

# Question Paper Preview

## Notations :

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

<b>Question Paper Name:</b>	Computer Science and Statistics
<b>Subject Name:</b>	Computer Science and Statistics
<b>Creation Date:</b>	2017-10-13 18:49:21
<b>Duration:</b>	150
<b>Total Marks:</b>	150
<b>Display Marks:</b>	No
<b>Calculator:</b>	Scientific
<b>Magnifying Glass Required?:</b>	No
<b>Ruler Required?:</b>	No
<b>Eraser Required?:</b>	No
<b>Scratch Pad Required?:</b>	No
<b>Rough Sketch/Notepad Required?:</b>	No
<b>Protractor Required?:</b>	No

## Computer Science and Statistics

<b>Group Number :</b>	1
<b>Group Id :</b>	798407212
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	150
<b>Revisit allowed for view? :</b>	No
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## Computer Science

<b>Section Id :</b>	798407218
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional:</b>	Mandatory
<b>Number of Questions:</b>	75
<b>Number of Questions to be attempted:</b>	75
<b>Section Marks:</b>	75
<b>Display Number Panel:</b>	Yes
<b>Group All Questions:</b>	No

<b>Sub-Section Number:</b>	1
<b>Sub-Section Id:</b>	798407273
<b>Question Shuffling Allowed :</b>	Yes

Question Number : 1 Question Id : 79840731706 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following features characterize the Fifth Generation computing?

Options :

1. ✘ voice and speech recognition
2. ✘ Artificial Intelligence and Decision support
3. ✘ Parallel processing with Multicore processors
4. ✔ All of the given options are correct

Question Number : 2 Question Id : 79840731707 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

What is the advantage of 2's Complement representation over the 1's Complement representation of signed integers?

Options :

1. ✘ 2's Complement representation uses lesser number of bits
2. ✘ the range of integers represented is much larger
3. ✔ zero value is represented uniquely with all 0's bit sequence
4. ✘ 2's complementation is essential for representing floating point numbers

Question Number : 3 Question Id : 79840731708 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The Octal number equivalent to the Hexadecimal number  $(40A3)_H$  is \_\_\_\_\_

Options :

1. ✘ 201214
2. ✘ 215141
3. ✔ 40243
4. ✘ 315121

Question Number : 4 Question Id : 79840731709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following binary coding schemes for decimal digits yields 9's Complement by logical complementation?

Options :

1. ✘ 2421 weighted code
2. ✘ Excess-3 code
3. ✘ Excess Gray code
4. ✔ 2421 weighted code and Excess-3 code

Question Number : 5 Question Id : 79840731710 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following logic gates are suitable to implement parity generator and checker for data transmission?

Options :

1. ✔ Ex-OR
2. ✘ AND
3. ✘ NOT

4. ✘ OR

Question Number : 6 Question Id : 79840731711 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following is the binary equivalent of the real number 30.625 ?

Options :

1. ✘ 101011.11
2. ✔ 11110.101
3. ✘ 11011.101
4. ✘ 11101.101

Question Number : 7 Question Id : 79840731712 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

During floating point arithmetic mantissa alignment of floating point operands is NOT required for \_\_\_\_\_

Options :

1. ✘ addition
2. ✘ multiplication
3. ✔ multiplication and division
4. ✘ addition and subtraction

Question Number : 8 Question Id : 79840731713 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The table used to specify the next state of a flip-flop for every combination of inputs and present state is called \_\_\_\_\_

Options :

1. ✘ Excitation table
2. ✘ Truth table
3. ✔ Characteristic table
4. ✘ State table

Question Number : 9 Question Id : 79840731714 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following is a very small micro-computer designed mainly for accessing web-applications accepting inputs only through touch screen and stylus?

Options :

1. ✘ Laptop
2. ✘ Notebook
3. ✔ Tablet PC
4. ✘ Smart phone

Question Number : 10 Question Id : 79840731715 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following logic gates are used for constructing a Half-adder?

Options :

1. ✘ Exclusive-OR
2. ✘ AND

- 3. ✗ OR
- 4. ✓ AND and OR gates

Question Number : 11 Question Id : 79840731716 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The operation of processing each element is known as \_\_

Options :

- 1. ✗ Sorting
- 2. ✗ Merging
- 3. ✓ Traversal
- 4. ✗ Inserting

Question Number : 12 Question Id : 79840731717 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

What is the range of integers that can be represented using 16-bit 2'Complement notation for fixed point numbers?

Options :

- 1. ✗  $-2^{15}$  to  $+2^{15}$
- 2. ✓  $-2^{15}$  to  $+2^{15}-1$
- 3. ✗  $-2^{15} + 1$  to  $+2^{15}$
- 4. ✗ 0 to  $2^{16}$

Question Number : 13 Question Id : 79840731718 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following components is used to transfer data among multiple general purpose registers through common bus?

Options :

- 1. ✓ Multiplexers
- 2. ✗ Exclusive-OR gates
- 3. ✗ Full adders
- 4. ✗ Shift registers

Question Number : 14 Question Id : 79840731719 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider a disk drive with the following specifications: 16 surfaces, 512 tracks/ surface, 256 sectors/track and 512 bytes/ sector. If the format overhead is 64 bytes/ sector, what is the effective track capacity?

Options :

- 1. ✗ 104 KB
- 2. ✗ 108 KB
- 3. ✓ 112 KB
- 4. ✗ 116 KB

Question Number : 15 Question Id : 79840731720 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following type of instruction formats results in the shortest assembly language program for arithmetic expressions?

Options :

1. ✘ zero-address instructions
2. ✘ 2- address instructions
3. ✔ 3- address instructions
4. ✘ single- address instructions

Question Number : 16 Question Id : 79840731721 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following addressing mode directs to add the data specified in the instruction to Program Counter?

