

# SRI SAI COACHING CENTRE

2/25, Raja Mill Road, Madurai – 1.

TRB – COMPUTER INSTRUCTOR – GRADE – 1

## Model - I

Name : .....

14.06.19

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### UNIT 1 - Computer Architecture

1. A computer uses a memory unit with 1Mega words of 32 bits each. A binary instruction code is stored in one word of memory. The instruction has four parts: an indirect bit, an operation code and a register code part to specify one of 32 registers and an address part. How many bits are there in the operation code, the register code part and the address part?  
A) 20, 7, 7      B) 7, 7, 20      C) 7, 5, 20      D) 7, 6, 20
2. In computers, subtraction is generally carried out by  
A) 1's complement      B) 2's complement  
C) 9's complement      D) 10's complement
3. Consider a system with 2 level cache. Access times of Level 1 cache, Level 2 cache and main memory are 1 ns, 6 ns and 50 ns respectively. The hit rates of Level 1 and Level 2 caches are 0.6 and 0.5, respectively. What is the average access time of the system ignoring the search time within the cache?  
A) 17.5 ns      B) 11.8 ns      C) 12.7 ns      D) 15.2 ns
4. The hexadecimal equivalent of the binary integer number 101010111101 is :  
A) D24      B) A B D      C) B A E      D) 1 A D
5. Elements of an array of contiguous memory locations are accessed using \_\_\_\_\_  
A) Indexed addressing mode      B) Base Register addressing mode  
C) Relative address mode      D) Displacement mode
6. Adapting the capacity of a system according the increased service load is called  
A) Tolerance      B) Scalability      C) Capability      D) Loading
7. Which of the following is an interrupt according to temporal relationship with systemclock ?  
A) Maskable interrupt      B) Periodic interrupt  
C) Division by zero      D) Synchronous interrupt
8. A memory management system has 32 pages with 1KB of page size. Physical memory consists of frames equivalent to half of the number of pages in logical memory. Number of bits required in logical and physical address are respectively :  
A) 14 and 15      B) 14 and 29      C) 15 and 14      D) 16 and 32
9. Range of addresses generated by a program is called as \_\_\_\_\_  
A) Logical Memory Addresses      B) Physical Memory Addresses  
C) Virtual address Space      D) Buffer Addresses
10. The amount of data exchange between cache and main memory is equivalent to \_\_\_\_\_  
A) Cache Memory      B) Cache Size      C) Block Size      D) Mapping Function

### Unit - II - Operating System

11. A Translation Look Aside Buffer (TLAB) with hit ratio 60%. It takes 30 nanoseconds (ns) to search TLAB and 200 ns to access main memory. The effective memory access time is \_\_\_\_\_.  
A) 330 ns      B) 140 ns      C) 310 ns      D) 240 ns

12. Consider the input/output (I/O) requests made at different instants of time directed at a hypothetical disk having 150 tracks as given in the following table:

Serial No.	1	2	3	4	5
Track No.	15	85	60	110	75
Time of arrival	50	130	110	100	150

Assume that :

Current head position is at track no. 65

Current clock time is 100 milliseconds [www.netugc.com](http://www.netugc.com)

Head movement time per track is 1 millisecond.

The seek times in Shortest Seek First (SSF) scheduling algorithms is :

- A) 150 milliseconds    B) 140 milliseconds    C) 130 milliseconds    D) 160 milliseconds
13. A given memory chip has 24 address pins and 8 data pins. What is the size of memory chip?  
A) 16 MB                    B) 16 Mb                    C) 16 GB                    D) 16 Kb
14. A system contains 25 units of resource of same type. The maximum resource requirement of P, Q and R are 10, 12, 15 respectively. Currently the process P, Q and R are allocated with 3, 7, 12 resources. Now, consider the following resource requests:  
(i) P makes a request for 3 resource units.  
(ii) Q makes request for 3 resources units.  
(iii) R makes a request of 3 resource units.  
For a safe state, which of the following options must be satisfied?  
A) Only request (i)    B) Only request (ii)    C) Only request (iii)    D) Request (i) and (ii)
15. Consider the following set of processes and the length of CPU burst time given in milliseconds:  
Process and CPU Time    Process CPU Burst time (ms)    P1 5    P2 7    P3 6    P4 4  
Assume that processes being scheduled with Round-Robin Scheduling Algorithm with time quantum 3ms. Then the waiting time for P2 is \_\_\_\_\_ ms.  
A) 15                    B) 12                    C) 3                    D) 14
16. Consider a main memory with 3 page frames for the following page reference string:  
5, 4, 3, 2, 1, 4, 3, 5, 4, 3, 4, 1, 4. Assuming that the default page faults are not counted. Find the number of page faults in FIFO and second chance replacement respectively are  
A) 8 and 9                    B) 6 and 5                    C) 7 and 9                    D) 9 and 8
17. If the size of logical address space is 2 to the power of m, and a page size is 2 to the power of n addressing units, then the high order \_\_\_\_\_ bits of a logical address designate the page number, and the \_\_\_\_\_ low order bits designate the page offset.  
A) m, n                    B) n, m                    C) m – n, m                    D) m – n, n
18. Consider a disk with 8172 bytes per track having a rotation time of 8msec and average seek time of 20 msec. What is the time in msec to read a block of 1024 bytes from this disk?  
A) 29 sec                    B) 49 sec                    C) 48 sec                    D) 27 sec
19. Match the following list1 with list2:  
a. DMA I/O ----- 1. High speed RAM  
b. Cache ----- 2. Disk  
c. Interrupt I/O ----- 3. Printer  
d. Condition code register ----- 4. ALU  
Codes:  
A) a – 2, b – 1, c – 3, d - 4                    B) a – 4, b – 1, c – 3, d - 2  
C) a – 2, b – 3, c – 1, d – 4                    D) a – 3, b – 4, c – 2, d - 1

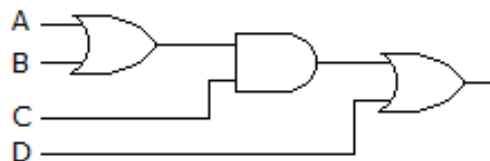
20. What must reside in the main memory under all situations in a resident - OS computer?  
 A) Linker                      B) Loader                      C) Assembler                      D) Compiler

