP address is.....
- a) 24 bits
 - b) 32 bits
 - c) 32 bytes
 - d) 8 byte
15. The newer technique uses a distributed database system called to translate names to addresses.
- a) DNS
 - b) IP
 - c) ARP
 - d) Telnet
16. What is the loopback address of localhost?
- a) 0.0.0.0
 - b) 172.16.12.1
 - d) 127.0.0.1
 - c) 255.0.0.0
17. IAHC stands for.....
- a) International Ad Hoc Committee
 - b) Internet Ad Hoc Committee
 - c) Intranet Ad Hoc Council
 - d) Intranet Ad Hoc Committee
18. converts a physical network address into an IP address.
- a) ARP
 - b) RARP
 - c) DNS
 - d) DHCP
19. DHCP stands for.....
- a) Dynamic Host Control Protocol

- b) Diskless Hosts Control protocol
 - c) Diskless Hosts Configuration protocol
 - d) Dynamic Host configuration Protocol
20. The command can set or display the configuration values for a network interface.
- a) ping
 - b) traceroute
 - c) ifconfig
 - d) finger
21. The protocol was originally developed as a mechanism to enable diskless hosts to be remotely booted over a network as workstations.
- a) RARP
 - B) ARP
 - c) DHCP
 - d) BOOTP
22. Find out the class of these addresses:
1) 192.10.10.10 and 2) 191.10.10.10
- a) C,B
 - b) B, B
 - c) C, C
 - d) A, B
23. NAT stands for.....
- a) Node access teminal
 - b) Node address Translation
 - c) Network address translation
 - d) Network address transmitter
24. The maximum length of a "thick" Ethernet cable is
- a) 100 meters
 - b) 200 meters
 - c) 500 meters
 - d) 1000meters
25. are needed to communicate with systems on other networks.
- a) repeaters
 - b) amplifiers
 - c) Bridge
 - d) Gateways
26. The kernel configuration file is normally changed only when you wish to:
- a) Produce a smaller, more efficient kernel by removing unneeded items.
 - b) Add a new device
 - c) Modify a system parameter
 - d) all of the above.
27. The command customizes the kernel configuration and generates the files needed to compile and link the kernel.
- a) ping
 - b) ifconfig
 - c) make config
 - d) finger
28. In a kernel configuration feature, . ifis selected, the dynamically loadable module is loaded the first time a call is made to the kernel that requires the module.
- a) "m"
 - b) "Y"
 - c) "n"
 - d) "r"

29. At the time Linux 2.0 kernel configuration the option..... adds TCP/IP networking to the kernel.
- a) CONFIG_IP_ACCT
 - b) CONFIG_INET
 - c) CONFIG_INET_PCTCP
 - d) CONFIG_IP_FORWARD
30. MTU stands for.....
- a) Message transmission unit
 - b) Message transfer unit
 - c) Maximum transmission unit
 - d) Minimum transfer unit.
31. The..... command can determine which interface is used on a system from the messages displayed on the console during a boot.
- a) dmesg
 - b) traceroute
 - c) ifconfig
 - d) finger
32. The most basic function of ifconfig command is assigning the Address.
- a) Physical address
 - b) Hardware address
 - c) MAC address
 - d) IP address
33. In the TCP/IP protocol architecture, the Network Access Layer includeslayers of the OSI Reference Model.
- a) presentation, session, application
 - b) physical, data link, network
 - c) data link, network
 - d) physical, data link
34. The option tells netstat to display the status of all configured network interfaces.
- a) -n
 - b) -i
 - c) either a or b
 - d) neither a nor b
35. SLIP stands for.....
- a) Synchronous Level Interface Protocol
 - b) Serial Line Interface Protocol
 - c) Synchronous Level Internet Protocol
 - d) Serial Line Internet Protocol
36. A is constructed manually by the system administrator using the route command.
- a) static routing table
 - b) dynamic routing table
 - c) both a and b
 - d) neither a nor b
37. A is built from the information exchanged by routing protocols.
- a) static routing table
 - b) dynamic routing table
 - c) both a and b
 - d) neither a nor b
38. Routes are built automatically by....., manually by the system administrator, or dynamically by routing protocols.
- a) route
 - b) traceroute

c) ifconfig

d) netstat

39. The limited capability of this routing table is easily verified with the command.

a) ping

b) traceroute

c) route

d) netstat

40. Find out the components of DHCP:

1) A protocol that delivers host-specific configuration parameters from a server to a host. 2) The client determines its own hardware address; this is normally in a ROM on the hardware.

3) A mechanism for the allocation of temporary or permanent network addresses to hosts.

a) 1,2

b) 1,3

c) 2,3

d) 1,2,3

Part B (Two mark questions)

41. An is any collection of separate physical networks, interconnected by a common protocol, to form a single logical network and the is the worldwide collection of interconnected networks, which grew out of the original ARPANET.

a) Internet, internet

b) internet, Internet

c) Internet,internet

d) Internet,Internet

42. State whether the following statements are true/false:

1) The standards of TCP/IP are published in a series of documents called RFC. 2) A Protocol is an agreement between the communicating parties on how communication is to proceed.

a) 1.T, 2.F

b) 1.T, 2.T

c) 1.F, 2.F

d) 1.F,2.T

43. What are the functions necessary to send data between two cooperating applications across the Internet?

1) addressing between hosts

2) routing between networks

3) multiplexing between layers

a) 1 and 2

b) 1 and 3

c) 2 and 3

d) 1,2 and 3

44. In case of IP address if the first 3 bits of the address are 1 1 0, it is a class network address where the first 3 bits are and the next 21 bits are the

a) B, class identifier, host address

b) B, class identifier, network address

c) C, class identifier, network address

d) C, class identifier, host address

45. In case of IP address if the first 4 bits of the address are, it is a address, sometimes called as Classaddress.

a) 1111, multicast, D

b) 1111, multicast, E

c) 1110, broadcast, E

d) 1110, multicast, D

46. List the tasks of routing:

1) Defining paths for the packets through and internetwork.

- 2) Breaking a network into smaller realms.
- 3) Forwarding data packets based on their predefined paths.
- a) 1 and 2
- b) 1 and 3
- c) 2 and 3
- d) 1,2 and 3

47. State whether the following statements are true/false:

- 1) The ARP software maintains a table of translations between IP addresses and Ethernet addresses, which is statically build up.
- 2) To display the entire ARP table, use the arp -a command.
- a) 1.T, 2.F
- b) 1.T, 2.T
- c) 1.F, 2.F
- d) 1.F,2.T

48. Port numbersare reserved for well-known services and Ports numbered are used for UNIX-specific services.

- a) more than 256, more than 1024
- b) below 256, from 256 to 1024
- c) from 0 to 256, from 257 to 1024
- d) from 256 to 1024, more than 1024

49. The top-level domains used in the United States are:

- 1) .mil 2) .web 3) .net 4) .int
- a) 1,2,3
- b) 1,2,4
- c) 2,3,4
- d) 1,3,4

50. State whether the following statements are true / false:

- 1) A fully qualified domain name starts with a specific host and ends with a top-level domain.
- 2) Domain names are always written as fully qualified domain names.
- a) 1.T, 2.T
- b) 1.T, 2.F
- c) 1.F, 2.T
- d) 1.F, 2.F

51. SMTP is based ondelivery, contacts on well known port number.....

- a) host to host, 23
- b) host to host, 25
- c) end to end , 23
- d) ent to end, 80

52. extends to provide the full set of configuration parameters defined in the Requirements for Internet Hosts RFC.

- a) DHCP, BOOTP
- b) BOOTP, DHCP
- c) RARP, BOOTP
- d) DHCP, RARP

53. State whether the following statements are true/ false:

- 1) The size of Ethernet hardware address is 8 bytes.
- 2) DHCP supports manual allocation for IP address allocation.
- a) 1.T, 2.T
- b) 1.T, 2.F
- c) 1.F, 2.T
- d) 1.F, 2.F

54. NAT limits the use of and

- a) encryption, authentication.
- b) encryption, decryption
- c) encapsulation, translation
- d) authentication, verification

55. At the time Linux 2.0 kernel configuration the optiondetermines whether the system accepts source-routed datagrams andadds support for keepalives to the kernel.

- a) CONFIG_SLIP_SMART, CONFIG_IP_NOSR
- b) CONFIG_IP_NOSR, CONFIG_SLIP_SMART
- c) CONFIG_IP_NOSR, CONFIG_SLIP
- d) CONFIG_PLIP, CONFIG_SLIP_COMPRESSED

56. State whether the following statements are true/false:

1) The Linux kernel is a C program compiled and installed by make. . 2) On FreeBSD systems, the kernel configuration file is located in the directory /usr/src/conf.

- a) 1.T, 2.T
- b) 1.T, 2.F
- c) 1.F, 2.T
- d) 1.F, 2.F

57. LCP is used

- 1) To pass traffic for multiple Network Layer protocols.
- 2) To establish the connection
- 3) Negotiate configuration parameters
- 4) Check link quality
- 5) Close the connection

- a) 1,2,3,4
- b) 2,4,5
- c) 1, 4 ,5
- d) 2,3,4,5

58.is a minimal protocol that allows isolated hosts to link via TCP/IP over the telephone network anduses a proposed international standard for transmitting HDLC over asynchronous lines.

- a) LCP, PPP
- b) PPP, LCP
- c) SLIP, PPP
- d) PPP, SLIP

59. In case of routing table flag fields, theflag is set, indicating that they are ready to be used and if theflag is set then it indicates that an external gateway is used.

- a) U, H
- b) H, U
- c) H, G
- d) U, G

60. State whether the following statements are true/ false:

- 1) In case of route command if the keyword default is used for the destination address, route never creates a default route.
- 2) If the routing metric value is greater than 0, the route is installed with the G flag set.

