

Reg. No:

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## END SEMESTER EXAMINATION - NOVEMBER 2019

Programme : B.Sc. Computer Science

Date : 14.11.2019

Course Code: 17UCSC11

Time: 10:00 am to 1.00 pm.

Course Title : Programming in C

Max Marks : 75

### SECTION - A

[10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

- Every C program must have one \_\_\_\_\_ function section.  
[a] definition [b] documentation  
[c] link [d] main
- &&,||,! Are \_\_\_\_\_ operators in C.  
[a] relational [b] logical  
[c] arithmetic [d] bitwise
- The formatted string for character variable is \_\_\_\_\_.  
[a] %d [b] %f  
[c] %c [d] %ld
- The do-while statement is a/an \_\_\_\_\_ statement.  
[a] entry-controlled loop [b] exit-controlled loop  
[c] branching [d] infinite loop

5. The process of allocating memory at compile time is known as \_\_\_\_\_ memory allocation.

- [a] static
- [b] dynamic
- [c] random
- [d] direct

6. The function \_\_\_\_\_ is used to compare two strings.

- [a] strcmp()
- [b] strlen()
- [c] strcmp()
- [d] strcpy()

7. The name of the structure is called the \_\_\_\_\_.

- [a] structure tag
- [b] structure name
- [c] structure template
- [d] structure

8. A \_\_\_\_\_ is a convenient tool for handling group of logically related data items.

- [a] function
- [b] array
- [c] structure
- [d] method

9. The mode \_\_\_\_\_ is used to open the file for appending data to it.

- [a] r
- [b] w
- [c] a
- [d] u

10. The function \_\_\_\_\_ may be used to position a file at beginning

- [a] fseth()
- [b] fseek()
- [c] fbegin()
- [d] rewind()

## SECTION - B

[5 X 7 = 35]

Answer ALL the Questions.

11. a) Describe the structure of C program.

[OR]

b) Discuss about various mathematical functions in C

12. a) Explain nested if statement with suitable examples.

[OR]

b) Differentiate between while and do-while statements.

13. a) Write note on dynamic array.

[OR]

b) Explain any two string handling functions with examples.

14. a) Explain the concept of array of structures

[OR]

b) What is a function? Explain how it can be defined?

15. a) Explain command line arguments with example program.

[OR]

b) Write short notes on pointers.

## SECTION - C

[3 X 10 = 30]

Answer Any THREE Questions.

16. Discuss about the various data types available in C.

17. Explain in detail about the printf() and scanf() functions with examples

15. a) What is a Hardware ? Discuss in detail  
[OR]  
b) What is Logical System architecture?

**SECTION – C**

[ 3 X 10 = 30 ]

**Answer Any THREE Questions.**

6. Elaborate the various Input and Output devices?
7. Discuss in detail about Primary memory.
8. With suitable examples, explain about Number system.
9. Discuss about Conversion of Binary, Octal and Hexadecimal Numbers.
10. What is the relationship between computer hardware and software?



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**END SEMESTER EXAMINATION - NOVEMBER 2019**

Programme : B.Com/BBA/B&I

Date : 12.11.2019

Course Code: 17UCSN11/19UCSN11

Time: 10.00 am. to 1.00 pm.

Course Title : Fundamentals of Computer Max Marks : 75

**SECTION – A**

[10 X 1 = 10]

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. The basic operations performed by a computer are \_\_\_\_\_  
[a] Arithmetic operation [b] Logical operation  
[c] Storage and relative [d] All the above
2. Third generation computers \_\_\_\_\_  
[a] Were the first to use built-in error detecting device.  
[b] Used transistors instead of vacuum tubes  
[c] Were the first to use neural network.  
[d] All the above.
3. The Central Processing Unit \_\_\_\_\_  
[a] is operated from the control panel  
[b] is controlled by the input data entering the system  
[c] Controls the auxiliary storage unit.  
[d] Controls all input, output and processing

**G.T.N. ARTS COLLEGE (AUTONOMOUS)***(Affiliated to Madurai Kamaraj University)**(Accredited by NAAC with 'B' Grade)***END SEMESTER EXAMINATION - NOVEMBER 2019****Programme : B.Com****Date : 12.11.2019****Course Code: 17UCSN21****Time: 2.00 pm to 5.00 pm.****Course Title : Introduction to Internet****Max Marks : 75****SECTION - A****[ 10 X 1 = 10 ]****Answer ALL the Questions****Choose the Correct Answer**