### UNIT – 3 DIGITAL ELECTRONICS

21. From the truth table below, determine the standard SOP expression.

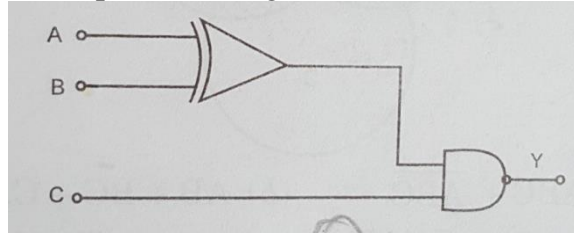
Inputs			Output
A	B	C	X
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	0

- A)  $X = \bar{A}\bar{B}\bar{C} + ABC + A\bar{B}C$                       B)  $X = ABC + ABC + ABC$   
 C)  $X = A\bar{B}C + \bar{A}BC + AB\bar{C}$                       D)  $X = \bar{A}\bar{B}C + \bar{A}BC + AB\bar{C}$
22. One of De Morgan's theorems states that  $\overline{X+Y} = \bar{X}\cdot\bar{Y}$ . Simply stated, this means that logically there is no difference between:  
 A) a NOR and an AND gate with inverted inputs  
 B) a NAND and an OR gate with inverted inputs  
 C) an AND and a NOR gate with inverted inputs  
 D) a NOR and a NAND gate with inverted inputs
23. How many gates would be required to implement the following Boolean expression after simplification?  $XY + X(X + Z) + Y(X + Z)$   
 A) 1                      B) 2                      C) 4                      D) 5
24. Derive the Boolean expression for the logic circuit shown below:



- A)  $CA + CB + CD$                       B)  $C(A + B)\bar{D}$   
 C)  $C(A + B) + D$                       D)  $CA + CB + D$
25. How many flip flops are needed to divide the input frequency by 64?  
 A) 2                      B) 4                      C) 6                      D) 8
26. A flip-flop circuit can be used for  
 A) Scaling                      B) Counting                      C) Rectification                      D) Demodulation
27. The BCD adder to add two decimal digits needs minimum of  
 A) 6 Full Adders and 2 Half Adders                      B) 5 Full Adders and 3 Half Adders  
 C) 4 Full Adders and 3 Half Adders                      D) 5 Full Adders and 2 Half Adders

28. Boolean expression for the output of the logic circuit shown below is:

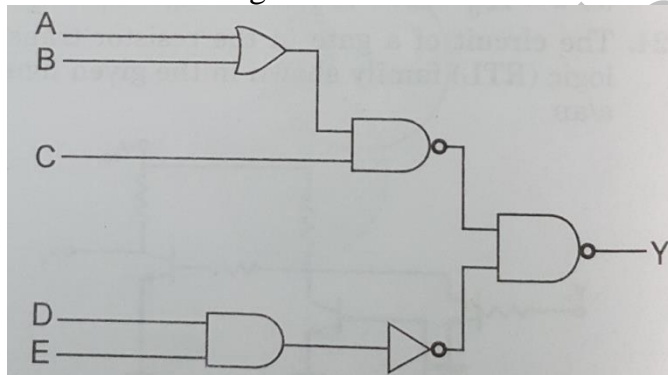


- A)  $Y = AB + AB + C$                       B)  $Y = \overline{A} \overline{B} + AB + \overline{C}$   
 C)  $Y = A \overline{B} + \overline{A} B + C$                       D)  $Y = AB + \overline{A} B + \overline{C}$

29. Boolean expression  $\overline{X} Y \overline{Z} + \overline{X} \overline{Y} Z + X Y \overline{Z} + X \overline{Y} Z + XYZ$  can be simplified using k-map to :

- A)  $X \overline{Z} + \overline{X} Z + YZ$     B)  $XZ + \overline{Y} Z + Y \overline{Z}$     C)  $\overline{X} Y + YZ + XZ$     D)  $\overline{X} \overline{Y} + Y \overline{Z} + \overline{Y} Z$

30. Output Y of the circuit shown in the figure is



- A)  $(A + B) C + D E$                       B)  $AB + C(D+E)$                       C)  $(A+B)C + D + E$                       D)  $(AB+C).DE$

### UNIT 4 – DATA STRUCTURES / OPEN OFFICE

31. Convert the following Infix expression to Postfix form using a stack  $x + y * z + (p * q + r) * s$ , Follow usual precedence rule and assume that the expression is legal.

- A)  $xyz^*+pq^*r+s^*+$                       B)  $xyz^*+pq^*r+s^*+$   
 C)  $xyz^*+pq^*r+s^*+$                       D) None of the mentioned

32. Which of the following statement(s) about stack data structure is/are NOT correct?

- A) Linked List are used for implementing Stacks  
 B) Top of the Stack always contain the new node  
 C) Stack is the FIFO data structure  
 D) Null link is present in the last node at the bottom of the stack

33. What is the output of following function for start pointing to first node of following linked list?

```
1->2->3->4->5->6
void fun(struct node* start)
{
    if(start == NULL)
        return;
    printf("%d ", start->data);
    if(start->next != NULL )
        fun(start->next->next);
    printf("%d ", start->data);
}
```

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

34. The following C function takes a single-linked list of integers as a parameter and rearranges the elements of the list.  
The function is called with the list containing the integers 1, 2, 3, 4, 5, 6, 7 in the given order.  
What will be the contents of the list after the function completes execution?

```

struct node
{
int value;
struct node *next;
};
void rearrange(struct node *list)
{
struct node *p, *q;
int temp;
if((!list)||!list->next)
return;
p = list;
q = list->next;
while(q)
{
temp= p->value;
p->value = q->value;
q->value = temp;
p = q->next;
q =p?p->next:0;
}
}

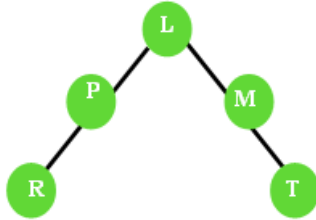
```