- a) 1.F, 2.F
- b) 1.F, 2.T
- c) 1.T, 2.F
- d) 1.T, 2.T

Part C (Four mark questions)

61. Match the following layer of OSI reference model with their functionality: Set 1:

- 1) Session layer
- 2) Presentation layer
- 3) Transport layer

Set 2:

A) This layer guarantees that the receiver gets the data exactly as it was sent. B) It manages the connection between cooperating applications.

C) This layer provides standard data presentation routines.

a) 1. A, 2.B, 3.C

b) 1. A, 2.C, 3.B

c) 1. C, 2.B, 3.A

d) 1. B, 2.C, 3.A

62. State whether the following statements are true/false in case of TCP/IP: 1) Each layer in the stack adds some control information is called encapsulation. 2) The Internet layer views all data as blocks called packet.

3) The Network Access Layer is the lowest layer of the TCP/IP protocol hierarchy.

a) 1.T, 2.T, 3.T

b) 1.T, 2.F, 3.F

c) 1.F, 2.F, 3.T

d) 1.F, 2.T, 3.F

63. State whether the following statements are true / false:

1) RIP is an older routing protocol.

2) As the incorporation of the mask information in the routing table shows, new operating systems like Linux 2.0.0 do not support CIDR. 3) Address depletion is not an issue for IPv4.

a) 1.T, 2.T, 3.T

b) 1.T, 2.F, 3.F

c) 1.F, 2.F, 3.T

d) 1.F, 2.T, 3.F

64. Match the following:

Set I:

1) CIDR

2) IPv6

3) Subnet

Set II:

A) Improved security built into the protocol B) This is the use of a mask instead of the address class to determine the destination network. C) It allows decentralized management of host addressing.

a) 1. A, 2.B, 3.C

b) 1. A, 2.C, 3.B

c) 1. B, 2.A, 3.C

d) 1. B, 2.C, 3.A

65. State whether the following statements are true/false:

1) portmapper different technique for reserving ports for RPC services. 2) Telnet port number is 25.

3) Statically allocated ports provide the flexibility needed to support multiple users.

a) 1.T, 2.T, 3.T

b) 1.T, 2.F, 3.F

c) 1.F, 2.F, 3.T

d) 1.F, 2.T, 3.F

66. Match the following flag fields of routing table:

Set I:

1) D 2) G 3) U

Set II:

A) The system's network interfaces provide routes to directly connected networks. B) Indicates that the route is operational.

C) Means that this route was added because of an ICMP Redirect Message.

a) 1. C, 2.A, 3.B

b) 1. A, 2.C, 3.B

c) 1. C, 2.B, 3.A

d)1. B, 2.C, 3.A

67. Match the following:

Set I:

1) MIME 2) SMTP 3) POP

Set II:

A) This is a standard protocol with STD number 53.

B) It guarantees delivery to the mail-gateway host.

C) This is suitable for carrying text data composed of US ASCII characters, but it does not support several languages.

a) 1. C, 2.A, 3.B

b) 1. A, 2.C, 3.B

c) 1. C, 2.B, 3.A

d)1. B, 2.C, 3.A

68. State whether the following statements are true / false:

1) Multipurpose Internet Mail Extensions is an extension of the existing TCP/IP mail system. 2) SMTP is similar to store and forward mailing method.

3) In SMTP the mail header is terminated by a null line.

a) 1.T, 2.T, 3.T

b) 1.T, 2.F, 3.T

c) 1.F, 2.F, 3.T

d) 1.F, 2.T, 3.F

69. State whether the following statements are true/ false:

1) A BOOTP client sends its IP address in a UDP datagram to the server. 2) In BOOTP flags field the most significant bit of the flags field is used as a broadcast flag. 3) DHCP is based on RARP protocol.

a) 1.F, 2.T, 3.F

b) 1.T, 2.F, 3.T

c) 1.F, 2.F, 3.T

d) 1.T, 2.T, 3.T

70. Match the following:

Set I:

1) DHCP 2) RARP 3) BOOTP

Set II:

A) This is a network-specific standard protocol, is defined in RFC 903. B) It provides a framework for passing configuration information to hosts on a TCP/IP network. C) This protocol was originally developed as a mechanism to enable diskless hosts to be remotely booted over a network as workstations.

a) 1. C, 2.A, 3.B

b) 1. A, 2.C, 3.B

c) 1. B, 2.A, 3.C

d)1. B, 2.C, 3.A

71. State whether the following statements are true/ false:

1) Address translation conserves IP addresses.

2) Performance Address translation never adds overhead to the processing of every datagram. 3) Routers modify the addresses in a datagram header.

a) 1.T, 2.T, 3.T

b) 1.T, 2.F, 3.F

c) 1.F, 2.F, 3.T

d) 1.F, 2.T, 3.F

72. Match the following type of options used to configure TCP/IP in the BSD kernel with their functionality:

Set I:

1) MROUTING 2) ARP_PROXYALL 3) IPACCT

Set II:

A) It creates a server for all addresses.

B) It adds additional code and counters that keep track of network usage. C) A kernel is necessary for the system to support some application like MBONE and Internet Talk Radio.

- a) 1. C, 2.A, 3.B
- b) 1. A, 2.C, 3.B
- c) 1. B, 2.A, 3.C
- d) 1. B, 2.C, 3.A

73. State whether the following statements are true/false:

1) A pseudo device is a device directly associated with an actual piece of hardware. 2) FDDI is a wide area network standard for transmitting data at 100M bps over fiber-optic cable.

3) Every host attached to a TCP/IP network requires some physical hardware for that attachment.

- a) 1.T, 2.T, 3.T
- b) 1.T, 2.F, 3.F
- c) 1.T, 2.T, 3.F
- d) 1.F, 2.T, 3.F

74. State whether the following statements are true/ false:

1) According to RFC, SLIP is an Internet standard.

2) HDLC is a slightly modified version of the Data Link Layer Protocol used by PPP. 3) The Network Control protocols are individual protocols.

- a) 1.F, 2.F, 3.F
- b) 1.F, 2.F, 3.T
- c) 1.T, 2.T, 3.F
- d) 1.F, 2.T, 3.F

75. Match the following options of slattach with their functionality:

Set I:

1) -c 2) -6 3) -h

Set II:

A) to select six-bit SLIP.

B) Van Jacobsen header compression

C) selects uncompressed SLIP with full headers

- a) 1. B, 2.A, 3.C
- b) 1. A, 2.C, 3.B
- c) 1. C, 2.A, 3.B
- d) 1. B, 2.C, 3.A

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

A

21

D

41

B

61

D
2
C
22
A
42
D
62
C
3
B
23
C
43
D
63
B
4
C
24
C
44
C
64
C
5
B
25
D
45
D
65
B
6
C
26
D
46
B
66
A
7
D
27
C
47
D
67
C
8
D
28

A
48
B
68
B
9
D
29
B
49
D
69
A
10
A
30
C
50
B
70
C
11
B
31
A
51
C
71
B
12
C
32
D
52
A
72
A
13
D
33
B
53
C
73
C
14
B
34
B
54
A
74

B
15
A
35
D
55
B
75
A
16
C
36
A
56
B
17
A
37
B
57
D
18
B
38
C
58
C
19
D
39
A
59
D
20
C
40
B
60
B

Sikkim Manipal University B.Sc(IT) TCP/IP 2011

Model Question Paper

Subject Code: BC0055

Subject Name: TCP/IP Protocol Suite

Credits: 4 Marks: 140

Part A (One mark questions)

1. The ----- oversees and coordinates the assignment of protocol identifiers used on the Internet.
A) IETF
B) IRTF
C) IANA
D) CDNA
2. The ----- reports errors and other information to help you diagnose unsuccessful packet delivery.
A) IGMP
B) ICMP
C) ARP
D) SLMP
3. The core protocols of the Transport layer are -----
A) TCP and UDP
B) SMTP and UDP
C) HTTP and FTP
D) SMTP and TCP
4. A node that can forward IP packets not explicitly addresses to itself is -----
A) link
B) Segment
C) Host
D) Router
5. The mapping of 32-bit Internet addresses to 48-bit FDDI addresses is done through -----
A) RFC
B) ARP dynamic discovery procedure.
C) SLIP
D) PPP
6. ----- is designed to allow the simultaneous use of multiple network-layer protocols.
A) ISDN
B) SMTP
C) UDP
D) PPP
7. The D-channel interface requires ----- encoding
A) manchester
B) differential Manchester
C) NRZ
D) Polar

8. The FDDI MAC specification defines a maximum frame size of ----- bytes for all frame fields.

- A) 4500
- B) 4300
- C) 5400
- D) 5500

9. The IP datagram header has a minimum length of ----- octets

- A) 20
- B) 40
- C) 10
- D) 4

10. The Class A network 127.0.0.0 is defined as the ----- network

- A) Loop back
- B) recursion
- C) asociative
- D) set lock

11. .A Host uses RARP to obtain its -----

- A) neighbour IP address
- B) IP address
- C) Parent Address
- D) routing address

12. ----- is used by the internet layer to determine which part of the IP address is the network ID and which part is the host ID.