Options :

1. ✘ Indirect
2. ✘ Indexed
3. ✘ Immediate
4. ✔ Relative

Question Number : 17 Question Id : 79840731722 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following Boolean equations involving the variables P,Q and R is TRUE?

Options :

1. ✘  $P.P' = 1$
2. ✘  $P.(Q+R) = (P+Q).(P+R)$
3. ✔  $P+Q+R = (P+Q)+R$
4. ✘  $P.R + P.Q = P$

Question Number : 18 Question Id : 79840731723 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following logical gate does not follow the Associative law?

Options :

1. ✘ OR
2. ✘ AND
3. ✔ NAND
4. ✘ EX-OR

Question Number : 19 Question Id : 79840731724 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The minimized Sum of Products form of the Boolean expression represented as

$F(a,b,c,d) = \Sigma(0,2,10,14,15)$  and the don't care conditions  $D(a,b,c,d) = \Sigma(6,8,11,12)$  is \_\_\_\_\_

Options :

1. ✘  $ac+b'd'+cd'$

2. ✔  $ac+b'd'$

3. ✘  $ac+b'd'+a'bcd'$

4. ✘  $ad'+ac+b'd'$

Question Number : 20 Question Id : 79840731725 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

How many 32 K x1 RAM chips are needed to provide a memory capacity of 512 Kbytes?

Options :

1. ✘ 16

2. ✘ 32

3. ✘ 64

4. ✔ 128

Question Number : 21 Question Id : 79840731726 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The mode of I/O transfer in which a bulk data is moved between peripherals and memory unit is called \_\_\_\_\_

Options :

1. ✘ Programmed I/O

2. ✔ Direct Memory Access (DMA)

3. ✘ Interrupt Initiated I/O

4. ✘ Bulk Data transfer

Question Number : 22 Question Id : 79840731727 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following statement is false about memory mapped I/O?

Options :

1. ✘ Decreases the effective memory for programs

2. ✘ Uses same instructions for both I/O and memory

3. ✔ Requires separate control signals for I/O and memory

4. ✘ Not suitable for slow I/O devices

Question Number : 23 Question Id : 79840731728 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider the following expression :

$$x = a * b - c * d + e$$

For generating target code, how many registers will be required apart from accumulator A ?

Options :

1. ✔ 1

2. ✘ 2
3. ✘ 3
4. ✘ 4

Question Number : 24 Question Id : 79840731729 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider a byte-addressable paged memory management system with page frames of size 4 Kbytes. If the logical address is 32-bit long and each page table entry is 4-byte long, how much space is required to store the page table in the memory?

Options :

1. ✘ 2 MB
2. ✘ 8 MB
3. ✔ 4 MB
4. ✘ 16 MB

Question Number : 25 Question Id : 79840731730 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

An interrupt that can be ignored temporarily by the CPU is called \_\_\_\_

Options :

1. ✘ low priority interrupt
2. ✘ vectored interrupt
3. ✘ polled interrupt
4. ✔ maskable interrupt

Question Number : 26 Question Id : 79840731731 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following types of control unit facilitates easy implementation of new instructions?

Options :

1. ✘ Hardware control unit
2. ✘ RISC control unit
3. ✔ microprogrammed control unit
4. ✘ CISC control unit

Question Number : 27 Question Id : 79840731732 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following is the advantage of implementing stacks using linked-noncontiguous memory locations?

Options :

1. ✔ Stack overflow doesn't occur
2. ✘ Stack underflow doesn't occur
3. ✘ No additional memory required for storing pointers
4. ✘ LIFO order can be violated, if required

Question Number : 28 Question Id : 79840731733 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following is the pre-requisite for applying Binary search algorithm on a collection of records ?

Options :

1. ✓ collection of records the records must be directly accessible
2. ✗ collection of records should be located across multiple sectors of the disk is stored in an array
3. ✗ collection of records should be less than 500 in number
4. ✗ collection of records the records must be directly accessible and collection of records should be located across multiple sectors of the disk is stored in an array

Question Number : 29 Question Id : 79840731734 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In 'C' programming, the elements of a normal multi-dimensional array are arranged in \_\_\_\_

Options :

1. ✗ column-major order
2. ✓ row-major order
3. ✗ lower triangular order
4. ✗ chronological order

Question Number : 30 Question Id : 79840731735 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider the following self-referencing node declaration in 'C':

```
struct node
{
int data;
struct node * next;
};

typedef struct node * NP;

NP x;
```

Which of the following 'C' statements creates a new node pointed by 'x' ?

Options :

1. ✗ x=(NP)malloc(sizeof(NP))
2. ✓ x=(NP)malloc(sizeof(struct node))
3. ✗ x=(struct node)malloc(sizeof(NP))
4. ✗ x=(struct node)malloc(sizeof(struct node))

Question Number : 31 Question Id : 79840731736 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33



Consider the implementation of a Queue in a circular linked list with its external pointer 'id' pointing to the last node. Which of the following is TRUE?

Options :

1. ✓ (front =id →next) and (rear = id)
2. ✗ (front =id) and (rear = id →next)
3. ✗ rear = id and one more external pointer is required to hold the 'front'
4. ✗ front = id and one more external pointer is required to hold the 'rear'

Question Number : 32 Question Id : 79840731737 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following data structures is suitable to implement insertion / deletion of a number in a stored set of numbers ?

Options :

1. ✗ queue
2. ✗ linked list
3. ✓ doubly linked list
4. ✗ binary tree

Question Number : 33 Question Id : 79840731738 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider the implementation of a Ready queue of processes during CPU scheduling with Round Robin algorithm. Which of the following data structures is preferred for implementing the ready queue?

Options :

1. ✗ priority queue
2. ✗ linear queue
3. ✓ circular queue
4. ✗ deque

Question Number : 34 Question Id : 79840731739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following data structures is essential for storing the return addresses while implementing recursive procedure calls?