- A) 1, 2, 3, 4, 5, 6, 7    B) 2, 1, 4, 3, 6, 5, 7    C) 1, 3, 2, 5, 4, 7, 6    D) 2, 3, 4, 5, 6, 7, 1
35. What does the following function do?
- ```

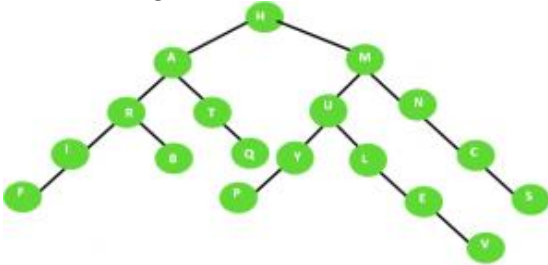
public Object some_func()throws emptyStackException
{
if(isEmpty())
    throw new emptyStackException("underflow");
returnfirst.getEle();
}

```
- A) pop    B) delete the top-of-the-stack element  
C) retrieve the top-of-the-stack element    D) none of the mentioned
36. Given an array of element 5,7,9,1,3,10,8,4. Tick all the correct sequences of elements after inserting all the elements in a min-heap.
- A) 1,3,4,7,8,9,10    B) 1,4,3,8,9,5,7,10  
C) 1,3,4,5,8,7,9,10    D) None of the mentioned

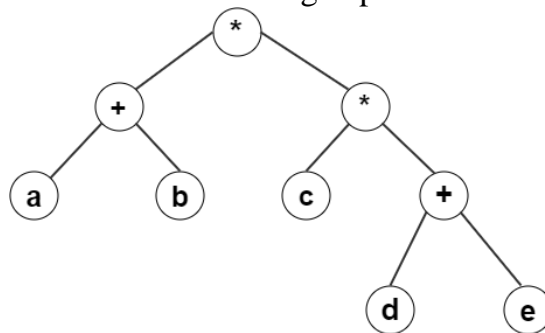
37. Figure below is a balanced binary tree. If a node inserted as child of the node R, how many nodes will become unbalanced?



- A) 2                      B) 1                      C) 3                      D) 0
38. Which of the following tree data structures is not a balanced binary tree?  
 A) AVL tree              B) Red-black tree              C) Splay tree              D) B-tree
39. Balanced binary tree with n items allows the lookup of an item in \_\_\_\_ worst-case time.  
 A)  $O(\log n)$               B)  $O(n \log 2)$               C)  $O(n)$               D)  $O(1)$
40. The figure shown below is a balanced binary tree. If node P is deleted, which of the following nodes will get unbalanced?



- A) U                      B) M                      C) H                      D) A
41. After performing these set of operations, what does the final list look contain?  
 InsertFront(10);  
 InsertFront(20);  
 InsertRear(30);  
 DeleteFront();  
 InsertRear(40);  
 InsertRear(10);  
 DeleteRear();  
 InsertRear(15);  
 display();
- A) 10 30 10 15              B) 20 30 40 15              C) 20 30 40 10              D) 10 30 40 15
42. What is the postfix expression for the following expression tree?



- A) abcde++\*\*              B) ab+cde+\*\*              C) abc+de+\*\*              D) abcd+\*e+\*

43. In linked list implementation of a queue, the important condition for a queue to be empty is?  
 A) FRONT is null    B) REAR is null    C) LINK is empty    D) None of the mentioned
44. What is the short cut key to open the Open dialog box?  
 A) F12    B) Shift F12    C) Alt + F12    D) Ctrl + F12
45. Which of the following is an absolute cell reference?  
 A) !A!1    B) \$A\$1    C) #a#1    D) A1

### UNIT - 5 – C++, PHP, PYTHON

46. Which of the following feature of OOPs is not used in the below code?

```
class A
{
  int i;
  public:
  void print(){cout<<"hello"<<i;}
}
class B: public A
{
  int j;
  public:
  void assign(int a){j = a;}
}
```

- A) Abstraction    B) Encapsulation    C) Inheritance    D) Polymorphism
47. Which of the following is true?  
 I) All operators in C++ can be overloaded.  
 II) The basic meaning of an operator can be changed.  
 A) I only    B) II only    C) Both I and II    D) Neither I nor II
48. What is a friend function in C++?  
 A) A function which can access all the private, protected and public members of a class  
 B) A function which is not allowed to access any member of any class  
 C) A function which is allowed to access public and protected members of a class  
 D) A function which is allowed to access only public members of a class
49. What is the output of following C++ code?

```
#include <iostream>
using namespace std;
class A{
  A(){
    cout<<"Constructor called";
  }
};
int main(int argc, char const *argv[])
{
  A a;
  return 0;
}
```

- A) Constructor called    B) Nothing printed    C) Error    D) Segmentation fault

50. The correct statement for a function that takes pointer to a float, a pointer to a pointer to a char and returns a pointer to a pointer to a integer is  
 A) `int **fun(float**, char**)`                      B) `int *fun(float*, char*)`  
 C) `int **fun(float*, char**)`                      D) `int ***fun(*float, **char)`
51. What will happen while using pass by reference  
 A) The values of those variables are passed to the function so that it can manipulate them  
 B) The location of variable in memory is passed to the function so that it can use the same memory area for its processing  
 C) The function declaration should contain ampersand (& in its type declaration)  
 D) All of the mentioned
52. What is the default return type of a function?  
 A) int                      B) void                      C) float                      D) char
53. Which of the following can be passed in function pointers?  
 A) variables                      B) data types                      C) functions                      D) none of the mentioned
54. Which of the following accesses the ninth element stored in array?  
 A) `array[9];`                      B) `array[8];`                      C) `array(8);`                      D) `array;`
55. The pointer can point to any variable that is not declared with which of these?  
 A) `const`                      B) `volatile`                      C) both `const` & `volatile`                      D) `static`

### PHP & PYTHON

56. Which of the following is not the scope of Variable in PHP?  
 A) Local                      B) Global                      C) Static                      D) Extern
57. What is the output of the following?  
`print('The sum of {0:b} and {1:x} is {2:o}'.format(2, 10, 12))`  
 A) The sum of 2 and 10 is 12                      B) The sum of 10 and a is 14  
 C) The sum of 10 and a is c                      D) Error
58. What is the output of the following piece of code?  
`def a(b):`  
`b = b + [5]`  
`c=[1,2,3,4]`  
`a(c)`  
`print(len(c))`  
 A) 4                      B) 5                      C) 1                      D) An exception is thrown
59. Suppose `t = (1, 2, 4, 3)`, which of the following is incorrect?  
 A) `print(t[3])`                      B) `t[3] = 45`                      C) `print(max(t))`                      D) `print(len(t))`
60. The assignment of more than one function to a particular operator is \_\_\_\_\_  
 A) Operator over-assignment                      B) Operator overriding  
 C) Operator overloading                      D) Operator instance
61. What is the output of the following?  
`for i in range(5):`  
`if i == 5:`  
`break`  
`else:`  
`print(i)`  
`else:`



print("Here")