- A) Parity bit
- B) Checksum
- C) Subnet mask
- D) loopback

13. The UDP datagram has an _____ byte header.

- A) 8
- B) 16
- C) 32
- D) 4

14. The Window scale expands the definition of the TCP window to ----- bits.

- A) 16
- B) 32
- C) 48
- D) 12

15. The well-known ports are controlled and assigned by the -----

- A) IFCI
- B) Positive ACK
- C) IANA
- D) SACK

16. One big difference between TCP and UDP is -----.

- A) Fast Recovery
- B) Fast Retransmit
- C) Slow start

D) Congestion control algorithm

17. TTL is stored in the DNS as an ----- value

A) unsigned 32 bit

B) signed 32bit

C) signed 16 bits

D) unsigned 16 bits

18. The division of the domain name space into zones is accomplished using ----- stored in the Domain Name System.

A) personel record

B) caching record

C) Domain name

D) Resource Record

19. Country domains are also called as ----- .

A) persistent domains

B) Local domain

C) Geographic domain

D) cluster domain

20. The UDP datagram has ----- byte header.

A) 6

B) 8

C) 2

D) 4

21. All internal Telnet commands consist of ----- byte sequences, depending on the command type.

A) 3 or 4 byte

B) 2 or 3 byte

C) 4 byte

D) 1 byte

22. Telnet is a standard protocol with STD number -----.

A) 4

B) 6

C) 2

D) 8

23. The Network Virtual Terminal is a ----- device operating in a line-buffered mode

A) half-duplex

B) simplex

C) Full duplex

D) semi-flex

24. ----- command shows refusal to use or continue to use options

A) RSH

B) SYNCH

C) WONT

D) AO

25. FTP stands for-----

A) Forward transport protocol

B) File Transfer protocol

C) File Transfer Port

D) None of the above

26. In the FTP transfer Passive mode is often referred to as -----

A) Firewall friendly mode

B) Asynchronous mode

C) Synchronous mode

D) fully controlled mode

27. The TFTP multicast option is described in RFC -----

A) 1123

B) 2347

C) 2090

D) 101

28. FTP uses ----- as a Transport protocol to provide reliable end-to-end transfers.

A) UDP

B) SMTP

C) HTTP

D) TCP

29. In order to deliver the mail an SMTP client contacts the destination host's SMTP server directly on well-known port -----

A) 30

B) 17

C) 25

D) 11

30. Post Office Protocol version 3 is a standard protocol with STD number-----

A) 53

B) 33

C) 9

D) 8

31. IMAP stands for -----

A) Intra message Access Protocol

B) Internet Message Access Protocol

C) Internal Mail Access Protocol

D) Inner mail access Protocol

32. ----- contains the complete lexical analysis of the mail header.

A) RFC 0937

B) RFC 1939

C) RFC 2822

D) RFC 3345

33. _____ is the entity responsible of development and maintenance of the standards of the web

A) World Wide Web consortium

B) Hypertext Markup Language

C) Hypertext Transport Protocol

D) National center for Supercomputing application

34. HTTP is based on ----- activity

A) Request-response

- B) first come first serve
- C) Last come first serve
- D) repeat-Request

35. HTTP is a stateless protocol because -----

- A) it uses HTML language
- B) It does not keep track of connections
- C) It is based on ISO OSI reference model
- D) It is based on TCP/ IP reference model

36. ----- are the strings that indicates the location and name of the source on the server.

- A) URMs
- B) URNs
- C) URLs
- D) URIs

37. SNMP stands for-----

- A) Simple Network Management Protocol
- B) Segmented Network Management Protocol
- C) single Nested Management protocol
- D) secure Network Management Protocol

38. The SNMP agent acts as ----- in the client/server model

- A) both client and server
- B) client
- C) Server
- D) neither client nor server

39. The ----- utility is a command available on most platforms that enables a user to list the sockets in use on a system.

- A) CONN
- B) NETSTAT
- C) CONNCOST
- D) NETST

40. MIB stands for-----

- A) Multiple Info Byte
- B) Maximum Information Bus
- C) Mega Info Byte
- D) Management Information Base

Part B (Two mark questions)

41. The ----- protocol resolves a host name, such a www.cisco.com, to an IP address.

- A) DNS
- B) HTTP
- C) SMTP
- D) ARP

42. State True or False

- i. Some RFCs provide informal, experimental, or historical information only.
- ii. TCP/IP was designed to be dependent of the network access method, frame format and medium.

- A) False, False
- B) False, True

C) True, False

D) True, True.

43. The basic rate for PPP over SONET/SDH is that of STS-3c/STM-1 at ----- Mbps

A) 155.52

B) 158.25

C) 164

D) 332

44. Frame Relay is documented in RFC ----- and is expanded in RFC ----- to allow the transmission of IPV6 packets.

A) 2424, 2590

B) 2427, 2590

C) 2590, 2427

D) 2590, 2424

45. _____ is message from client to server indicating that the offered address is already in use.

A) DHCPNACK

B) DHCPINFORM

C) DHCPDECLINE

D) DHCPACK

46. ARP is used on IEEE 802 networks as well as on the older DIX Ethernet networks to map IP address to -----
-----.

A) Logical Name

B) Domain Name

C) logical address

D) physical hardware

47. Selective Acknowledgment (SACK) allows the receiver to inform the sender about -----.

A) All the segments that are received successfully.

B) All the segments ignored

C) Selective segments processed

D) Selective segments ignored.

48. ----- avoids having TCP wait for a timeout to resend lost segments.

A) Fast recovery

B) Fast Retransmit

C) Slow start

D) Fast start

49. A name server that does not have authority for any zone is called a ----- name server.

A) nonzone

B) recursive

C) Associative

D) caching-only

50. If a domain name ends in a dot, it is called as ----- domain Name

A) fully qualified

B) binary

C) symbolic

D) top level

51. Remote Execution Command Protocol uses TCP port----- and Remote Shell Protocol uses TCP port-----

-
- A) 512, 520
 - B) 520,512
 - C) 512,514
 - D) 514,520
52. ----- is a way to resolve meaningful and easy to remember names to IP addresses.
- A) domain Name System
 - B) Uniform resource locator
 - C) Stub resolver
 - D) DMA controller
53. In an active transfer, the FTP client sends a PORT command to the FTP server, indicating-----
on which the client will listen for a connection
- A) PORT number
 - B) IP address
 - C) IP address and PORT number
 - D) Server IP address
54. TFTP file transfer is a ----- data transfer and is a simple protocol used to transfer files.
- A) disk-to-file
 - B) disk-to- disk
 - C) file-to-disk
 - D) file-to-file
55. IMAP stands for -----
- A) Intra message Access Protocol
 - B) Internet Message Access Protocol
 - C) Internal Mail Access Protocol
 - D) Inner mail access Protocol
56. State True or False.
- i. IMAP4 always keeps messages on the server and replicates copies to the clients.
 - ii. The online model of IMAP4 is opposite of disconnected model.
- A) False, True
 - B) True , True
 - C) False, False
 - D) True, False
57. The maximum size of cookie is -----
- A) 2 KB
 - B) 3 KB
 - C) 4 KB
 - D) 8 KB
58. The HTTP URL scheme enables you to locate network resources through the -----
- A) HTTP protocol
 - B) UDP protocol
 - C) SSL Protocol
 - D) SNMP protocol
59. The SNMP manager, also referred to as a -----
- A) Client agent

- B) server agent
- C) network Management Station
- D) Network agent

60. ----- implements a manager/agent/subagent model which conforms very closely to the client/server model

- A) SMTP
- B) SNMP
- C) FTP
- D) TFTP

Part C (Four mark questions)

61. State True or False

- i. The interaction between SNMP components is not a agent -restrictive.
- ii. Traps are asynchronous notifications of events occurring within an SNMP community
- iii. The SNMP groups are defined by RFC 1111

- A) False, True, False
- B) True, True, True
- C) True, false, true
- D) False, False, True

62. Match the following

- I. 1970 1. HTTP
- II. 1972 2. FTP
- III. 1973 3. ARPANET
- IV. 1996 4. Telnet

- A) I- 3, II-4 , III- 2, IV-1
- B) I- 4, II-3 , III- 2, IV-1
- C) I- 3, II-2 , III-4, IV-1
- D) I- 3, II-4 , III- 1, IV-2

63. State true or false

- i. SLIP can support multiple protocols across a single link.
- ii. DLCIs have strictly local significance at each frame relay interface
- iii. ATM dos not provides a virtual connection switched environment.

- A) true , true, true
- B) false, false, false
- C) true, false, true
- D) false, true, false

64. Match the following

- I. X.25 1. RFC 2225
- II. Frame Relay 2. RFC 2590
- III. SDH 3. RFC 1356
- IV. ATM 4. RFC 2615

- A) I- 3, II-4 , III- 2, IV-1
- B) I- 4, II-3 , III- 2, IV-1
- C) I- 3, II-2 , III-4, IV-1
- D) I- 3, II-4 , III- 1, IV-2

65. Match the following

- I. RARP 1. RFC 826
- II. BOOTP 2. RFC 792
- III. ARP 3. RFC 951
- IV. ICMP 4. RFC 903

- A) I- 4 II-3 III-1 IV-2
- B) I-3 II-4 III-2 IV-1
- C) I-2 II-1 III-4 IV-3
- D) 1-4 II-2 III-1 IV- 3

66. State True or False

- i. An unfragmented datagram has an all-zero fragmentation information field.
- ii. IP addresses are represented by 32-bit unsigned binary value.
- iii. Class A address are suitable for networks with small number of hosts.

- A) true , true, true
- B) false, false, false
- C) true, true false
- D) false, true, false

67. State true or false

- i. Process IDs differ between operating system platforms, thus they are not uniform.
- ii. UDP provides flow control and congestion control.
- iii. TCP sends data in variable length segments

- A) False, False, False
- B) True, True, False
- C) True, False, True
- D) True, True, True

68. State True or False

- i. UDP does not provide a mechanism for one application to send a datagram to another
- ii. TCP is a connection-less protocol
- iii. Congestion avoidance and slow start are dependent algorithms with same objectives.

- A) False, False, False
- B) True, True, False
- C) True, False, True
- D) True, True, True

69. State True or False

- i. The domain name system is a way to resolve meaningful and easy-to-remember names to IP addresses.
- ii. Many countries have their own second-level domains underneath which parallels the generic top-level domains
- iii. A DNS cannot be queried using a Uniform Resource Identifier.