1. Web page is called as \_\_\_\_\_.  
[a] file [b] document  
[c] resource [d] URL
2. DNS stands for \_\_\_\_\_.  
[a] Domain Name System [b] Document Name System  
[c] Dynamic Name System [d] Domain Numeric System
3. Process of keeping address in memory for future use is called as \_\_\_\_\_.  
[a] routing [b] resolving  
[c] loading [d] processing
4. \_\_\_\_\_ is suitable for networking in a building.  
[a] WAN [b] MAN  
[c] LAN [d] TELENET
5. We get list of sites after typing a word in search bar is called \_\_\_\_\_.  
[a] single word [b] double word  
[c] key phrase [d] tag list

6. Search engines are able to search \_\_\_\_\_ type of information.

- [a] videos
- [b] documents
- [c] images
- [d] all of these

7. In a Email architecture we can have \_\_\_\_\_ scenarios.

- [a] 2
- [b] 3
- [c] 4
- [d] 6

\_\_\_\_\_ is used for computer communication between users.

- [a] Facebook
- [b] E-mail
- [c] Google
- [d] Whatsapp

Correct HTML tag for the largest heading is \_\_\_\_\_.

- [a] <head>
- [b] <h6>
- [c] <heading>
- [d] <h1>

The attribute of <form> tag

- [a] module
- [b] action
- [c] main
- [d] page

### SECTION – B [ 5 X 7 = 35 ]

#### Answer ALL the Questions

List out the requirements to connect to internet.

[OR]

Discuss the major impacts of internet on society.

12. Write a note on the following.

- a) Client Computer
- b) Host Computer
- c) Internet Service Provider (ISP)

[OR]

b) Explain any network topology.

13. a) What is a browser? Explain its basic features.

[OR]

b) How a web page can be run in a web browser? Explain

14. a) How would you create your own E-mail account? Explain

[OR]

b) Describe Netscape.

15. a) What is HTML? How are HTML tags written?

[OR]

b) Describe the process of inserting graphics in HTML

### SECTION – C

[ 3 X 10

#### Answer Any THREE Questions

16. Discuss any 10 important services provided by internet.

17. What is DNS? Explain how it works.

18. What are search engines? Explain its categories.

19. Define E-mail. Explain the parts of E-Mail text.

20. What is a form? How they are created?

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## END SEMESTER EXAMINATION - November 2019

Programme : B.Sc. Computer Science

Date : 13.11.2019

Course Code: 17UCSC21

Time: 2.00 pm. to 5.00 pm.

Course Title : Visual Programming

Max Marks : 75

### SECTION - A

[ 10 X 1 = 10 ]

Answer ALL the Questions

Choose the Correct Answer

- \_\_\_\_\_ controls hold pictures.  
[a] Image [b] Text  
[c] Message [d] Option
- \_\_\_\_\_ property determines whether a text box can accept more than one line of text.  
[a] Alignment [b] Text  
[c] Multiline [d] Maxlength
- \_\_\_\_\_ property returns or sets the number of characters selected.  
[a] Selstart [b] Selttext  
[c] Sellength [d] Selbold
- The \_\_\_\_\_ function returns the square root of the numeric expression inside the Parenthesis.  
[a] Sqrt() [b] Exp()  
[c] Abs() [d] Sqrtroot()

5. \_\_\_\_\_ can't be open ended in visual basic.  
 [a] Variables [b] Constant  
 [c] Array [d] String
6. \_\_\_\_\_ is also one of the most time consuming tasks for a computer.  
 [a] Searching [b] Splitting  
 [c] Sorting [d] Joining
7. The Erl stands for \_\_\_\_\_.  
 [a] Errorline [b] Errorlink  
 [c] Errorload [d] Errorlead

8. \_\_\_\_\_ doesn't have the ability to let the user type into a cell automatically.

- [a] Text Property [b] MsFlexGrid  
 [c] Key Press Event [d] Grid Controls

9. The \_\_\_\_\_ statement is to read back the information contained in a file character by character.

- [a] File Num [b] Print  
 [c] File Identifier [d] EOF

10. \_\_\_\_\_ read or change any byte of a file.