Options :

1. ✗ multi-dimensional array
2. ✗ doubly linked list
3. ✗ binary tree
4. ✓ Stack

Question Number : 35 Question Id : 79840731740 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider an expression tree that accommodates an arithmetic expression in a binary tree whose leaf nodes and non-leaf nodes represent the operands and operators respectively. What is the right child of the node '+' in the expression tree representing "cab\*de/+-" ?

Options :

1. ✘ '\*'
2. ✔ '/'
3. ✘ 'e'
4. ✘ '-'

Question Number : 36 Question Id : 79840731741 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If the inorder and preorder sequence of nodes of a binary tree is 30,38,48,52,56,75,80 and 48,30,38,56,52,80,75 respectively what is the postorder sequence of its nodes?

Options :

1. ✘ 30,56,38,52,80,48,75
2. ✘ 30,56,38,80,75,52,48
3. ✔ 38,30,52,75,80,56,48
4. ✘ 56,52,80,48,30,38,75

Question Number : 37 Question Id : 79840731742 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Complexity of binary search algorithm is :

Options :

1. ✘  $O(n)$
2. ✔  $O(\log n)$
3. ✘  $O(n^2)$
4. ✘  $O(n \log n)$

Question Number : 38 Question Id : 79840731743 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The sequence of integers 51,63,48,34,58,42,29,56 are accommodated in an AVL- tree. What is the inorder sequence of the nodes of the AVL tree?

Options :

1. ✔ 29,34,42,48,51,56,58,63
2. ✘ 51,48,29,56,63,34,58,42
3. ✘ 51,48,29,34,58,56,63,42

4. ✘ 56,63, 48,29,51,42,34,58

Question Number : 39 Question Id : 79840731744 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider a stack created using an array of five locations. What will be the contents of the stack in LIFO order after executing the sequence of operations: push A, push B, push P, push Q, pop, pop, pop, push C, push D ?

Options :

1. ✔ D,C,A
2. ✘ D,C,B,A
3. ✘ D,C,Q
4. ✘ A,C,D

Question Number : 40 Question Id : 79840731745 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In a complete k-ary tree, every internal node has exactly k children. The number of leaves in such a tree with n internal nodes is

Options :

1. ✘ nk
2. ✘  $(n-1)k + 1$
3. ✔  $n(k-1) + 1$
4. ✘  $n(k-1)$

Question Number : 41 Question Id : 79840731746 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following algorithm is used for finding the minimal cost spanning tree of a connected graph with weighted edges?

Options :

1. ✔ Kruskal's algorithm
2. ✘ Dijkstra's algorithm
3. ✘ Warshall's algorithm
4. ✘ Floyd's algorithm

Question Number : 42 Question Id : 79840731747 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following algorithms is used to check for acyclicity of a directed graph?

Options :

1. ✘ Depth first traversal
2. ✘ Breadth first traversal
3. ✔ Depth first traversal and Breadth first traversal
4. ✘ topological sorting

Question Number : 43 Question Id : 79840731748 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider an undirected graph with homogeneous (equal cost) edges. Which of the following is one of the advantages of Breadth first traversal(BST) of such a graph compared to Depth first traversal(DST) ?

Options :

1. ✘ only BFS checks for acyclicity of graphs
2. ✔ BFS finds shortest paths from a given source node to the rest of the nodes
3. ✘ BFS helps in Checking if a graph is bipartite or not
4. ✘ BFS finds shortest paths from a given source node to the rest of the nodes and BFS helps in Checking if a graph is bipartite or not

Question Number : 44 Question Id : 79840731749 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In C programming, which of the following keywords is used in a file to ACCESS a global variable in a program that spans over multiple files?

Options :

1. ✘ static
2. ✘ file static
3. ✔ extern
4. ✘ static and extern

Question Number : 45 Question Id : 79840731750 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider the 'C' program segment given below:

```
int *pi;  
float *pf;  
char *pc;  
a=sizeof(pi);  
b=sizeof(pf);  
c=sizeof(pc);
```

Which of the following statements is TRUE?

Options :

1. ✔ a=b=c
2. ✘ a=b and b=4c
3. ✘ a=2c and b=4c
4. ✘ the relationship between a,b, and c is machine dependent

Question Number : 46 Question Id : 79840731751 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider the 'C' program fragment . What will be the output ?

```
x=5;  
y=x++;  
printf(("%d %d",x,y);
```

Options :

1. ✘ 5,6
2. ✘ 5,5
3. ✔ 6,5

4. ✘ 6,6

Question Number : 47 Question Id : 79840731752 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The most appropriate matching for the following pairs is

- |                         |          |
|-------------------------|----------|
| A) Depth first search   | p) heap  |
| B) Breadth first search | q) queue |
| C) Sorting              | r) stack |

Possible combination is :

Options :

1. ✘ A- p, B- q, C- r
2. ✘ A- r, B- p, C- q
3. ✔ A - r, B- q, C- p
4. ✘ A - q, B- r, C - p

Question Number : 48 Question Id : 79840731753 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the given options provides the increasing order of asymptotic complexity of functions

f1, f2, f3 and f4 ?

$$f1 ( n) = 2 ^ n$$

$$f2 ( n) = n ^ {3/2}$$

$$f3(n) = n \log n$$

$$f4(n) = n ^ {(\log n)}$$

Options :

1. ✔ f3, f2, f4, f1
2. ✘ f3, f2, f1, f4
3. ✘ f2, f3, f1, f4
4. ✘ f2, f3, f4, f1

Question Number : 49 Question Id : 79840731754 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In C++ programming, the declaration statement " class CL:public X, public Y "is an example of

Options :

1. ✔ multiple inheritance
2. ✘ repeated inheritance
3. ✘ hybrid inheritance
4. ✘ Invalid declaration

Question Number : 50 Question Id : 79840731755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In C++ programming, which of the following is TRUE about Abstract classes?