- A) False, False, True
- B) True, False, False
- C) True, True, False
- D) True, True, True

70. State True or False

- i. Telnet is a described in RCF 854
- ii. An NVT is an imaginary device with a basic structure common to a wide range of real terminals.
- iii. The communication between client and server is handled with external commands

A) False, False, True

B) True, False, False

C) True, True, False

D) True, True, True

71. Match the following

I. FTP 1. RFC 2090

II. TFTP 2. RFC 783

III. TFTP multicast option 3. STD number 33

IV. SAS 4. STD number 9

A) I- 4 II-3 III-1 IV-2

B) I-3 II-4 III-2 IV-1

C) I-2 II-1 III-4 IV-3

D) 1-4 II-2 III-1 IV- 3

72. State True or False

i. The IMAP4 protocol is defined by RFC 4678

ii. The disconnected model of IMAP4 is exactly opposite of online model

iii. The POP3 commands consists of a keyword and possibly one or more arguments following the keyword.

A) True, True, False

B) True, True, True

C) True, false, true

D) False, False, True

73. State True or False

i. One of the most important features of HTTP is caching capability

ii. Web servers are not available for a UNIX variant platforms

iii. Browser is referred to as an application that provides access to a Web server.

A) True, True, False

B) True, True, True

C) True, false, true

D) False, False , True

74. State True or False

i. The interaction between SNMP components is not a agent -restrictive.

ii. Traps are asynchronous notifications of events occurring within an SNMP community

iii. The SNMP groups are defined by RFC 1111

A) False, True, False

B) True, True, True

C) True, false, true

D) False, False , True

75. Match the following

I. IMAP4 1. Port 21

II. POP3 2. Port 25

III. SMTP 3. Port 143

IV. FTP 4. Port 110

A) I- 4 II-3 III-1 IV-2

B) I-3 II-4 III-2 IV-1

C) I-2 II-1 III-4 IV-3

D) 1-4 II-2 III-1 IV- 3

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

C

21

B

41

A

61

C

2

B

22

D

42

C

62

A

3

A

23

A

43

A

63

D

4

D

24

C

44

B

64

C

5
B
25
B
45
C
65
A
6
D
26
A
46
D
66
C
7
C
27
C
47
A
67
C
8
A
28
D
48
B
68
A
9
A
29
B
49
D
69
C
10
A
30
A
50

A
70
C
11
B
31
B
51
C
71
A
12
C
32
C
52
A
72
D
13
A
33
A
53
C
73
C
14
B
34
A
54
B
74
C
15
C
35
B
55
B
75
B
16
D

36
D
56
D
17
A
37
A
57
C
18
D
38
C
58
A
19
C
39
B
59
C
20
B
40
D
60
B

Sikkim Manipal University B.Sc(IT) Software Engineering

Model Question Paper

Subject Code: BT0081

Subject Name: Software Engineering

Credits: 4 Marks: 140

Part A (One mark questions)

1. _____ is a collection of programs written to service other programs.
 - A) System software
 - B) Real time software
 - C) Application software
 - D) Business Software
2. Software that monitors / analyzes / controls real-world events as they occur is called _____.
 - A) Embedded software
 - B) Real time software
 - C) Real world Software
 - D) None of the above
3. _____ refers to the predictability of the order and timing of information.
 - A) Content
 - B) Information determinacy
 - C) Application software
 - D) Software crisis
4. As per IEEE, _____ is the systematic approach to the development, operation, maintenance and retirement of software.
 - A) Software Engineering
 - B) Program
 - C) System
 - D) None of the above
5. _____ refers to the support phase of software development.
 - A) Adaption
 - B) Enhancement
 - C) Maintenance
 - D) Actions
6. RAD stands for
 - A) Rapid Application Data
 - B) Reverse Application Development
 - C) Rapid Action Development
 - D) Rapid Application Development
7. _____ is a function of the number of failures experienced by a particular user of that software.
 - A) Software reliability
 - B) Software efficiency
 - C) Software detection
 - D) None of the above
8. _____ is a measure of the time between observed system failures.
 - A) AVAIL
 - B) POFOD
 - C) ROCOF
 - D) MTTF

9. _____ is a software testing process in which the objective is to measure the reliability of the software rather than to discover software faults.
- A) Defensive programming
 - B) Damage assessment
 - C) Statistical testing
 - D) None of the above
10. OOD stands for
- A) Object-Oriented Development
 - B) Object-One Design
 - C) Object-Oriented Design
 - D) Online-Object Design
11. _____ is a classification scheme, which shows how an object class is related to other classes through common attributes and services.
- A) Naming
 - B) Taxonomy
 - C) Organization
 - D) Aggregation
12. _____ model is a way of showing how data is processed by a system.
- A) Data-flow
 - B) Data-division
 - C) Data-Process
 - D) None of the above
13. _____ is concerned with developing an object-oriented model of the application domain.
- A) Object-oriented design
 - B) Object-oriented programming
 - C) Object-oriented analysis
 - D) None of the above
14. PDL stands for _____.
- A) Program Data Language
 - B) Program Description Language
 - C) Program Data Level
 - D) Private Draft Level
15. A function is represented on a structure chart as a _____.
- A) circle
 - B) triangle
 - C) rectangle
 - D) arrow
16. Effective data capture requires data collection and _____.
- A) Data mining
 - B) Data security
 - C) Data order
 - D) None of the above
17. The software engineering process represents a _____ for problem solving in a business context in several senses.
- A) round-trick framework
 - B) round framework
 - C) round-trip framework
 - D) rare-trip framework
18. UML stands for _____.

- A) Unified Modeling Level
- B) Unified Method Language
- C) United Modeling Language
- D) Unified Modeling Language

19. _____ is the process of factoring the design module.

- A) Software re-engineering
- B) Configuration management
- C) software maintenance
- D) Software Refactoring

20. The first stage in the change management process is to complete a _____.

- A) Change decision
- B) Change request form
- C) Change form
- D) Change leader form

21. A _____ is an instance of a system that differs, in some way, from other instances.

- A) system version
- B) system type
- C) data version
- D) system time

22. _____ is a test case design method that uses the control structure of the procedural design to derive test cases.

- A) Black-box testing
- B) White-glass testing
- C) Red-box testing
- D) White-box testing

23. _____ focuses on the functional requirements of the software.

- A) Red-box testing
- B) Black-box testing
- C) Glass-box testing
- D) None of the above

24. Which testing is also called behavioral testing?

- A) Black-box testing
- B) Glass-box testing
- C) White-box testing
- D) None of the above

25. _____ refers to the set of activities that ensure that software correctly implements a specific function.

- A) Conversion
- B) Correction
- C) Validation
- D) Verification

26. When using _____ testing, test drivers must be written to exercise the lower-level components.

- A) top-up
- B) bottom-up
- C) up-down
- D) None of the above

27. _____ testing is a testing strategy, which was devised for testing real-time systems.

- A) Thread
- B) Real
- C) Top-up

D) Time

28. _____ integration testing is an incremental approach to construction of program structure.

A) Top-up

B) Up-down

C) Top-down

D) None of the above

29. _____ integration testing begins construction and testing with atomic modules.

A) Top-up

B) Bottom-up

C) Up-down

D) Top-down

30. A strategy for software testing may also be viewed in the context of the _____.

A) Spiral

B) Data

C) Test routine

D) None of the above

31. The most critical resource in the problem-solving process is _____.

A) People

B) Raw material

C) Tools

D) Money

32. A project involves a temporary assemblage of _____ brought together to solve a specific problem.

A) Data

B) Material

C) Files

D) Resources

33. _____ must be completed within a specific time period and have well-defined beginnings and ends.

A) Programs

B) Projects

C) Work

D) Functions

34. According to Moore's law, the density of digital chips doubles approximately every _____ months but cost remains constant.

A) 24

B) 36

C) 18

D) 12 35. Which business illustrates the impact of networking power on industry?

A) Marketing

B) Paper

C) Printing

D) E-business

36. One of the most notable characteristics of organizational problem solving is its frequent dependence on _____.

A) Physical resources

B) Management

C) Leader

D) Vehicles

37. _____ is a prevalent characteristic of the software process modeling literature.

A) Process

B) Diversity

C) Modeling

D) Program

38. Cultural differences are examples of _____ characteristics that affect the degree of diversification in an environment.

A) Inherited

B) Dependent

C) Independent

D) None of the above

39. Lack of _____ is a major source of ignorance.

A) Communication

B) Money

C) Knowledge

D) Resource

40. CORBA stands for _____.

A) Common Oriented Request Broker Architecture

B) Common Object Recent Broker Architecture

C) Common Object Request Broker Architecture

D) Common Object Request Based Architecture

Part B (Two mark questions)

41. Which of the following are the characteristics Software?

i) Software is developed or engineered

ii) Software doesn't "wear out"

iii) It is manufactured in the classical sense

iv) Software is not custom built.

A) i and iii

B) i, ii and iii

C) ii and iv

D) ii and iii

42. Which of the following statements are true?

1. Software is a physical rather than a logical system element.

2. Computer software is the product that software engineers design and build.

3. Information content and degree are important factors in determining the nature of a software application.

4. Software is a set of application programs that are built by software engineers.

A) 1 and 3

B) 1, 2 and 4

C) 2 and 4

D) 2 and 3

43. _____ model couples the iterative nature of the prototyping with the controlled and systematic aspects of the _____ model.

A) Spiral, linear sequential

B) Spiral, RAD

C) Linear sequential, Component based development

D) RAD, linear sequential

44. The _____ model is often used as the paradigm for the development of _____ applications.

A) RAD, client/server

B) Concurrent process, client/server

C) Concurrent process, Popular

D) RAD, system

45. _____ is the situation in which a subroutine calls itself or calls another subroutine, which then calls the _____ subroutine.