A) 0 1 2 3 4 Here    B) 0 1 2 3 4 5 Here    C) 0 1 2 3 4    D) 1 2 3 4 5

62. What will be the output of the following PHP code?

```
< ?php
$number = array ("4", "hello", 2);
echo(array_sum ($number));
?>
```

A) 4hello2    B) 4    C) 2    D) 6

63. What will be the output of the following PHP code?

```
< ?php
$fruits = array ("apple", "orange", array ("pear", "mango"),
"banana");
echo(count($fruits, 1));
?>
```

A) 3    B) 4    C) 5    D) 6

64. What will be the output of the following PHP code?

```
< ?php
$fruits = array ("apple", "mango", "peach", "pear",
"orange");
$subset = array_splice ($fruits, 2);
print_r($fruits);
?>
```

A) Error  
B) Array ( [0] => apple [1] => mango [2] => peach )  
C) Array ( [0] => apple [1] => mango )  
D) Array ( [0] => pear [1] => orange )

65. PHP recognizes constructors by the name.

A) classname()    B) \_construct()  
C) function \_construct()    D) function \_\_construct()

### **UNIT - 6 (RDBMS)**

66. This Query can be replaced by which one of the following?

```
SELECT name, course_id
FROM instructor, teaches
WHERE instructor.ID= teaches.ID;
```

A) Select name, course\_id from teaches, instructor where instructor\_id=course\_id;  
B) Select name, course\_id from instructor natural join teaches;  
C) Select name, course\_id from instructor;  
D) Select course\_id from instructor join teaches;

67. **SELECT** name \_\_\_\_ instructor name, course id

```
FROM instructor, teaches
WHERE instructor.ID= teaches.ID;
```

Which keyword must be used here to rename the field name?

A) From    B) Rename    C) As    D) Join

68. **SELECT \* FROM** employee **WHERE** dept\_name="Comp Sci";  
In the SQL given above there is an error . Identify the error.  
A) Dept\_name      B) Employee      C) "Comp Sci"      D) From
69. A table has fields F1, F2, F3, F4, F5 with the following functional dependencies  
F1 → F3    F2 → F4    (F1 . F2) → F5  
In terms of Normalization, this table is in  
A) 1 NF      B) 2 NF      C) 3 NF      D) none
70. '\_\_\_' matches any string of \_\_\_\_\_ three characters. '\_\_\_%' matches any string of at \_\_\_\_\_ three characters.  
A) Atleast, Exactly    B) Exactly, Atleast    C) Atleast, All    D) All, Exactly

71.

| A  | B  | C  | D  |
|----|----|----|----|
| a1 | b1 | c1 | d1 |
| a1 | b2 | c2 | d2 |
| a2 | b2 | c2 | d3 |
| a3 | b3 | c4 | d3 |

- Which of the following functional dependency holds for above relation R(A,B,C,D)
- A) AB → D and D → A  
B) AB → C and B → D  
C) AB → C and B → C  
D) AB → D and A → D
72. Which of the following query would display names of all the students whose honours subject is English and percentage of marks more than 80, or honours subject is Spanish and percentage of marks more than 80?
- A) select first\_name, last name from students where (honours\_subject = "English" or honours\_subject = "Spanish" ) and percentage\_of\_marks > 80;  
B) select first\_name, last name from students where honours\_subject = "English" or honours\_subject = "Spanish" and percentage\_of\_marks > 80;  
C) select first\_name, last name from students where (honours\_subject = "English" or honours\_subject = "Spanish" and percentage\_of\_marks > 80);  
D) select first\_name, last name from students where (honours\_subject = "English") or honours\_subject = "Spanish" and percentage\_of\_marks > 80;
73. What is returned by ROUND(789.8389, 2)?  
A) 789.84      B) 789.83      C) 78      D) 789.00
74. Which of the following is not true about modifying rows in a table?  
A) Existing rows in a table are modified using the UPDATE statement.  
B) You can update more than one row at a time.  
C) All the rows in a table are modified if you omit the WHERE clause.  
D) None of the above.
75. Which of the following is not true about modifying rows in a table?  
A) Existing rows in a table are modified using the UPDATE statement.  
B) You can update more than one row at a time.  
C) All the rows in a table are modified if you omit the WHERE clause.  
D) None of the above.

## UNIT - 7 BUSINESS COMPUTING

76. Match the following with respect to RDBMS :

- |                          |   |                                                                                |
|--------------------------|---|--------------------------------------------------------------------------------|
| a) Entity integrity      | - | 1) Enforces some specific business rule that do not fall into entity or domain |
| b) Domain integrity      | - | 2) Rows can't be deleted which are used by other records                       |
| c) Referential integrity | - | 3) Enforces valid entries for a column                                         |
| d) Userdefined integrity | - | 4) No duplicate rows in a table                                                |

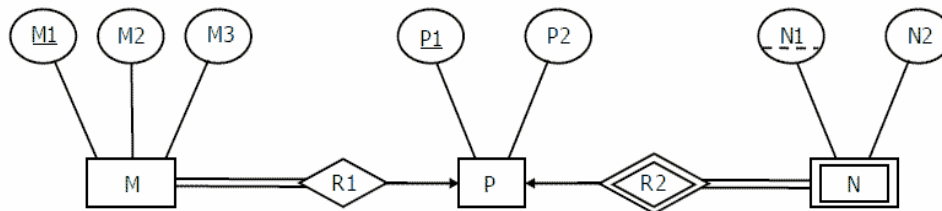
|        |   |   |   |   |    |   |   |   |   |
|--------|---|---|---|---|----|---|---|---|---|
| Codes: | a | b | c | d |    | a | b | c | d |
| A)     | 3 | 4 | 1 | 2 | B) | 4 | 3 | 2 | 1 |
| C)     | 4 | 2 | 3 | 1 | D) | 2 | 3 | 4 | 1 |

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

77. Given the basic ER and relational models, which of the following is INCORRECT?

- A) An attributes of an entity can have more that one value
- B) An attribute of an entity can be composite
- C) In a row of a relational table, an attribute can have more than one value
- D) In a row of a relational table, an attribute can have exactly one value or a NULL value

78. Consider the following ER diagram.



The minimum number of tables needed to represent M, N, P, R1, R2 is

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

79. An ER Model includes

- I. An ER diagram portraying entity types.
- II. Attributes for each entity type
- III. Relationships among . entity types.
- IV. Semantic integrity constraints that reflects the business rules about data not captured in the ERdiagram.