Options :

1. ✘ can be instantiated
2. ✔ have at least one pure virtual function

- ✘ has definition of member function
- ✘ all functions must be pure virtual

Question Number : 51 Question Id : 79840731756 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The object oriented concept that determines the method to be invoked at run time is called \_\_\_\_

Options :

- ✘ data hiding
- ✘ method binding
- ✘ dynamic loading
- ✔ dynamic binding

Question Number : 52 Question Id : 79840731757 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider the C++ program segment given below:

```
Void main( )  
{  
int a = 100;  
int &b=a;  
cout << &b <<&a;  
}
```

Which of the following will be printed ?

Options :

- ✘ prints 100 and address of 'a'
- ✘ run time error occurs
- ✔ prints the address of 'a' twice
- ✘ prints the address of 'b' followed by 100

Question Number : 53 Question Id : 79840731758 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following is essential for the architectural level protection implemented in hardware to distinguish an instruction executed for the operating system from the instruction executed for the user?

Options :

- ✔ dual mode operation
- ✘ system calls
- ✘ access control matrix
- ✘ critical section

Question Number : 54 Question Id : 79840731759 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following scheduling algorithms inherently support pre-emptive scheduling of CPU?

Options :

- ✘ First In First Out

- ✘ priority scheduling
- ✘ Shortest job first
- ✔ Round Robin

Question Number : 55 Question Id : 79840731760 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

..... is a technique of improving the priority of process waiting in queue for CPU allocation.

Options :

- ✘ starvation
- ✔ aging
- ✘ revocation
- ✘ relocation

Question Number : 56 Question Id : 79840731761 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following high level languages allow system calls to be directly invoked?

Options :

- ✘ JAVA
- ✘ C
- ✘ C++
- ✔ C and C++

Question Number : 57 Question Id : 79840731762 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In paged memory management, if the page size is increased .....

Options :

- ✔ internal fragmentation increases
- ✘ internal fragmentation decreases
- ✘ external fragmentation increases
- ✘ external fragmentation decreases

Question Number : 58 Question Id : 79840731763 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

With regard to inter process communication through shared variables, which of the following is NOT a necessary condition to be satisfied by a solution to critical section problem?

Options :

- ✘ Mutual exclusion
- ✔ Hold and wait
- ✘ Progress
- ✘ Bounded waiting

Question Number : 59 Question Id : 79840731764 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

During process execution, the time elapsed from the submission of a request until the first response produced is called .....

Options :

- ✘ Turn-around time
- ✘ waiting time
- ✔ Response time
- ✘ Time quantum

Question Number : 60 Question Id : 79840731765 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The thread library of APIs for creating and managing threads are implemented in \_\_\_\_\_

Options :

- ✘ Kernel space
- ✘ user space
- ✘ hybrid space
- ✔ any one of these options depending on the OS / virtual machine

Question Number : 61 Question Id : 79840731766 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following is NOT an effective process synchronization mechanism used by a set of cooperating sequential processes with SHARED MEMORY?

Options :

- ✘ atomic instruction 'Get-and Set'
- ✘ Semaphores
- ✘ Monitors
- ✔ Signal and Wait

Question Number : 62 Question Id : 79840731767 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In deadlock handling, Wait-for graphs are used for \_\_\_\_\_

Options :

- ✘ deadlock avoidance
- ✘ deadlock prevention
- ✔ deadlock detection
- ✘ deadlock recovery

Question Number : 63 Question Id : 79840731768 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which of the following memory management schemes deals with mapping of two-dimensional logical addresses to the single dimensional physical address?

Options :

- ✘ paging
- ✘ variable partitions
- ✔ segmentation
- ✘ fixed partitions

Question Number : 64 Question Id : 79840731769 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33



The number of page faults resulted with the Least Recently Used page replacement algorithm for the reference string: 3,2,4,3,1,2,3,1,4,5,3,1,4,5,2,4 with four page frames allotment for the process is \_\_\_\_

Options :

1. ✓ 6
2. ✗ 8
3. ✗ 5
4. ✗ 7

Question Number : 65 Question Id : 79840731770 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In which of the following page replacement polices Balady's anomaly occurs ?

Options :

1. ✓ FIFO
2. ✗ LRU
3. ✗ LFU
4. ✗ MRU

Question Number : 66 Question Id : 79840731771 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In dynamic protection system, revocation of access rights to shared objects can be implemented more efficiently and easily using \_\_\_\_\_

Options :

1. ✗ capability lists
2. ✓ Access lists
3. ✗ Lock-Key mechanism
4. ✗ capability lists and Access lists

Question Number : 67 Question Id : 79840731772 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

A standalone process that spawns copies of itself to exhaustively use system resources making them unavailable to legitimate processes

Options :

1. ✗ Virus
2. ✗ trapdoor
3. ✓ worm
4. ✗ firewall

Question Number : 68 Question Id : 79840731773 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Let  $R=(A,B,C,D,E,F)$  be a relational scheme with the functional dependencies given below:

$$C \rightarrow F, E \rightarrow A, EC \rightarrow D, A \rightarrow B$$

Which of the following is a key for R?

Options :

1. ✗ CD
2. ✗ AE

3. ✓ EC

4. ✗ AC

Question Number : 69 Question Id : 79840731774 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Suppose a given base relation R is replaced by two restrictions A and B such that A UNION B is always equal to R and A INTERSECT B is always empty. Is logical data independence achievable?

Options :

1. ✓ Yes

2. ✗ no

3. ✗ possibly yes

4. ✗ insufficient information to decide

Question Number : 70 Question Id : 79840731775 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

A relation TIME TABLE is defined with the following attributes:

D Day of the week (1 to 5)

P Period within day (1 to 8)

C Classroom number

T Teacher name

L Lesson name

The tuple {D:d, P:p, C:c, T:t, L:l} appears in this relation if and only if at time {D:d, P:p} lesson l is taught by teacher t in classroom c. You can assume that lessons are one period in duration and that every lesson has a name that is unique with respect to all lessons taught in the week. What are the candidate keys?