A) Failure detection, Called

B) Recursion, calling

C) Parallelism, nested

D) Parallelism, calling

46. _____ is an approach to fault tolerance which can be carried out without a fault-tolerant _____.

A) Exception Handling, detector

B) Damage assessment, detector

C) Damage assessment, converter

D) Defensive programming, controller

47. State True (T) or False (F)

i) A software design is a model system that has many participating entities and relationships.

ii) Designs are documented in a set of design documents that describes the design for programmers and other designers.

A) i -T , ii-F

B) i -T , ii-T

C) i -F , ii-F

D) i -F , ii-T

48. Objects are usually members of an object class whose definition defines _____ and _____ of class members.

A) attributes, elements

B) attributes, operations

C) members, operations

D) members, structures

49. State True (T) or False (F)

i) Object-oriented systems are easier to maintain as the objects are dependent.

ii) The state is represented as a set of object attributes.

A) i -T , ii-F

B) i -T , ii-T

C) i -F , ii-F

D) i -F , ii-T

50. Which of the following are the characteristics of an object-oriented design?

i) Objects are abstraction of system entities

ii) Objects are independent entities that may readily be changed

iii) Objects may be distributed

iv) Shared data areas are eliminated

A) i ,ii and iii

B) i, ii and iv

C) ii and iv

D) ii and iii

51. The analysis by _____ & _____ recognized two major approaches in software development.

A) Martin, Boehm

B) Boehm, Belz

C) Martin, Raffo

D) Belz, Raffo

52. _____ and _____ perspectives have gained greater attention as critical elements in the assessment of process models. A) Project preparation, Software economics B) Project management, Software issues C) Project Details,

Software issues D) Project management, Software economics 53. Which of the following statements are true? i. Creating a new system version involves removing new source code and building the system. ii. Creating a release is more complex and expensive. iii. The more changes to a system, the less new faults will be introduced iv. For UNIX platforms, the most widely used version management systems are SCCS.

A) i and iii

B) i, ii and iii

C) ii and iii

D) ii and iv

54. Which of the following statements are true?

i. Boundary value analysis is a test case design technique that complements equivalence partitioning.

ii. Rather than focusing solely on output conditions, BVA detects test cases from the input domain.

iii. Graphical user interfaces (GUIs) present interesting challenges for software engineers.

iv. Client/server architectures represent a significant challenge for hardware testers.

A) i and iii

B) i, ii and iii

C) ii and iv

D) ii and iii

55. Which of the following statements are true?

i) Software reviews are a "generator" for the software engineering process.

ii) Reviews are applied at various points during software development.

iii) Softer reviews "purify" the software engineering activities.

iv) In the black-box approach, test cases are designed using only the internal specification of the software. A) i and iii B) i,

ii and iii C) ii and iv D) ii and iii

56. Which of the following statements are true?

i) Unit testing makes heavy use of white-box testing techniques.

ii) White-box test case design techniques are the most prevalent during integration.

iii) Black-box testing techniques are used exclusively during validation.

iv) The unit test is Black-box oriented. A) i and iii B) i, ii and iii C) ii and iv D) ii and iii

57. Defining a problem at an _____ level is obviously _____ complex than defining a problem at a metro-net or global level. A) intranet, more B) Internet, less C) internet, more D) intranet, less

58. State True (T) or False (F) a. A computer can be attached to a digital camcorder, TV and printer. b. Multimedia data cannot be captured

immediately and edited as required. A) a-T, b-T B) a-T, b-F C) a-F, b-T D) a-F, b-F

59. _____ ignorance assumes that information can be gathered using only one or two paths of _____, with other aspects of the problem not even considered for relevancy. A) In-depth, knowledge B) In-breadth, knowledge C) In-breadth, source D) In-depth, source

60. Which of the following statements are true? i) The CIO understands that the system will encounter problems from time to time. ii) A key factor in determining the system's success is how quickly the system can give results. iii) The corporate database is the primary backup for each of the regional offices. iv) Local offices use system software to access the remote application server. A) i and iii B) i, ii and iii C) ii and iv D) ii and iii

61. Match the following

a) Business Software i. Spreadsheets

b) Personal computer software ii. Pattern recognition

c) Artificial Intelligence software iii. Payroll

d) Embedded software iv. Resides only in read-only memory

A) a-iii, b-i, c-iv, d-ii

B) a-ii, b-i, c-iv, d-iii

C) a-iii, b-i, c-ii, d-iv

D) a-i, b-iii, c-iv, d-ii

62. Structured approaches to software development include

- i) System models
- ii) Notations
- iii) rules
- iv) Design advice
- v) Process guidelines

- A) i, ii and iv only
- B) ii ,iv and v only
- C) i, ii , iii and iv only
- D) i, ii , iii , iv and v

63. Systematic reuse in the development process offers which of the following advantages

- i) System reliability increased
- ii) Overall process risk is reduced
- iii) Effective use can be made of specialists
- iv) Software development time can be reduced
- v) System clarity increased

- A) i, iii, and v only
- B) i, ii iii, and v only
- C) i, ii iii, and iv only
- D) i, ii and iv only

64. State whether the following statements are True (T) or False (F)

- i) Architectural design comes after detailed system specification
- ii) Architectural design is necessary to structure and organize the specification
- iii) There is a accepted process model for architectural design
- iv) The output of the architectural design process is an architectural design documents.

- A) i-T, ii-F, ii-T, iv-F
- B) i-T, ii-F, iii-T, iv-T
- C) i-F, ii-T, iii-F, iv-T
- D) i-T, ii-T, iii-F, iv-F

65. Match the following a) Circles i. Represents user interactions with the system b) Rounded rectangle ii. Represent data stores c) Arrows iii. Transform inputs to outputs d) Rectangle iv. Direction of data flow A) a-iii, b-i, c-iv, d-ii B) a-ii, b-i, c-iv, d-iii C) a-iii, b-i, c-ii ,d-iv D) a-i, b-iii, c-iv, d-ii

66. State whether the following statements are True (T) or False (F) a) Money has been the critical factor in software development. b) The first unspoken assumption is that software problems are primarily driven by internal software factors.

c) A second significant unspoken assumption has been that the software development process is dependent on organizations. d) A third unspoken assumption was that the software project was separate from the software process. A) a-T, b-F, c-T, d-F B) a-F, b-F, c-T, d-T C) a-T, b-T, c-F, d-F D) a-F, b-T, c-F, d-T

67. State whether the following statements are True (T) or False (F) i) Adaptive maintenance is concerned with fixing reported errors in the software. ii) Corrective maintenance means changing the software to some new environment such as a different hardware platform iii) Perfective maintenance involves implementing new functional or non-functional system requirements. iv) The maintenance process is triggered by a set of change requests from system users, management or customers. A) i-T, ii-F, iii-T, iv-F B) i-F, ii-F, iii-T, iv-T C) i-T, ii-T, iii-F, iv-F D) i-F, ii-T, iii-F, iv-T

68. Black-box testing attempts to find errors in the following categories (i) Incorrect or missing functions (ii) Interface errors (iii) Errors in data types iv) Behavior or performance errors (v) Intact errors A) i, ii and iv only B) ii ,iv and v only C) i, ii , iii and iv only D) i, ii , iii , iv and v

69. State True (T) or False (F)

- a) Data correction focuses on the underlying reasons for the results evaluated.
- b) SQAP stands for Software Quality Assurance Plans.
- c) SQAP takes a broad view of quantity.

d) Many test management tools also serve as generic test drivers. A) a-T b-T, c-F, d-F B) a-F b-T, c-F, d-T C) a-T b-F, c-T, d-F D) a-F, b-F, c-T, d-T 70. State whether the following statements are True (T) or False (F) a. Unit testing begins at the vortex of the spiral. b. Integration testing addresses the issues associated with the dual problems of verification and program construction. c. Modules are integrated by moving upward through the control hierarchy. d. The unit test is black-box oriented, and the step can be conducted in serial for multiple components. A) a-T, b-T, c-F, d-F B) a-T, b-F, c-F, d-T C) a-T, b-F, c-T, d-F D) a-T, b-T, c-T, d-F 71. Match the following a) Accounting department i. Interacts with the system at the financial level b) System operator ii. Check prices, and close deals c) Inventory personnel iii. Responsible for inputting and updating data d) Salesmen iv. Track data and initiate new requests A) a-iii, b-i, c-iv, d-ii B) a-ii, b-i, c-iv, d-iii C) a-iii, b-i, c-ii, d-iv D) a-i, b-iii, c-iv, d-ii 72. State True (T) or False (F) a) Web applications can also serve as a repository to store, retrieve, and search for data and information. b) More complex organizations have less ill-structured solutions. c) The direct connection between software development and business performance is adequate. d) RAD stands for Rapid Application Development. A) a-T, b-T, c-F, d-F B) a-T, b-F, c-F, d-T C) a-T, b-F, c-T, d-F D) a-T, b-T, c-T, d-F 73. At the problem level, the roots of diversification include: i) Scope and complexity of problems ii) Types of requirements and forms of problems iii) Need to learn and apply new capabilities iv) Challenges of continuous change v) Impact of the supplier disciplinary effects A) i, ii and iii B) i, ii and iii C) ii, iv and v D) i, ii, iii and iv 74. Which of the following are the properties of a Robot? a) RDBMS software i. Distributing data across the system b) CORBA ii. Accesses a regional information hub c) Local office iii. Back-up and recovery d) Sybase iv. Relational database Management Company A) a-iii, b-i, c-iv, d-ii B) a-ii, b-i, c-iv, d-iii C) a-iii, b-i, c-ii, d-iv D) a-i, b-iii, c-iv, d-ii 75. State True (T) or False (F) a) Object-oriented modeling involves identifying the classes of object. b) The design of class hierarchies is a simple process. c) The use of structured methods involves producing large amounts of diagrammatic design documentation. d) Functional and object-oriented approaches are opposing rather than complementary techniques. A) a-T, b-T, c-F, d-F B) a-T, b-F, c-F, d-T C) a-T, b-F, c-T, d-F D) a-T, b-T, c-T, d-F