- A) I, II, III & IV                      B) I & IV                      C) I, II & IV                      D) I & III

80. A data dictionary does not provide information about

- A) Where data is located
- B) who owns it
- C) size of disk storage device
- D) How the data is used

81. Is the appropriate pairing of items in the two columns listing various activities encountered in a software life cycle?

- |                         |                                       |
|-------------------------|---------------------------------------|
| P. Requirements Capture | 1. Module Development and Integration |
| Q. Design               | 2. Domain Analysis                    |
| R. Implementation       | 3. Structural and Behavioral Modeling |
| S. Maintenance          | 4. Performance Tuning                 |

- A) P-3, Q-2, R-4, S-1                      B) P-2, Q-3, R-1, S-4  
 C) P-3, Q-2, R-1, S-4                      D) P-2, Q-3, R-4, S-1

82. Match the following:
- |                       |                                                       |
|-----------------------|-------------------------------------------------------|
| 1) Waterfall model    | a) Specifications can be developed incrementally      |
| 2) Evolutionary model | b) Requirements compromises are inevitable            |
| 3) Component-based    | c) Explicit recognition of risk software engineering  |
| 4) Spiral development | d) Inflexible partitioning of the project into stages |
- Codes:
- |                       |                       |
|-----------------------|-----------------------|
| A) 1-a, 2-b, 3-c, 4-d | B) 1-d, 2-a, 3-b, 4-c |
| C) 1-d, 2-b, 3-a, 4-c | D) 1-c, 2-a, 3-b, 4-d |
83. The prototyping model of software development is:
- A) a reasonable approach when requirements are well-defined  
 B) a useful approach when a customer cannot define requirements clearly.  
 C) the best approach to use for projects with large development teams.  
 D) a risky model that rarely produces a meaningful product.
84. Which one of the following is NOT desired in a good Software Requirement Specifications (SRS) document?
- A) Functional Requirements  
 B) Non-Functional Requirements  
 C) Goals of Implementation  
 D) Algorithms for Software Implementation
85. Which one of the following is TRUE?
- A) The requirements document also describes how the requirements that are listed in the document are implemented efficiently.  
 B) Consistency and completeness of functional requirements are always achieved in practice.  
 C) Prototyping is a method of requirements validation.  
 D) Requirements review is carried out to find the errors in system design
86. Consider the following entity relationship diagram (ERD), where two entities E1 and E2 have a relation R of cardinality 1 : m.



- The attributes of E1 are A11, A12 and A13 where A11 is the key attribute. The attributes of E2 are A21, A22 and A23 where A21 is the key attribute and A23 is a multi-valued attribute. Relation R does not have any attribute. A relational database containing minimum number of tables with each table satisfying the requirements of the third normal form (3NF) is designed from the above ERD. The number of tables in the database is
- A) 2      B) 3      C) 5      D) 4
87. User interface which uses both menus technique and forms is classified as
- A) defined user interface  
 B) host user interface  
 C) query user interface  
 D) graphical user interface
88. Popular technique in Web-based user interfaces are
- A) unstructured host manner  
 B) pull-down menus  
 C) pull-up options  
 D) structured host manner
89. If high-level data manipulation language is used in standalone interface manner then this language is considered as
- A) host language  
 B) sublanguage  
 C) query language  
 D) scheming language

90. Data dictionary is also known as  
 A) Function catalog                      B) Data catalog  
 C) Storage catalog                        D) System catalog

### **Unit – 8 (Web Development)**

91. Which element contains definition?  
 a) <dl>                      b) <dd>                      c) <dt>                      d) <ul>
92. Which of the following can't be the value of list-style-type?  
 a) square                      b) circle                      c) ellipse                      d) disc
93. Which attribute is used with <select> element?  
 a) multiple                      b) selected                      c) name                      d) value
94. How many standard color names does HTML supports?  
 a) 120                      b) 130                      c) 140                      d) 90
95. To show deleted text, which element is used?  
 a) <ins>                      b) <del>                      c) <em>                      d) <strong>
96. What is the color of an unvisited link?  
 a) red                      b) blue                      c) purple                      d) green
97. How many minimum number argument is/are needed in Left() method?  
 A) 1                      B) 2                      C) 3                      D) 4
98. What does the following piece of code do?  
 <%  
 response.write(Now)  
 %>  
 A) 4/25/2019                      B) 4:46:03  
 C) 4/25/2019 4:46:03 PM                      D) Saturday 4/27/2019 4:46:03 PM
99. How to pass argument by value and reference to a function in VBScript?  
 A) Using ByVal keyword                      B) Using ByRef keyword  
 C) Both of the above.                      D) None of the above.
100. Which is correct syntax in frameset in HTML?  
 <frameset rows="25", "50", "25">  
 <frameset rows="25,50,25">  
 <frameset rows="25, 40,25">  
 <frameset rows="25, \*,25">  
 A) i only                      B) i and ii only                      C) i, ii, iii and iv only                      D) ii and iv only

### **Unit – IX - MULTIMEDIA**

101. In Animation, Key frames are responsible for:  
 a) Change in the course of action.                      b) Change in the course of planning.  
 c) Change in direction.                      d) Change in the course of producing.
102. What is the shortcut key to create a duplicate layer of a layer?  
 A) Ctrl+J                      B) Ctrl+T                      C) Ctrl+N                      D) Ctrl+D
103. A MIDI interface is used  
 a) For the transmission and reception of audio between MIDI devices  
 b) For the transmission and reception of MIDI signals in/out of a computer  
 c) Translate MIDI code so that we can read it  
 d) To route audio signals into the computer