Options :

1. ✗ C, DPL and DPT

2. ✓ L, DPC and DPT

3. ✗ T, DPC and DPL

4. ✗ L, C and DPT

Question Number : 71 Question Id : 79840731776 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Let C be a certain club and let relation R{A, B} be such that the tuple (a, b) appears in R if and only if a and b are both member of C. What nontrivial MVDs does R satisfy?

Options :

1. ✗ B→→A | {}

2. ✗ A|B →→ {}

3. ✗ A→→B|{}

4. ✓ {} →→ A|B

Question Number : 72 Question Id : 79840731777 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If a relation scheme is in BCNF, then it is also in

Options :

- ✘ 2NF
- ✔ 3NF
- ✘ 1NF
- ✘ None of given options are correct

Question Number : 73 Question Id : 79840731778 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

\_\_\_\_\_ causes damage to the database, or to some portion of it and affect at least those transactions currently using that portion.

Options :

- ✘ System failure
- ✘ Soft crash
- ✔ Hard crash
- ✘ global failure

Question Number : 74 Question Id : 79840731779 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Suppose transaction T1 retrieves the set of all rows that satisfy some condition. Suppose that transaction T2 then inserts a new row satisfying that same condition. If transaction T1 now repeats its retrieval request, it will see a row that did not previously exist. This is called \_\_\_\_\_ that violated serializability.

Options :

- ✔ Phantoms
- ✘ Non-repeatable read
- ✘ dirty read
- ✘ repeatable read

Question Number : 75 Question Id : 79840731780 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Let A and B be two relations. The candidate key(s) for the operation \_\_\_\_\_ are same as every candidate key of A. Assume that in each of the following cases A and B meet the requirements for the operation.

Options :

- ✘ A MINUS B
- ✘ A SEMIJOIN B
- ✘ A SEMIMINUS B
- ✔ All of the given options are correct

Statistics

Section Id :

798407219

Section Number :

2

Section type :

Online

Mandatory or Optional:

Mandatory

Number of Questions:	75
Number of Questions to be attempted:	75
Section Marks:	75
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	798407274
Question Shuffling Allowed :	Yes

Question Number : 76 Question Id : 79840731781 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The stable average of Central Tendency Measure is

Options :

1. ✘ Median

2. ✔ Mean

3. ✘ Mode

4. ✘ Geometric Mean

Question Number : 77 Question Id : 79840731782 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

What is the suitable average to be used if the data is Qualitative?

Options :

1. ✘ Mean

2. ✘ Mode

3. ✔ Median

4. ✘ Harmonic Mean

Question Number : 78 Question Id : 79840731783 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If Arithmetic Mean is 18 and Harmonic Mean is 8 then Geometric Mean is

Options :

1. ✓ 12
2. ✗ 121
3. ✗ 11
4. ✗ 144

Question Number : 79 Question Id : 79840731784 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Correct : 1 Wrong : 0.33

The Arithmetic Mean and Geometric Mean for two observations are 5 and 4 respectively. Find the two observations?

Options :

1. ✗ (4, 4)
2. ✗ (3, 8)
3. ✗ (4, 8)
4. ✓ (8, 2)

Question Number : 80 Question Id : 79840731785 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Correct : 1 Wrong : 0.33

The Mean and Variance of 5 observations is 4.4 and 8.24 respectively. Three of the five observations are 1, 6 and 2. Find the other two?

Options :

1. ✗ (8, 5)
2. ✓ (9, 4)
3. ✗ (10, 3)
4. ✗ (6, 7)

Question Number : 81 Question Id : 79840731786 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Correct : 1 Wrong : 0.33

The Mean of 100 observations is 50. What will be the new Mean if 5 is added and each observation is multiplied by 3?

Options :

1. ✘ 160
2. ✔ 165
3. ✘ 120
4. ✘ 170

Question Number : 82 Question Id : 79840731787 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The average mark of boys in particular subject was 80 and that of girls was 65.

The average mark of all the students was 74. The ratio of boy to girl is

Options :

1. ✘ 2:3
2. ✘ 1:3
3. ✘ 3:1
4. ✔ 3:2

Question Number : 83 Question Id : 79840731788 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The point of intersection of the less than and the more than Ogive corresponds to the

Options :

1. ✔ Median
2. ✘ Decile
3. ✘ Quartile
4. ✘ mode

Question Number : 84 Question Id : 79840731789 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The breadth of the rectangle is equal to the length of the class interval in

Options :

1. ✘ Freaquency polygon
2. ✔ Area Diagram
3. ✘ Ogive
4. ✘ Pictogram

Question Number : 85 Question Id : 79840731790 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Frequency density is used in the construction of

Options :

1. ✘ Bar diagram
2. ✘ Freaquency Polygon
3. ✔ Histogram
4. ✘ Ogive

Question Number : 86 Question Id : 79840731791 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

H.A Struges formula for determining class-intervals, the number of classes is

Options :

1. ✘  $K = 3.332 \log_{10} N$
2. ✘  $K = 3.323 \log_{10} N$
3. ✘  $K = 3.222 \log_{10} N$

4. ✓  $K = 3.322 \log_{10} N$

Question Number : 87 Question Id : 79840731792 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Probability is a measure, it measures

Options :

1. ✓ Uncertainty

2. ✗ Chaos

3. ✗ Length

4. ✗ Liquids

Question Number : 88 Question Id : 79840731793 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Relative Frequency always lies between

Options :

1. ✗  $[-1, 1]$

2. ✓  $[0, 1]$

3. ✗  $(0, 1)$

4. ✗  $[-3, 3]$

Question Number : 89 Question Id : 79840731794 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The definition of Empirical Probability was given by

Options :

1. ✗ James Bernoulli

2. ✗ A.N. Kolmogorou



3. ✓ Von Mises

4. ✗ Jacob Bernoulli

Question Number : 90 Question Id : 79840731795 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The first person to obtain a Quantitative measure of uncertainty is?