Answer Keys

Part - A

Part - B

Part - C

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

Q. No.

Ans. Key

1

A

21

A

41

A

61

C

2

B

22

D

42

C

62

D
3
B
23
B
43
A
63
C
4
A
24
A
44
B
64
C
5
C
25
D
45
B
65
D
6
D
26
B
46
D
66
D
7
A
27
A
47
B
67
B
8
D
28
C
48
B
68
A

9
C
29
B
49
D
69
B
10
C
30
A
50
A
70
A
11
B
31
A
51
C
71
D
12
A
32
D
52
D
72
B
13
C
33
B
53
D
73
D
14
B
34
C
54
A
74
C
15

C
35
D
55
D
75
C
16
A
36
A
56
A
17
C
37
B
57
D
18
D
38
A
58
B
19
D
39
A
59
B
20
B
40
C
60
A

Sikkim Manipal University B.Sc(IT) Discrete Mathematics

Subject Code: BT0069

Subject Name: Discrete Mathematics

Credits: 4 Marks: 140

Part A (One mark questions)

1. If a set A contains three elements, then its power set contains elements.

- A) 7
- B) 8
- C) 9
- D) 16

2. For any two sets A and B, $A \times B = \{(x, y) / x \in A, y \in B\}$ is called

- A) Analytical product
- B) Square product
- C) Rectangular product
- D) Cartesian product

3. If the object A may be chosen in in „m“ ways and B in „n“ ways then either A or B may be chosen in ways.

- A) $m - n$ ways
- B) mn ways
- C) $m + n$ ways
- D) $n - m$ ways

4. If there are 42 ways to select a representation for class A and 50 ways to select a representative for the class B, then the number of ways in which the representative can be selected for both the class A and class B is

- A) $42 + 50$ ways
- B) 42×50 ways
- C) $50 - 42$ ways
- D) 46 ways

5. A relation for the sequence $\{a_n\}$ which is an equation that expresses a_n in terms of one or more of the previous terms of the sequence, namely a_0, a_1, \dots, a_{n-1} for all integers n with $n \geq n_0$ where n_0 is a non-negative integer is known as a

- A) Reflexive relation
- B) Recurrence relation
- C) Symmetric relation
- D) Anti-symmetric relation

6. A sequence of the form $\{1, 1, 2, 3, 5, 8, 13, \dots\}$ is known as a

- A) Arithmetic sequence
- B) Geometric sequence
- C) Fibonacci sequence
- D) Newton sequence

7. Two elements „a“ and „b“ of a poset „A“ are comparable if

- A) $a \leq b$
- B) $b \leq a$
- C) $a < b$
- D) either A) or B)

8. An element x of a Poset P which satisfies the condition: $\forall y \in S$ and $x \leq y \Rightarrow y = x$ then x is called a

- A) minimal element
- B) maximal element
- C) neither minimal nor maximal
- D) element

9. A Poset (L, \leq) where supremum of x and y and infimum of x and y exist for every pair $x, y \in L$ is called a

- A) Group
- B) Ring
- C) Lattice
- D) Structure

10. For a lattice (L, \leq) , if every non-empty subset of L has greatest lower bound and least upper bound, then L is said to be a

- A) Proper lattice
- B) Complete lattice
- C) Improper lattice
- D) Incomplete lattice

11. Let S be a non-empty set, then the operation \cdot on S which satisfies the condition $a \cdot (b \cdot c) = (a \cdot b) \cdot c$ is said to be

- A) distributive
- B) Associative
- C) Closed
- D) divisible

12. The set N of natural numbers where $x \cdot y = \max\{x, y\}$ is a

- A) Ring
- B) Complete lattice
- C) Semigroup
- D) Field

13. A statement that is either true or false, but not both is called as

- A) distributive
- B) Associative
- C) Closed
- D) divisible

14. A is an argument consisting of two propositions called premises and a third proposition called the conclusion.

- A) Ring
- B) Syllogism
- C) Normal
- D) Field

15. A of one variable is defined to be an expression consisting of a predicate symbol and an individual variable.

- A) function
- B) simple function
- C) simple statement function
- D) statement function

16. The word is called the universal quantifier and is denoted by (x).

- A) and
- B) for all
- C) all
- D) if then

17. A is a complemented distributive lattice.

- A) Abstract Algebra
- B) Boolean Algebra
- C) Linear Algebra
- D) Lie Algebra

18. $a \cdot a =$

- A) $-a$
- B) 1
- C) 0
- D) a

19. If S denotes non-empty set of symbols, then it is called as a

- A) Alphabet
- B) symbolism
- C) letters
- D) language

20. The number of symbols in the string is called as the of the string.

- A) width
- B) variables
- C) length
- D) diameter

21. Strings are fed into the device by means of an

- A) screen
- B) input machine
- C) output tape
- D) input tape

22. An automation system in which the output depends only on the present input is called a

- A) Mealy machine
- B) Moore machine
- C) Moore counter
- D) Mealy counter

23. An edge associated with a vertex pair $\{v_i, v_i\}$ is called a

- A) vertex edge
- B) self loop
- C) cycle edge
- D) circular edge

24. The number of edges incident on a vertex v is called the of v .

- A) factor
- B) size
- C) degree
- D) multiple

25. A is a method that gives an error message for that n-tuple.

- A) Coding message
- B) analytical message
- C) Decoding message
- D) coordinate message

26. The probability function of a Binomial distribution is given by

- A) $x^n p^x q^{n-x}$
- B) ${}^n P_x p^x q^{n-x}$
- C) ${}^n C_x p^x q^{n-x}$
- D) ${}^n P_x p^x q^{n-x}$

27. Consider the sets N, Z, Q, R the order in which these can be arranged is

- A) N ? Z ? Q ? R
- B) Z ? Q ? N ? R
- C) Z ? Q ? R ? N
- D) Q ? Z ? R ? N

28. U? =

- A) ?
- B) ?
- C) ?
- D) ?

29. Consider the function $f(x) = x^3$ for every $x \in \mathbb{R}$, then f is a

- A) onto function
- B) into function
- C) one-one function
- D) one-to-one function

30. The letters of the word SUNDAY can be arranged in

- A) 740 ways
- B) 720 ways
- C) 750 ways
- D) 670 ways

31. $C(n, r) =$

- A) $\frac{n!}{r!(n-r)!}$

B)
()!!
!
2 n r r
n
?

C)
()!!
!
2 n r r
n
?

D)
()!!
! 2
n r r
n
?

32. If the sequence is 2 r then the generating function is

A) 3)
(1
(1)
z
z z
?
?

B) 3)
(1
(1)
z
z z
?
?

C) 3)
(1
(1)
z
z z
?
?

D) 3)
(1
(1)
z
z z

?

??

33. For any subset A of \mathbb{R} , infimum of $A =$

- A) maximum of A
- B) minimum of A
- C) Any number in A
- D) only fractions

34. State true (T) or false (F)

(i) Consider the set Z of integers, we define $R = \{(a, b) \mid a \equiv r \pmod{2}, b \equiv r \pmod{2}\}$ then $(a, b) \in R \iff a$ and b give the same remainder r when divided by 2 is an equivalence relation.

(ii) Let R be an equivalence relation defined by A . Let $a, b \in A$ be arbitrary elements, then $[a] = [b] \iff (a, b) \in R$

- A) (i) T (ii) T
- B) (i) F (ii) F
- C) (i) T (ii) F
- D) (i) F (ii) T

35. State true (T) or false (F)

(i) A relation R is transitive if $(a, b) \in R, (b, c) \in R$ then $(a, c) \in R$.

(ii) A relation R is symmetric if $(a, b) \in R \iff (b, 2b) \in R$.

- A) (i) T (ii) T
- B) (i) F (ii) F
- C) (i) T (ii) F
- D) (i) F (ii) T

36. How many possible outcomes are there when 100 dice are rolled?

- A) 6100
- B) 1006
- C) 600
- D) 6^{100}

37. The number of arrangements in the letters of the word "ACCOUNTANT" is

- A) 226800
- B) 162800
- C) 262800
- D) 282600

38. G is said to be a, if there exists an element $a \in G$ such that $G = \langle a \rangle$.

- A) Additive group
- B) Subtractive group
- C) Cyclic group
- D) Normal group

39. If \otimes is a binary operation in \mathbb{Q} defined by

3

ab

$a \otimes b = \frac{a+b}{3}$, then identity =

- A) 4
- B) 5
- C) 3

D) 2

40. The permutation (1 3 5 6) is

A) Even

B) Odd

C) Zero

D) not defined

Part B (Two mark questions)

41. The solution of the recurrence relation $a_n = 6a_{n-1} - 9a_{n-2}$ with the initial conditions $a_0 = 1$ and $a_1 = 6$ is

A) $a_n = 3^n - n3^n$

B) $a_n = 3^n + 3^n$

C) $a_n = 3^n + n3^n$

D) $a_n = 3 + n3^n$

42. The solution of the recurrence relation $a_n = a_{n-1} + 2a_{n-2}$ with $a_0 = 2$ and $a_1 = 7$ is

A) n^n

B) n^n

C) n^n

D) n^n

A) n^n

B) n^n

C) n^n

D) n^n

43. If $(a, b) \in R$ and if $a \sim b$ with $a \sim b$ then we write

A) $a < b$

B) $a > b$

C) $a = b$

D) $a \sim b$

44. "If P is a partially ordered set in which every chain has an upper bound, then P possesses a maximal element" this lemma is known as.....