104. You have 30 seconds audio file sampled at a rate of 44.1 KHz and quantized using 8 bits ; calculate the size of stereo versions of this file  
 a) 10,584,000bytes b) 2,646,000 bytes c) 1,323,000bytes d) None of these
105. The process used to calculate patterns of dots such that values from 0 to 255 correspond to patterns that are more and more filled at darker pixel values are known as  
 a) Color matching b) Dithering c) Rendering d) None of these

### Unit – IX (Java Script)

106. What will be the output of the following Javascript code?  

```
function range(int length)
{
  int a=5;
  for(int i=0;i<length;i++)
  {
    console.log(a);
  }
}
range(3);
```

 a) 5 b) 555 c) 3 d) error

107. What will be the output of the following Javascript code?  

```
var a=0;
var b =0;
while(a <3)
{
  a++;
  b += a;
  console.log(b);
}
```

 a) 135 b) 123 c) 013 d) 01

108. Consider the following code snippet :  

```
var a = [1,2,3,4,5];
a.slice(0,3);
```

 What is the possible output for the above code snippet ?  
 a) Returns [1,2,3]. b) Returns [4,5].  
 c) Returns [1,2,3,4]. d) Returns [1,2,3,4,5].

109. The events that are not triggered directly by user activity are called  
 a) Device-independent input events b) Device-dependent input events  
 c) User interface events d) State change events
110. Which function among the following lets to register a function to be invoked repeatedly after a certain time?  
 a) setTimeout() b) setTotaltime() c) setInterval() d) setTime()

### UNIT - 10 DATA COMMUNICATION & NETWORKS

111. Which of the following is the communications protocol that sets the standard used by every computer that access to web based information?  
 A) HTML B. HTTP C. DML D. XML

112. Which one of the following is the small group of computers and peripherals linked together in a small geographical area?  
 A. WAN                      B. LAN                      C. MAN                      D. PAN
113. A (n) \_\_\_\_ appearing on a web page opens another document when clicked.  
 A. Anchor                      B. Reference                      C. Heading                      D. Hyperlink
114. Which of the following function is not performed by servers?  
 A. E-mail processing                      B. Processing websites  
 C. Word processing                      D. Database sharing
115. \_\_\_\_\_ contains the basic software you need in order to find, retrieve, view, and send information over the internet.  
 A. Website                      B. Modem                      C. Router                      D. Web Browser
116. Which of the following represents 1 million byte?  
 A. Gigabyte                      B. Kilobyte                      C. Terabyte                      D. Megabyte
117. Devices converts digital signals to Sine waves at the sending end and back to digital signals at the receiving end is called  
 A. Modem                      B. Telephone                      C. Mobile phone                      D. Router
118. The network address of 172.80.0.0/21 provides how many subnets and hosts?  
 A) 32 subnets and 2048 hosts each                      B) 32 subnets and 2046 hosts each  
 C) 8 subnets and 2048 hosts each                      D) 7 subnets and 1024 hosts each
119. If a host of a network has the address 172.47.55.35/30. What is the subnetwork this host belongs to?  
 A) 172.47.55.0                      B) 172. 47.55.35                      C) 172. 47.55.34                      D) 172. 47.55.32
120. F the data unit is 111101, the divisor  $X^3 + 1$ , what is the dividend at the receiver?  
 A. 111101010                      B. 111101101                      C. 111101110                      D. 111101111
121. Why IP protocol is considered as unreliable?  
 A) A packet may be lost                      B) Packets may arrive out of order  
 C) Duplicate packets may be generated                      D) All the above
122. What does router do in a network?  
 A) Forward a packet to all outgoing links  
 B) Forwards a packet to the next free outgoing link  
 C) Determines on which outgoing link a packet is to be forwarded  
 D) Forwards a packet to all outgoing links except the originated link
123. The duration of time it takes to send a message from one end of a network to the other and back is called  
 A) Round Trip Time(RTT)                      B) Full duplex time(FDT)  
 C) Circle Trip Time(C TT)                      D) Data Travelling Time(DTT)
124. What does the port number in a TCP connection specify?  
 A) It specifies the communication process on the two end systems  
 B) It specifies the quality of the data and connection  
 C) It specify the size of data  
 D) All of the above
125. What is the usable size of network bits in Class B of IP address?  
 A.04                      B. 08                      C. 14                      D.16

126. The meaning of Straight Through Cable is  
 A) Four wire pairs connect to the same pin on each end  
 B) The cable which directly connects computer to computer  
 C) Four wire pairs not twisted with each other  
 D) The cable which is not twisted
127. A file contains 2 million bytes. How long does it take to download this file using a 1Mbps channel?  
 A. 16 s                      B. 20 s                      C. 100 s                      D. 10 s
128. Carrier sense multiple access (CSMA) method was developed to increase the  
 A) Collision                      B) Performance                      C) Transmission                      D) Station
129. ISDN stands for  
 A) Integrated Services Digital Network  
 B) Integrated Services Dialers Network  
 C) International Subscribers Digital Network  
 D) International Subscribers Dialers Network
130. USART stands for  
 A) Uniform Symbols And Receiver Transmitter  
 B) Unified Symbolic And Receive Transmit  
 C) Universal Synchronized Asymmetric Receiver Transmitter  
 D) Universal Synchronous Asynchronous Receiver Transmitter

### Edu & Psy

131. “வளர்ச்சிசார் செயல்கள்” என்னும் வார்த்தையை பிரபலப்படுத்தியவர்  
 A) ஹேவி ஹர்ஸ்ட்                      B) ஹர்லாக்  
 C) கில்ஃபோர்ட்                      D) ஆல்பிரட் பாண்டூரா  
 “The term Developmental task” was popularized by  
 A) Havighurst                      B) Hurlock                      C) Guilford                      D) Albert Bandura
132. குழந்தை மையக் கல்வியின் தந்தை  
 A) தாகூர்                      B) காந்தி                      C) மரியா மாண்டிசோரி                      D) ரூசோ  
 The father of child centered education is  
 A) Tagore                      B) Gandhi                      C) Maria Montessori                      D) Rousseau
133. IGNOU எப்போது துவங்கப்பட்டது  
 “IGNOU” was started in  
 A) 1984                      B) 1985                      C) 1987                      D) 1986
134. 2011ம் ஆண்டு கணக்கெடுப்பின்படி இந்தியாவின் எழுத்தறிவு சதவீதம் எவ்வளவு?  
 According to census 2011, literacy rate of India is  
 A) 57.21%                      B) 64.83%                      C) 74.04%                      D) 82.4%
135. தமிழ்நாட்டில் ஆரம்பப் பள்ளிகளில் மதிய உணவுத்திட்டம் யாருக்கு செயல்படுத்தப்படுகின்றது?  
 A) ஏழை மாணவர்களுக்கு                      B) SC / ST மாணவர்கள்  
 C) பெண் குழந்தைகளுக்கு                      D) 6ஆம் வகுப்பிற்கு மேற்பட்ட அனைவருக்கும்  
 In Tamilnadu, Mid-day meal in Primary Schools was provided to  
 A) Poor students                      B) SC / ST students  
 C) Girls only                      D) All students upto 6<sup>th</sup> std