Options :

1. ✓ James Bernoulli

2. ✗ Jacob Bernoulli

3. ✗ Pascal

4. ✗ James Boole

Question Number : 91 Question Id : 79840731796 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

A is an event. If  $P(A) = 1$ , then A is called

Options :

1. ✗ Null Event

2. ✗ Compound Event

3. ✓ Sure Event

4. ✗ Independent Event

Question Number : 92 Question Id : 79840731797 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Find the missing frequency from the following data, given that the Median mark is 23.

Mark:	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
No. of students:	5	8	?	6	3

Options :

1. ✘ 10.5

2. ✔ 10

3. ✘ 20

4. ✘ 24

Question Number : 93 Question Id : 79840731798 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If  $\sigma$  is the standard deviation of  $x_1, x_2, x_3, \dots, x_n$ , then the standard deviation of  $k - x_1, k - x_2, k - x_3, \dots, k - x_n$ , is

Options :

1. ✔  $\sigma$

2. ✘  $k\sigma$

3. ✘  $k - \sigma$

4. ✘  $\sigma + k$

Question Number : 94 Question Id : 79840731799 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If  $m$  is the Arithmetic Mean of  $x_1, x_2, \dots, x_n$  then the Arithmetic Mean of  $5x_1, 5x_2, \dots, 5x_n$

Options :

1. ✘  $m$

2. ✘  $5 + m$

3. ✘  $5 - m$

4. ✔  $5m$

Question Number : 95 Question Id : 79840731800 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The main drawback of arithmetic mean is

Options :

1. ✘ It is affected by small values
2. ✘ It is not useful for further mathematical analysis
3. ✔ It is very much affected by extreme values
4. ✘ It is not based on all observations

Question Number : 96 Question Id : 79840731801 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Standard deviation is not independent of change of the

Options :

1. ✘ Origin
2. ✔ Scale
3. ✘ Mean
4. ✘ None of the given options is correct

Question Number : 97 Question Id : 79840731802 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The width of each of nine classes in a frequency distribution is 3.5 and the lower class boundary of the lowest class is 12. Which one of the following is the upper class boundary of the 9<sup>th</sup> class?

Options :

1. ✔ 43.5
2. ✘ 40.5
3. ✘ 47.5
4. ✘ 37.5

Question Number : 98 Question Id : 79840731803 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The data collected in population census are termed as

Options :

1. ✘ Secondary data
2. ✘ Tertiary data
3. ✔ Primary Data
4. ✘ Qualitative data

Question Number : 99 Question Id : 79840731804 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The following is used in collection of population census data

Options :

1. ✘ Questionnaire
2. ✔ Schedules
3. ✘ Data from journals
4. ✘ None of the given options is correct

Question Number : 100 Question Id : 79840731805 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

For comparison of magnitudes of three variables we use

Options :

1. ✘ Simple bar diagram
2. ✘ frequency curves
3. ✘ Histogram
4. ✔ Multiple bar diagram

Question Number : 101 Question Id : 79840731806 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Sum of the deviations of a set of values from their arithmetic mean is equal to

Options :

1.  zero
2.  Minimum
3.  Maximum
4.  Mean

Question Number : 102 Question Id : 79840731807 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In a sample survey, \_\_\_\_\_ errors may also arise due to defective frame and faulty selection of sampling units.

Options :

1.  Sampling
2.  Non-sampling
3.  Response
4.  Non-response

Question Number : 103 Question Id : 79840731808 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The complete list of sampling units which covers the population is known as

Options :

1.  Sampling fraction
2.  Census survey
3.  Sample survey
4.  Sampling frame

Question Number : 104 Question Id : 79840731809 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

A measure of central value which depends on first 50% of observations is

Options :

1. ✘ Mean

2. ✘ Geometric Mean

3. ✔ Median

4. ✘ Mode

Question Number : 105 Question Id : 79840731810 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consider the following statements:

1. Quadratic Mean is always greater than the Arithmetic Mean.
2. Quartiles are not equidistant from Median in Symmetrical distributions.
3. Mode is the average to be used to find the ideal size foot wear

Which of the above statements is/are correct?

Options :

1. ✘ 2 and 3 only

2. ✔ 2 only

3. ✘ 3 only

4. ✘ 1 and 3 only

Question Number : 106 Question Id : 79840731811 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

What are the measures which express the spread of observations in terms of distance between the values of selected observations?

Options :

1. ✘ Quartile Deviation and Standard Deviation

2. ✔ Range and Quartile deviation

3. ✘ Mean Deviation and Standard Deviation

4. ✘ Range and Mean deviation

Question Number : 107 Question Id : 79840731812 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

For any two numbers a and b, Standard Deviation is

Options :

1. ✘  $\frac{|a+b|}{2}$

2. ✘  $\frac{a-b}{2}$

3. ✔  $\frac{a+b}{2}$

4. ✘  $\frac{|a-b|}{2}$

Question Number : 108 Question Id : 79840731813 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If Mean < Median or Mean < Mode then the distribution is

Options :

1. ✘ Positively Skewed

2. ✔ Negatively Skewed

3. ✘ Symmetric

4. ✘ None of the given options is correct

Question Number : 109 Question Id : 79840731814 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Limits of Karl Pearson's Coefficient of skewness  $s_k$  are

Options :

1.   $|s_k| \leq 3$

2.   $|s_k| \leq 2$

3.   $|s_k| \leq 1$

4.   $|s_k| \geq 1$

Question Number : 110 Question Id : 79840731815 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Given  $Q_1 = 18$ ,  $Q_3 = 25$ , Mode=21 and Mean=18. Find the coefficient of Skewness.