A) Descartes's Lemma

B) Radon Lemma

C) Zorn's Lemma

D) Newton's Lemma

45. The factors of 12 under forms a lattice.

A) Divisibility

B) Addition

C) Multiplication

D) Subtraction

46. State true(T) or false(F)

Let (L, \leq, \cdot) be an algebraic lattice and $x \in L$ then

(i) $x \cdot x = y, x \cdot x = x$

(ii) $x \cdot (x \cdot y) = x$

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

47. State whether true(T) or false(F)

Let $(S, ?)$ and $(S?, 0)$ be two semigroups. A function $f : S \rightarrow S?$ is called an isomorphism from $(S, ?)$ to $(S?, 0)$ if,

(i) f is one-to-one.

(ii) $f(a?b) = f(a) ? f(b)$ for all $a, b \in S$

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

48. Consider the set $(A, ?)$ if for all $a \in A$, if there exists an element e such that $a ? e = e ? a = a$ then e is called an

A) identity element

B) inverse element

C) idempotent element

D) adsorption element

49. State whether true(T) or false(F)

(i) $x + y + 4 = 7$ is a statement but it is not a proposition.

(ii) $x > 3$ and $x > 5$ are not statements but propositions

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

50. State whether true(T) or false(F)

" $P \rightarrow Q$ " can be read in any one of the following ways

(i) If P then Q

(ii) P if and only if Q

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

51. State whether true(T) or false(F)

(i) $\neg \exists x M(x)$ symbolizes "There do not exist a man"

(ii) $\forall x (M(x) \rightarrow C(x))$ symbolizes "For all men some men are clever"

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

52. The symbolic form of the statement "All men are giants" with universe of discourse as class of men is

A) $\forall x G(x)$

B) $\exists x G(x)$

C) $\forall x \neg G(x)$

D) $\exists x \neg G(x)$

53. State whether true(T) or false(F)

(i) $a \neq 0 = a$

(ii) $a \cdot a = 1$

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

54. If $S = \{a, b, c\}$ then $P(S) =$

A) $\{s, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, c\}\}$

B) $\{s, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, c\}\}$

C) $\{s, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{a, c\}, \{?\}\}$

D) $\{s, \{a\}, \{b\}, \{c\}, \{a, b\}, \{b, c\}, \{?\}\}$

55. State whether true(T) or false(F)

Let S be the set of symbols and S^* denote the set of all strings then

(i) Concatenation on S^* is associative.

(ii) The empty string is an identity element for the operation.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

56. State whether true(T) or false(F)

(i) A sentential form is any derivative of a non-terminal symbol S .

(ii) Language is a subset of all terminal strings over V_T .

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

57. State whether true(T) or false(F)

(i) The symbol Σ is used for input alphabet.

(ii) The symbol Γ is used for output alphabet.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

58. State whether true(T) or false(F)

In a transition graph we have

(i) The initial state, q_0 , of the system is represented by a rectangle with an arrow pointing towards it

(ii) The final state, q_1 , is represented by two diamond shape structures.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

59. State whether true(T) or false(F)

(i) The sum of the degrees of the vertices of a graph G is thrice the number of edges.

(ii) The number of vertices of odd degree is always even..

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

60. State whether true(T) or false(F)

(i) A vertex of degree 1 is called a pendant vertex.

(ii) A vertex having no incident edge is called an isolated vertex.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

Part C (Four mark questions)

61. State whether true(T) or false(F)

(i) The sum of the degrees of the vertices of a graph G is thrice the number of edges.

(ii) The number of vertices of odd degree is always even.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

62. A fair coin is tossed 6 times then the probability that exactly two heads occur is

A)

64

15

B)

64

5

C)

64

50

D)

64

25

63. If $f: R \rightarrow R$ is defined by $f(x) = x^2 - 3x + 5$ then $f^{-1}(3) =$

A) $\{1, 2\}$

B) $\{2, 3\}$

C) $\{1, 3\}$

D) $\{2, 1\}$

64. The number of ordered partition of a set with n elements of type (q_1, q_2, \dots, q_t) is

$P(n, q_1, q_2, \dots, q_t) =$

A)

$n! \dots n! 1 2 r q q q$

n

B)

$n! \dots n!$

1

$1 2 r q q q$

C)

! !..... !

!

1 2

2

r q q q

n

D)

! !..... !

!

1 2 r q q q

n

65. The solution of the recurrence relation $1 2 3 6 11 6 ? ? ? ? ? ? ? ? n n n n a a a$ with initial conditions $a_0 = 2, a_1 = 5$ and $a_2 = 15$ is

A) n^n

B) $n a^{1/2} 2^{2/3}$

C) n^n

D) $n a^{1/2} 2^{2/3}$

A) n^n

B) $n a^{1/2} 2^{2/3}$

C) n^n

D) $n a^{1/2} 2^{2/3}$

66. State whether true(T) or false(F)

(i) A relation R is symmetric if and only if the relation matrix is symmetric

(ii) The elements in the level-1 of a Poset are called atoms

(iii) A Poset is represented by a diagram called as Argand Diagram

(iv) A Poset S is said to be a totally ordered set if for a, b in S exactly one of the conditions $a > b, a = b$ or $b > a$ holds.

A) (i) T (ii) T (iii) F (iv) T

B) (i) T (ii) T (iii) T (iv) T

C) (i) T (ii) T (iii) F (iv) F

D) (i) F (ii) T (iii) F (iv) T

67. State whether true(T) or false(F)

(i) Let $(L, ?)$ be a lattice ordered set. Define $x \wedge y = \inf(x, y)$ and $x \vee y = \sup(x, y)$, then (L, \wedge, \vee) is an algebraic lattice.

(ii) Let (L, \wedge, \vee) be an algebraic lattice, define $x \wedge y \vee x \vee y = x$, then (L, \wedge, \vee) is a lattice ordered set.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

68. State whether true(T) or False(F)

(i) There is no one-to-one correspondence between any two right cosets of H in G

(ii) If G is a finite group and H is a subgroup of G, then $O(H)$ is a divisor of $O(G)$.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

69. State whether true(T) or False(F)

Let P_1, P_2, \dots, P_n be n statement variables

(i) The expression $\sum_{i=1}^n P_i$ where

$\sum_{i=1}^n P_i$ is either P_i or $\sim P_i$ is called a min term.

(ii) The expression $\prod_{i=1}^n P_i$ where

$\prod_{i=1}^n P_i$ is either P_i or $\sim P_i$ is called a max term.

A) (i) T (ii) T

B) (i) T (ii) F

C) (i) F (ii) T

D) (i) F (ii) F

70. State whether true(T) or False(F)

Let the universe of discourse be the set of integers. Determine the truth values of the following sentences

(i) $\forall x (x^2 \geq 0)$

(ii) $\exists x (x^2 - 5x + 6 = 0)$

(iii) $\exists x (x^2 - 5x + 6 = 0)$

(iv) $\forall y (\exists x (x^2 = y))$

A) (i) T (ii) T (iii) T (iv) F

B) (i) T (ii) F (iii) T (iv) F

C) (i) F (ii) T (iii) F (iv) T

D) (i) F (ii) F (iii) F (iv) F

71. State whether true(T) or False(F)

(i) Two Boolean expressions of n variables are said to be equivalent if they assume the same value for every assignment of values to the n variables.

(ii) Some switches or switching circuits may be represented by some new type of diagrams, which are called as gates.

(iii) A gate or combination of gates is a constant number

(iv) A symbolic representation which represents a polynomial is called a switching network.

A) (i) T (ii) T (iii) F (iv) F

B) (i) T (ii) F (iii) T (iv) F

C) (i) F (ii) T (iii) F (iv) T

D) (i) F (ii) F (iii) F (iv) F

72. The language $L(G) = \{a^n b^m / n, m \geq 1\}$ generated by the grammar

$G = (\{S, A, B, C\}, \{a, b\}, S, P)$ where P is the set of productions

$\{S \rightarrow aS, S \rightarrow aB, B \rightarrow bC, C \rightarrow aC, C \rightarrow a\}$ is

A) aabaaa

B) aaabaa

C) aabbaa

D) ababab

73. State true(T) or false(L)

Let $M = (Q, \Sigma, q_0, F)$ be a DFA where

(i) Q is non-empty, finite set of states.

(ii) Σ is a non-empty, finite set of input alphabets.

(iii) δ is a transition function.

(iv) $q_0 \in Q$ is the start state.

A) (i) T (ii) T (iii) T (iv) T

B) (i) T (ii) T (iii) F (iv) F

C) (i) F (ii) F (iii) T (iv) T

D) (i) T (ii) F (iii) T (iv) F

74. State true(T) or false(F)

(i) A graph $G = (V, E)$ is said to be a null graph if $E = \emptyset$.

(ii) A cycle is a simple circuit.

(iii) A loop is a cycle of length 2.

(iv) A cycle that is not a loop must have length at least 3.