136. கீழே கொடுக்கப்பட்டுள்ள கூற்றுகளில் “இந்திய தேசிய கல்வி நாள்” குறித்தவைகளுள் தவறானது எது?

- A) இது ஒவ்வொரு ஆண்டும் செப்டம்பர் 5ம் நாள் கொண்டாடப்படுகின்றது
- B) இது ஒவ்வொரு ஆண்டும் நவம்பர் 11ம் நாள் கொண்டாடப்படுகிறது
- C) இது இந்தியாவின் முதல் கல்வியமைச்சர் மௌலானா அபுல்கலாம் ஆசாத்தின் பிறந்த தினத்தின் நினைவாக கொண்டாடப்படுகின்றது
- D) 2008ம் ஆண்டிலிருந்து இது கொண்டாடப்படுகின்றது

Which statement is not correct about the “National Education Day” of India

- A) It is celebrated on 5<sup>th</sup> September in every year
- B) It is celebrated on 11<sup>th</sup> November every year
- C) It is celebrated in memory of India’s first union minister of Education Abul Kalam Azad birthday
- D) It is being celebrated since 2008

137. WAIS ல் உள்ள சொற்சோதனைகள்

- A) 4 சோதனைகள்
- B) 8 சோதனைகள்
- C) 5 சோதனைகள்
- D) 6 சோதனைகள்

The verbal scale of WAIS consists of

- A) 4 Tests
- B) 8 Tests
- C) 5 Tests
- D) 6 Tests

138. ஒரு ஓவியத்தினைப் பார்க்கும்போது எவ்விதமான அனுபவம் பெறப்படும்?

- A) சமூக மதிப்பு
- B) நன்னெறி மதிப்பு
- C) அழகியல் மதிப்பு
- D) அறிவார்ந்த மதிப்பு

Experience obtained while seeing a painting is

- A) Social value
- B) Moral Value
- C) Aesthetic value
- D) Intellectual value

139. படித்துக் கொண்டே தொலைக்காட்சி பார்ப்பது

- A) கவனபகுப்பு
- B) கவனவீச்சு
- C) கவனமாற்றம்
- D) கவனக்குறைவு

Studying while seeing Television is

- A) Division of Attention
- B) Span of Attention
- C) Change of Attention
- D) Disruption of Attention

140. “மனதில் பிளவு” என்பதன் பொருளுடன் தொடர்புடையது

- A) சித்தபிரம்மை
- B) நியூரோசிஸ்
- C) மறதிநோய்
- D) மனசிதைவு

The term ..... literally means “splitting of the mind”

- A) Paranoia
- B) Nectrosis
- C) Amnesia
- D) Schizophrenia

**G.K.**

141. Choose the correct statement.

1. James Chadwick discovered Neutron in 1932.

2. Chemical formula of heavy water is D<sub>2</sub>O

சரியான கூற்றினைத் தேர்வு.

1. ஜேம்ஸ் சாட்விக் 1932ல் நியூட்ரானைக் கண்டுபிடித்தார்.

2. கணநீரின் வேதியியல் வாய்ப்பாடு D<sub>2</sub>O

- A) 1 மட்டும்
- B) 2 மட்டும்
- C) இரண்டும்
- D) எதுவுமில்லை

142. Match the following:

| Organisation | Started   |
|--------------|-----------|
| a. ASEAN     | - 1. 1960 |
| b. INTERPOL  | - 2. 1923 |
| c. APEC      | - 3. 1967 |
| d. OPEC      | - 4. 1989 |

பொருத்துக:

| அமைப்பு     | தொடக்கம்  |
|-------------|-----------|
| a. ASEAN    | - 1. 1960 |
| b. INTERPOL | - 2. 1923 |
| c. APEC     | - 3. 1967 |
| d. OPEC     | - 4. 1989 |

| Codes: | a | b | c | d | a  | b | c | d |   |
|--------|---|---|---|---|----|---|---|---|---|
| A)     | 2 | 3 | 1 | 4 | B) | 3 | 2 | 1 | 4 |
| C)     | 2 | 3 | 4 | 1 | D) | 3 | 2 | 4 | 1 |

143. Choose the wrongly matched pair.

| Art        | Subject                              |
|------------|--------------------------------------|
| A) Art 72  | - Pardoning power of President       |
| B) Art 112 | - Union Budget                       |
| C) Art 58  | - Oath (or) affirmation of President |
| D) Art 123 | - Ordinance                          |

சரியாக பொருந்தாத இணையைத் தேர்வ.  
சரத்து பொருள்

|               |                                       |
|---------------|---------------------------------------|
| A) சரத்து 72  | - குடியரசுத்தலைவர் மன்னிப்பு அதிகாரம் |
| B) சரத்து 112 | - மத்திய பட்ஜெட்                      |
| C) சரத்து 58  | - குடியரசுத் தலைவர் பதவியேற்பு        |
| D) சரத்து 123 | - அவசர சட்டம்                         |

144. The movement relates with Dandi March

|                              |                                |
|------------------------------|--------------------------------|
| A) Non Co-operation Movement | B) Civil Disobedience Movement |
| C) Home Rule Movement        | D) Quit India Movement         |

தண்டி யாத்திரையுடன் தொடர்புடைய போராட்டம்

|                        |                               |
|------------------------|-------------------------------|
| A) ஒத்துழையாமை இயக்கம் | B) சட்டமறுப்பு இயக்கம்        |
| C) தன்னாட்சி இயக்கம்   | D) வெள்ளையனே வெளியேறு இயக்கம் |