Options :

1.  0.812

2.  -0.714

3.  -0.812

4.  0.714

Question Number : 111 Question Id : 79840731816 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If mean and Geometric mean of 10 observations are 12 and 9 respectively, then variance is

Options :

1.  8

2.  63

3.  64

4.  72



Question Number : 112 Question Id : 79840731817 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Pearson Coefficient of Skewness for a distribution is 0.4 and Coefficient of Variation is 30%. Its Mode is 88. Find the Mean and Median.

Options :

1. ✘ 10 and 96
2. ✘ 96 and 100
3. ✘ 96 and 86
4. ✔ 86 and 96

Question Number : 113 Question Id : 79840731818 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The empirical relation between Mean deviation (MD) and Standard Deviation (SD) is

Options :

1. ✔  $5MD = 4SD$
2. ✘  $4MD = 5SD$
3. ✘  $6MD = 5SD$
4. ✘  $3MD = 2SD$

Question Number : 114 Question Id : 79840731819 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

A Measure of dispersion which does not depend on the unit of measurement of data

Options :

1. ✘ Mean Deviation
2. ✘ Standard Deviation
3. ✔ Coefficient of variation

#### 4. ✘ Range

Question Number : 115 Question Id : 79840731820 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Kurtosis of Normal distribution in terms of  $\beta_2$  coefficient is

Options :

1. ✘  $\beta_2 > 3$

2. ✔  $\beta_2 < 3$

3. ✘  $\beta_2 = 0$

4. ✘  $\beta_2 = 3$

Question Number : 116 Question Id : 79840731821 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Coefficient of determination lies between the limits

Options :

1. ✔  $[0,1]$

2. ✘  $(0,1)$

3. ✘  $(-1,1)$

4. ✘  $[-1,1]$

Question Number : 117 Question Id : 79840731822 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The correlation between Intelligence and Demand is

Options :

1. ✘ Negative

2. ✘ Positive

3. ✓ Non-Sense

4. ✗ Either positive or negative

Question Number : 118 Question Id : 79840731823 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The limits of Rank correlation coefficient are

Options :

1. ✗  $[0,1]$

2. ✗  $[-1,0]$

3. ✓  $[-1,1]$

4. ✗  $[0.5,0]$

Question Number : 119 Question Id : 79840731824 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

For a group of 8 students, the sum of squares of differences in ranks for Telugu and English marks was found to be 50. What is the value of rank correlation coefficient?

Options :

1. ✗ 0.37

2. ✗ -0.40

3. ✗ -0.37

4. ✓ 0.40

Question Number : 120 Question Id : 79840731825 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

For 20 pairs  $(x_i, y_i)$  of observations the correlation coefficient  $\gamma(x, y) = 0.4$  and  $\bar{X} = 12, \bar{Y} = 15, \sigma_x^2 = 9, \sigma_y^2 = 16$ . Later it was found that the pair  $(x=20, y=15)$  was wrongly taken as  $(x=15, y=20)$ . Find the correct value of the correlation coefficient ?

Options :

1. ✘ -0.31
2. ✘ 0.61
3. ✔ 0.31
4. ✘ -0.61

Question Number : 121 Question Id : 79840731826 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If the correlation Coefficient  $r$  is more than 6 times the probable error, then correlation is

Options :

1. ✔ Significant
2. ✘ Positive
3. ✘ Negative
4. ✘ Not significant

Question Number : 122 Question Id : 79840731827 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

If the correlation coefficient  $r$  is 0.917 and its Probable Error is 0.034. What would be the value of  $n$ ?

Options :

1. ✘ 10
2. ✔ 8
3. ✘ 12

4. ✘ 9

Question Number : 123 Question Id : 79840731828 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The coefficient of rank correlation of the marks obtained by 10 students in statistics and accountancy was found to be 0.2. It was later discovered that the difference in ranks in the two subjects obtained by one of the students was wrongly taken as 9 instead of 7. Find the correction coefficient of rank correlation?

Options :

1. ✘ 0.394

2. ✘ 0.390

3. ✘ 0.392

4. ✔ 0.391

Question Number : 124 Question Id : 79840731829 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The Logarithmic Straight Line is used as an expression for

Options :

1. ✘ Absolute movement

2. ✘ Random movement

3. ✔ Secular movement

4. ✘ Irregular movement

Question Number : 125 Question Id : 79840731830 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Which average is used for Smoothing a Time Series?

Options :

1. ✘ Pooled average

2. ✓ Moving average

3. ✗ Weighted average

4. ✗ Simple average

Question Number : 126 Question Id : 79840731831 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

In time series , deseasonalisation is needed for the study of

Options :

1. ✓ Cyclic Component

2. ✗ Trend Component

3. ✗ Random Component

4. ✗ None of the given options is correct

Question Number : 127 Question Id : 79840731832 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The Oscillation movements in a time series with period of Oscillation more than one year are termed on

Options :

1. ✗ Trend

2. ✗ Seasonal Variation

3. ✓ Cyclic Variation

4. ✗ Irregular variations

Question Number : 128 Question Id : 79840731833 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Number of equations required to fit Second Degree Parabola Curve?

Options :

1. ✘ 4

2. ✔ 3

3. ✘ 2

4. ✘ 1

Question Number : 129 Question Id : 79840731834 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Paasche's price index is based on

Options :

1. ✘ Base year quantities

2. ✘ Average of base and current year quantities

3. ✘ Geometric mean of base and current year quantities

4. ✔ Current year quantities

Question Number : 130 Question Id : 79840731835 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The prices of a commodity in the year 1985 and 1990 were 25 and 30 respectively taking 1985 as base year the average relative price is:

Options :

1. ✘ 113.25

2. ✘ 110.25

3. ✘ 108.79

4. ✔ 109.54

Question Number : 131 Question Id : 79840731836 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Real wages are defined as

Options :