A) (i) T (ii) T (iii) T (iv) T

B) (i) T (ii) T (iii) F (iv) T

C) (i) F (ii) F (iii) T (iv) T

D) (i) T (ii) F (iii) T (iv) F

75. The word $c = 1010110$ is transmitted through a binary symmetric channel. If $e = 0101101$ is the error pattern, find the word r received. Also if $p = 0.05$ is the probability that a signal is incorrectly received, the probability with which r is received

A) 1111011, 0.00005

B) 1110011, 0.000005

C) 1111011, 0.000005

D) 1011010, 0.000005

Answer Keys

1

B

21

D

41

C

61

C

2

D

22

B

42

D

62

A

3

C

23

B

43

B

63
A
4
B
24
C
44
C
64
D
5
B
25
C
45
A
65
A
6
C
26
D
46
C
66
A
7
D
27
A
47
B
67
A
8
A
28
D
48
A
68
C
9
C
29

D
49
B
69
A
10
B
30
B
50
B
70
B
11
B
31
A
51
D
71
A
12
C
32
B
52
A
72
A
13
B
33
B
53
B
73
A
14
B
34
A
54
C
74
B

15
B
35
C
55
A
75
C
16
B
36
A
56
C
17
B
37
A
57
A
18
D
38
C
58
D
19
A
39
C
59
C
20
C
40
B
60
A

Sikkim Manipal University Website Design

Subject Code: BT0078

Subject Name: Website Design

Credits: 2 Marks: 70

Part A (One mark questions)

1. The internet is based on a large number of protocols and conventions and such protocol is explained in the technical publication called as _____

A.RFF

B.RFC

C.RCC

D.CSS

2. The browser display window can be used to display more than one document at a time using _____

A. Frames

B. Columns

C. New Window

D. Extras

3. _____ assigns distinctive names and addresses to computers connected on the Internet.

A. General Atomics

B. InterNIC

C. Network Domain

D. AT & AE

4. _____ is a specialized computer that reads the address of each TCP/IP packet and sends the packet to its destination.

A. Server

B. FTP

C. LAN

D. Router

5. _____ is an XML-based markup language describing the formatting of XML data for output to screen, paper or other media.

A. XSLTE

B. DHTML

C. XSL-FO

D. External CSS

6. Which of the following is/are the graphics file formats?

A. GIF

B. JPEG

C. TIFF

D. All A, B & C

7. PNG stands for _____

A. Portable Network Group

B. Portable Node Graphics

C. Portable Network Graphics

D. Portable Node Group

8. The _____ attribute of tag specifies the URL of the application on the web server that is to be called when the user clicks the Submit button.

A. Action

B. Method

C. Type

D. Name

9. Marketing and buying products and services through Internet is called _____

A. Internet Marketing

B. Local trade

C. Internet commerce

D. Electronic commerce

10. CSS stands for _____.

A. Computer Style Sheets

B. Cascading Style Sheets

C. Compound Style Sheets

D. Graphic Style Sheets

11. Choose the well optimized web page size.

A. 0-100K

B. 0-40K

C. 10-20K

D. 0-256K

12. SGML stands for _____

A. Simple Generalized Markup Language

B. Standard Generalized Markup Language

C. Standard Graphical Markup Language

D. Simple Graphical Markup Language

13. _____ Is a block-level tag that's used to enclose multi-line quotations from other sources.

A.

B.

C.

d.

14. _____ is a freeware utility that allows you to create impressive Web page buttons.

A. Buttonmedia

B. Buttonmania

c. Buttoncreator

D. None of the above

15. The _____ attribute is used to name the standard namespace for instances, which is XMLSchema-instance.

A. schema Location

B. schema

C. location

D. schemaInstance

16. Pick up the optional element(s) in a SOAP message.

A. Text

B. Body

C. Header

D. footer

17. WSDL stands for _____

A. Web Sphere Description Language

B. Web Service Data Leak

C. Web Sphere Data Link

D. Web Service Description Language

18. HTTP stands for _____

A. Hyper Text Transfer Protocol

B. Hyper Tension Transfer Protocol

C. Hyper Tech Transfer Protocol

D. Hyper Talk Transfer Protocol

19. The attribute 'disable-output-escaping' belongs to _____ element.

A.

B.

C.

D.

20. The _____ is used to put a conditional test against the content of the XML file.

A.

B.

C.

D.

Part B (Two marks questions)

21. The primary attributes of the

tag are _____

1. style

2. class

3. id

A. 1, 2 & 3

B. 2 & 3

C. 1 & 3

D. 1 & 2

22. TCP stands for _____ and IP stands for _____

A. Transmission Center Protocol, Information Protocol

B. Transport Center Protocol, Intranet Protocol

C. Transmission Control Protocol, Incoming Protocol

D. Transmission Control Protocol, Internet Protocol

23. State True or False statements.

1. Hierarchical applies to sites that are information-rich and are best organized as a large tree, much like a library.

2. Global applies to sites where you can easily and logically jump among all points; this is best if you are presenting information in fewer, broader categories.

A. 1-True, 2-False

B. 1-False, 2-False

C. 1-False, 2-True

D. 1-True, 2-True

24. Advantages of XML

1. XML Separates Data from HTML

2. XML Simplifies Data Sharing

3. XML Simplifies Data Transport

4. XML Simplifies Platform Changes

A. 1, 2 & 3

B. 2, 3 & 4

C. 1, 2, 3 & 4

D. 1, 3 & 4

25. Pick up the correct specifications of the style attribute.

1. H3 {font-family: Arial}

2. H3 {font-family: Arial; font-style: italic;}

3. H3 {font-family: Arial; font-style: italic; color: green}

4. H3 {font-family: Arial, Helvetica, sans-serif;}

A. 1, 2, 3 only

B. 1, 2 only

C. 3, 4 only

D. All 1, 2, 3 & 4

26. Pick up the attributes that are supported by table element.

- a. align
 - b. border
 - c. bgcolor
 - d. nowrap
- A. a, b, c only

B. a, b only

C. c, d only

D. All of the above

27. Pick up the correct data types of the XML elements.

a. PCDATA

b. EMPTY

c. ANY

d. NOTHING

A. a, b, c only

B. a, b, d only

C. b, c, d only

D. All of the above

28. Match the following w.r.t XML schemas:

Schema Purpose

- 1. SVG a. Addresses the creation of events and listeners
- 2. XForms b. Addresses form input collection and submission
- 3. XML Events c. Addresses graphics

A. 1-c, 2-b, 3-a

B. 1-a, 2-b, 3-c

C. 1-b, 2-a, 3-c

D. 1-b, 2-c, 3-a

29. If we want the elements and attributes that are not defined directly in the schema element to be included in the target namespace, schema's _____ must be set to _____

- A. targetNamespace, schema
- B. elementFormDefault, qualified
- C. elementFormDefault, schema
- D. xmlns, elementFormDefault

30. _____ and _____ are the two utility elements in WSDL specification.

- A. definition, type
- B. documentation, import *
- C. message, port Type
- D. binding, service

31. The powerful capabilities provided by XSL are _____

- 1. the creation of formatting constructs including generated text and graphics
- 2. the definition of reusable formatting macros
- 3. writing-direction independent style sheets
- 4. extensible set of formatting objects

- A) 1, 2, 3 & 4*
- B) 2, 3 & 4
- C) 1, 2 & 3
- D) 1, 3 & 4

Part C (Four marks questions)

32. Which of the following are belongs to Styles of navigation?

- 1. Embedded links
- 2. Bread-crumbs trail
- 3. Mix and match
- 4. Tab navigation

5. Site map

A.1, 2, 3, 4 & 5*

B.2, 3, 4 & 5

C.1, 3, 4 & 5

D.1, 2, 4 & 5

33. Match the following w.r.t web graphics tools:

Web graphic tools and its purpose

1. DeKnop a. Manipulate both vector and bitmap images
2. Gimp b. Create pictures and animations
3. PhotoPlus c. Free graphics editor
4. Macromedia Fireworks d. Create customized web page buttons quickly

A. 1-d, 2-c, 3-b, 4-a *

B. 1-b, 2-c, 3-d, 4-a

C. 1-c, 2-d, 3-a, 4-b

D. 1-a, 2-b, 3-c, 4-d

34. Disadvantages of DTDs

1. DTDs are written in a syntax unrelated to XML, so they cannot be analyzed with an XML processor.
2. It can be confusing to deal with two different syntactic forms, one to define a document and one to define its structure.
3. Do not allow restrictions on the form of data that can be the content of a particular tag
4. There are only 10 data types, none of which is numeric

A. 1, 2, 3 & 4

B. 2, 3 & 4

C. 1, 3 & 4

D. 1, 2 & 3

35. Match the following w.r.t styles of navigation:

Style Purpose:

1. Embedded links a. one-stop shopping for everything on your site
2. Bread-crumbs trail b. for breaking into a few primary categories
3. Tabbed c. for organizing large amounts of information
4. Site map d. most basic form of navigation

A. 1-a, 2-b, 3-c, 4-d

B. 1-b, 2-c, 3-d, 4-a

C. 1-d, 2-c, 3-b, 4-a

D. 1-c, 2-a, 3-b, 4-d

36. Match the following w.r.t Markup Languages.

Purpose of Markup Language

1. SGML a. meta-language and you can define your own elements
2. HTML b. specific application with a specific set of rules that are defined in DTD
3. XML c. meta-language that describes another language and you cannot define your own elements

A. 1-b, 2-c, 3-a

B. 1-a, 2-b, 3-c

C. 1-b, 2-a, 3-c

D. 1-c, 2-b, 3-a *

37. Three major roles within the web service architecture are _____

1. Service provider
2. Service requestor
3. Service registry
4. Service database
5. Service server

A. 1, 2 & 3

B. 2, 3 & 4

C. 3, 4 & 5

D.1, 2, 3, 4 & 5*

38. Limitations of CSS.

1. CSS cannot reuse document data
2. CSS cannot conditionally select document data
3. CSS cannot calculate quantities or store values in variables
4. CSS cannot generate dynamic text, such as page numbers

A. 1, 2 and 3 only

B. 2, 3 and 4 only

C. 1, 2 and 4 only

D. All 1, 2, 3 & 4 *

Answer Keys

Q. No.

Ans. Key

Q. No.

Ans. Key

1

B

21

A

2

A

22

D

3

B

23

D

4

D

24

C

5

C

25

D

6

D

26

D

7

C

27

A

8

A

28

A

9

D

29

B

10

B

30

B

11

C

31

A

12

B

32

A

13

A

33

A

14

B

34

A

15

A

35

C

16

C

36

D

17

D

37

D

18

A

38

D

19

D

20

A