145. Kimberley Mine is situated in?

|                 |           |           |              |
|-----------------|-----------|-----------|--------------|
| A) South Africa | B) Zambia | C) Canada | D) Australia |
|-----------------|-----------|-----------|--------------|

கிம்பர்லி சுரங்கம் அமைந்துள்ள நாடு

|                     |             |         |                |
|---------------------|-------------|---------|----------------|
| A) தென் ஆப்பிரிக்கா | B) ஜாம்பியா | C) கனடா | D) ஆஸ்திரேலியா |
|---------------------|-------------|---------|----------------|

146. Who is the chairman of the committee to study Western Ghats?

|             |                   |                   |                  |
|-------------|-------------------|-------------------|------------------|
| A) Mathavan | B) Krishnamachari | C) Kasthurirangan | D) Thilak Pandey |
|-------------|-------------------|-------------------|------------------|

மேற்கு தொடர்ச்சி மலைகள் பற்றி ஆராய அமைக்கப்பட்ட குழுவின் தலைவர் யார்?

|           |                    |                  |                |
|-----------|--------------------|------------------|----------------|
| A) மாதவன் | B) கிருஷ்ணமாச்சாரி | C) கஸ்தூரிரங்கன் | D) திலக்பாண்டே |
|-----------|--------------------|------------------|----------------|

147. Choose the wrongly matched pair.

- A) National Sugar Institute - Dehradun  
B) National Institute of Immunology - Chandigarh  
C) Tropical Forestry Research Institute - Jabalpur  
D) Indian Institute of Geo magnetism - Mumbai

தவறான இணையைத் தேர்வக.

- A) தேசிய சர்க்கரை ஆராய்ச்சி மையம் - டேராடூன்  
B) நோய் எதிர்ப்பு ஆராய்ச்சி மையம் - சண்டிகர்  
C) வெப்ப அயன வன ஆராய்ச்சி மையம் - ஜபல்பூர்  
D) இந்திய புவிகாந்த ஆராய்ச்சி மையம் - மும்பை

148. Who received the Janipath Award for 2018

- A) Reguvir Southri B) Abinev Ghosh  
C) Vinda Karandika D) Jeyakandan

ஞானபீட விருது 2018 பெற்றவர் யார்?

- A) ரகுவீர் சவுத்ரி B) அபினவ் கோஷ்  
C) விந்தா கராந்திகா D) ஜெயக்காந்தன்

149. Common Wealth Game 2018 was held in

- A) Australia B) Seyol C) New Delhi D) London

காமன்வெல்த் விளையாட்டுப்போட்டி 2018 நடைபெற்ற இடம்

- A) ஆஸ்திரேலியா B) சியோல் C) நியூடெல்லி D) லண்டன்

150. Match the following:

1. June 5 - World Environment day  
2. July 11 - World Population Day  
3. February 28 - National Science Day  
4. May 31 - No Topacco Day

- A) 1, 2 are true B) 1, 2, 3 are true C) 2, 3, 4 are true D) All are true

சரியானவற்றைக் காண்.

1. ஜூன் 5 - உலக சுற்றுச்சூழல் தினம்  
2. ஜூலை 11 - உலக மக்கள் தொகை தினம்  
3. பிப்ரவரி - தேசிய அறிவியல் தினம்  
4. மே 31 - புகையிலை ஒழிப்பு தினம்

- A) 1, 2 சரி B) 1, 2, 3 சரி C) 2, 3, 4 சரி D) அனைத்தும் சரி

**TRB – COMPUTER INSTRUCTOR – GRADE – 1**  
**Model - I**

**Answer Key:**

**14.06.19**

|    |   |    |   |    |   |     |   |     |   |
|----|---|----|---|----|---|-----|---|-----|---|
| 1  | C | 31 | A | 61 | A | 91  | B | 121 | D |
| 2  | A | 32 | C | 62 | D | 92  | C | 122 | C |
| 3  | B | 33 | D | 63 | D | 93  | A | 123 | A |
| 4  | B | 34 | B | 64 | C | 94  | C | 124 | A |
| 5  | A | 35 | C | 65 | D | 95  | B | 125 | C |
| 6  | B | 36 | A | 66 | B | 96  | B | 126 | A |
| 7  | D | 37 | B | 67 | C | 97  | A | 127 | A |
| 8  | C | 38 | D | 68 | C | 98  | C | 128 | B |
| 9  | C | 39 | A | 69 | A | 99  | C | 129 | A |
| 10 | C | 40 | A | 70 | B | 100 | D | 130 | D |
| 11 | C | 41 | D | 71 | C | 101 | A | 131 | A |
| 12 | B | 42 | B | 72 | A | 102 | A | 132 | D |
| 13 | A | 43 | A | 73 | A | 103 | B | 133 | B |
| 14 | C | 44 | D | 74 | D | 104 | B | 134 | C |
| 15 | A | 45 | B | 75 | D | 105 | B | 135 | D |
| 16 | B | 46 | D | 76 | B | 106 | B | 136 | A |
| 17 | D | 47 | D | 77 | C | 107 | A | 137 | D |
| 18 | A | 48 | A | 78 | B | 108 | C | 138 | C |
| 19 | A | 49 | C | 79 | A | 109 | D | 139 | A |
| 20 | B | 50 | C | 80 | C | 110 | C | 140 | D |
| 21 | D | 51 | B | 81 | B | 111 | B | 141 | C |
| 22 | A | 52 | B | 82 | B | 112 | B | 142 | D |
| 23 | B | 53 | C | 83 | B | 113 | D | 143 | C |
| 24 | C | 54 | B | 84 | D | 114 | C | 144 | B |
| 25 | C | 55 | C | 85 | C | 115 | D | 145 | A |
| 26 | B | 56 | D | 86 | B | 116 | D | 146 | C |
| 27 | C | 57 | B | 87 | D | 117 | A | 147 | A |
| 28 | C | 58 | B | 88 | B | 118 | B | 148 | B |
| 29 | B | 59 | B | 89 | C | 119 | D | 149 | A |
| 30 | A | 60 | C | 90 | D | 120 | A | 150 | D |