- [a] Seek [b] Put  
 [c] Binary Files [d] Unlock

**SECTION - B [5 X 7 = 35]**

**Answer ALL the Questions**

11. a) Explain the following i) Color Properties ii) Message Boxes

[OR]

b) List out the properties of Command Buttons with example.

12. a) Explain any seven data types in VB with example.

[OR]

b) List the important properties of Rich Text Boxes with example

13. a) Explain : i) Instr Function

ii) The Nifty (New) Replace Function

[OR]

b) Write down the steps to create records in table with example

14. a) What are the Control Arrays ? How to add and remove the controls in a control array [OR]

b) Explain the types of error trapping methods with error codes

15. a) Explain the types of files in VB

[OR]

b) Explain in detail about the line and shape controls. Give an example

**SECTION - C**

**[3 X 10 = 30]**

**Answer Any THREE Questions**

16. What are the various Simple Event Procedure available in code window ? Explain with example.

17. Describe the Determinate Loops with an example.

18. Explain about One-Dimensional Array with Index Ranges.

19. List out the properties of List Box and Combo Boxes with suitable example.

20. What are the Mouse Event Procedures ? Explain.

5. Write the syntax for binary operator.

- [a] Op x
- [b] x op
- [c] x op y
- [d] x y op

6. Only \_\_\_\_\_ operators can be overloaded.

- [a] existing
- [b] new
- [c] insert
- [d] delete

7. Which of the following describes "Is-a-Relationship"?

- [a] Aggregation
- [b] Inheritance
- [c] Dependency
- [d] All the above

8. What does inheritance allows you to do?

- [a] create a class
- [b] create a hierarchy of class
- [c] access methods
- [d] None of the mentioned

9. \_\_\_\_\_ is a pointer that points to the object for which this function was called

- [a] New
- [b] delete
- [c] pointer
- [d] this pointer

10. The \_\_\_\_\_ functions must be members of some class.

- [a] virtual function
- [b] inline function
- [c] friend function
- [d] static function

## SECTION - B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain the structure of C++ program

[OR]

b) Display weekdays using switch statement in C++

12. a) Discuss the friend function.

[OR]

b) How to define member function?

13. a) Distinguish between constructor and destructor.

[OR]

b) Write a C++ program to demonstrate overloading binary operator

14. a) Write a brief note on single inheritance.

[OR]

b) Describe about virtual-base class.

15. a) Discuss the unformatted I/O operators.

[OR]

b) Write a C++ program for arithmetic calculation using pointers.

## SECTION - C [3 X 10 = 30]

Answer any THREE Questions.

16. Give a brief note on data types available in C++.

17. Calculate the area of a square, rectangle and circle using function overloading.



15. a) What is Krushkal's Algorithm? Explain

[OR]

b) Write a short note about optimal merge patterns.

SECTION - C [ 3 X 10 = 30 ]

Answer Any THREE Questions.

16. What is meant by circular Linked List? Write the algorithm to print and insert the elements in CLL.
17. Discuss briefly about basic operations(insert and delete) in circular queue.
18. Define binary tree. Define and proof the 2 lemmas.
19. What is quick sort? Write the algorithm for quick sort with examples.
20. What is knapsack problem? Give example and the algorithm for the same.

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**END SEMESTER EXAMINATION - NOVEMBER 2019**

Programme : B.Sc. Computer Science

Date : 16.11.2019

Course Code: 17UCSC32

Time: 2.00 pm. to 5.00 pm.

Course Title : Data structures and  
Computer Algorithm

Max Marks : 75

SECTION - A

[10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. A linear collection of data elements where the linear node is given by means of pointer is called \_\_\_\_  
[a] Linked list [b] Node list  
[c] Primitive list [d] None of the mentioned
2. What is the time complexity of inserting a node in a doubly linked list?  
[a]  $O(n \log n)$  [b]  $O(\log n)$   
[c]  $O(n)$  [d]  $O(1)$
3. A queue is a \_\_\_\_  
[a] FIFO(First in First out)list [b] LIFO>Last in First Out)  
[c] Ordered array [d] Linear tree