1. ✘  $\frac{\text{Cost of living index}}{\text{Money wages}} \times 100$

2. ✘  $\frac{\text{Money wage}}{\text{Purchasing power}}$

3. ✔  $\frac{\text{Money wages}}{\text{Cost of living index}} \times 100$

4. ✘  $\text{Money wages} \times \text{Price index}$

Question Number : 132 Question Id : 79840731837 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The most appropriate average used in the construction of Index numbers is

Options :

1. ✘ Arithmetic mean

2. ✔ Geometirc Mean

3. ✘ Medium

4. ✘ Harmonic mean

Question Number : 133 Question Id : 79840731838 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Laspyre's Quantity Index Formula with usual notation is

Options :

1. ✔  $\frac{\sum q_{ij}p_{oj}}{\sum q_{oj}p_{oj}} \times 100$

2. ✘  $\frac{\sum q_{ij}p_{oj}}{\sum q_{ij}p_{ij}} \times 100$

3. ✘  $\frac{\sum q_{ij}p_{ij}}{\sum q_{oj}p_{ij}} \times 100$



4. ✘ 
$$\frac{\sum q_{ij}p_{oj}}{\sum q_{oj}p_{ij}} \times 100$$

Question Number : 134 Question Id : 79840731839 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Marshall-Edge worth Price Index does not obey

Options :

1. ✘ Time reversal test
2. ✘ Unit test
3. ✔ Factor reversal test
4. ✘ None of the given options is correct

Question Number : 135 Question Id : 79840731840 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Consumer Price index is same as

Options :

1. ✘ Marshal – Edg worth index
2. ✔ Laspeyre's Index
3. ✘ Paasche index
4. ✘ Fisher Index

Question Number : 136 Question Id : 79840731841 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Fisher's Index Number is the only formula among all other formula which satisfies

Options :

1. ✘ Time Reversal Test
2. ✔ Factor Reversal Test

3. ✘ Circular Test

4. ✘ Unit Test

Question Number : 137 Question Id : 79840731842 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The most suitable average to determine the Cost of Living Index for family budget method is

Options :

1. ✘ Arithmetic Mean

2. ✘ Geometric Mean

3. ✔ Weighted Arithmetic Mean

4. ✘ Median

Question Number : 138 Question Id : 79840731843 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Fisher's index number is the \_\_\_\_\_ between laspeyres' and paasche's index numbers

Options :

1. ✔ Geometric mean

2. ✘ Harmonic Mean

3. ✘ Arithmetic Mean

4. ✘ Median

Question Number : 139 Question Id : 79840731844 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Marshal Edgworth index number lies between

Options :

1. ✘ Fisher index and laspeyre's index numbers

2. ✘ Fisher index and paasche's index numbers
3. ✘ Laspeyres and Drobish-Bouley index numbers
4. ✔ Laspeyres and paashe's index numbers

Question Number : 140 Question Id : 79840731845 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

A bag contains 6 white and 3 black balls which are identical in shape. One ball is drawn at random, what is the probability it is white?

Options :

1. ✘  $\frac{1}{2}$
2. ✔  $\frac{2}{3}$
3. ✘  $\frac{1}{3}$
4. ✘ 1

Question Number : 141 Question Id : 79840731846 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

\_\_\_\_\_ index number satisfies circular test

Options :

1. ✘ Laspeyre's
2. ✘ Paasche's
3. ✘ Fisher's
4. ✔ Kelly's

Question Number : 142 Question Id : 79840731847 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The following data relate to the price of rice per kilogram in different years

year	1998	1999	2000	2001	2002	2003	2004
Price(Rs):	6	7	7	8	10	14	12

Find the link relative value for the year 2002

Options :

1. ✘ 100

2. ✘ 114.29

3. ✔ 125

4. ✘ 140

Question Number : 143 Question Id : 79840731848 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Chain index is defined as

Options :

1. ✔ 
$$\frac{\text{current year link relative} \times \text{preceding year chain index}}{100}$$

2. ✘ 
$$\frac{\text{preceding year link relative}}{100}$$

3. ✘ 
$$\frac{\text{previous year fixed base index}}{\text{current year link relative}} \times 100$$

4. ✘ None of the given options is correct

Question Number : 144 Question Id : 79840731849 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Real income is also known as

Options :

1. ✔ Deflated income

2. ✘ Increased income

3. ✘ Decreased income

4. ✘ Price index

Question Number : 145 Question Id : 79840731850 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

Most widely used model in time series analysis is

Options :

1. ✘ Additive model

2. ✔ Multiplicative Model

3. ✘ Linear Model

4. ✘ Mixed Model

Question Number : 146 Question Id : 79840731851 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The graph of the time series is also called

Options :

1. ✘ Histogram

2. ✘ Frequency curve

3. ✔ Historigram

4. ✘ None of the given options is correct

Question Number : 147 Question Id : 79840731852 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct : 1 Wrong : 0.33

The correction factor used in the computation of rank correlation when tied observations are present in the data is?

(‘m’ is the number of times an observation is repeated)

Options :

1. ✓  $\frac{m(m^2-1)}{12}$

2. ✗  $\frac{m^2(m-1)}{12}$

3. ✗  $\frac{m(m-1)}{12}$

4. ✗  $\frac{m^2-1}{2m}$

Question Number : 148 Question Id : 79840731853 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Correct : 1 Wrong : 0.33

In a scatter diagram if all points appear to form a straight line going down ward from left to right, then the correlation is know as

Options :

1. ✗ perfect positive correlation

2. ✓ simple positive correlation

3. ✗ No Correction

4. ✗ Perfect negative correlation

Question Number : 149 Question Id : 79840731854 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical  
Correct : 1 Wrong : 0.33

To compare the variability in two series we use

Options :

1. ✗ Standard deviation

2. ✓ Coefficient of variation

3. ✗ Mean Deviation

4. ✗ Scatter diagram

Correct : 1 Wrong : 0.33

Geometric mean of five observations 2,5,8,0,12 is

Options :

1. ✓ 0

2. ✗ 3.9487

3. ✗ 5.5663

4. ✗ 9.8648