4. In a stack, if a user tries to remove an element from empty stack it is called \_\_\_\_\_

- [a] Underflow
- [b] Empty collection
- [c] Over flow
- [d] Garbage collection

5. How many orders of traversal can be applied to a binary tree?

- [a] 1
- [b] 4
- [c] 2
- [d] 3

6. What is the maximum number of children that a binary tree node can have?

- [a] 0
- [b] 1
- [c] 2
- [d] 3

7. What is the worst case complexity of selection sort?

- [a]  $O(n \log n)$
- [b]  $O(\log n)$
- [c]  $O(n)$
- [d]  $O(n^2)$

8. What is the advantage of selection sort over other sorting techniques?

- [a] It requires no additional storage space
- [b] It is scalable
- [c] It works best for inputs which are already sorted.
- [d] It is faster than any other sorting technique

9. Kruskal algorithm is used to \_\_\_\_\_

- [a] find minimum spanning tree
- [b] find single source shortest path
- [c] find all pair shortest path algorithm
- [d] traverse the graph.

10. The knapsack problem is an example of \_\_\_\_\_

- [a] Greedy algorithm
- [b] 2D dynamic programming
- [c] 1D dynamic programming
- [d] Divide and conquer

### SECTION - B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Define : Multidimensional array. Write the addressing function of a 3D array. [OR]

b) Define upper Triangular matrices. Explain storage representation of upper triangular matrices.

12. a) Define Dequeue. Write the algorithm for insert a element in Dequeue. [OR]

b) Discuss shortly about evaluation of postfix expressions

13. a) What is inorder traversal in binary tree? Explain. [OR]

b) What is Expression tree? Explain.

14. a) What is pseudocode conventions..Discuss about it. [OR]

b) Define space complexity. Explain about it.

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**SECTION - C** [ 3 X 10 = 30 ]

**Answer Any THREE Questions.**

16. Perform the following conversion.
  - i) Express decimal 523 in excess-3 code
  - ii) Convert gray number 1110 in to binary equivalent
  - iii) What is the octal equivalent of decimal 324.98?
  - iv) Write the operation of the AND gate with inverted inputs
17. Use karnaugh simplification and draw the simplified circuit that converts a 4-bit binary input to a gray code output.
18. Explain the types 2's complement addition with an example for each case.
19. Explain the general configuration of a microprogrammed control unit with a neat block diagram.
20. Discuss instruction formats in detail

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**END SEMESTER EXAMINATION - NOVEMBER 2019**

**Programme : B.Sc., computer Science**      **Date : 19.11.2019**  
**Course Code: 17UCSA31**                      **Time: 2.00 pm. to 5.00 pm.**  
**Course Title : Digital principles and**  
**computer organization**                      **Max Marks :75**

**SECTION - A** [10 X 1 = 10]

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. What is the decimal value of binary 1101.01?
  - [a] 11.75
  - [b] 14.25
  - [c] 13.75
  - [d] 13.25
2. Which gate produces high output when any input is high?
  - [a] AND
  - [b] NOT
  - [c] OR
  - [d] NAND
3. The other name of multiplexer is \_\_\_\_\_.
  - [a] data controller
  - [b] data selector
  - [c] data distributor
  - [d] data defender
4. Which parity scheme is used in the codeword 11011? (assume 4 bit data and last bit as parity bit)
  - [a] odd
  - [b] even
  - [c] mixed
  - [d] rational

5. The one's complement of the given decimal number 12 is

[a] 1100 [b] 1101

[c] 0011 [d] 0111

6. The addition of two unsigned numbers whose sum is greater than 255

causes \_\_\_\_\_

[a] carry flag [b] overflow

[c] under flow [d] zero flow

7. An \_\_\_\_\_ code is a group of bits used to instruct the computer to perform a specific function

[a] instruction code [b] Operation code

[c] functional code [d] immediate instructional code

8. \_\_\_\_\_ register is used for holding temporary data during the processing.

[a] Data [b] Accumulator

[c] Temporary [d] Input

9. In \_\_\_\_\_ mode, the value of the register is incremented after accessing the value of used to access memory.

[a] Register mode [b] Auto increment

[c] Direct address [d] Immediate

10. \_\_\_\_\_ technique is used to execute multiples tasks simultaneously.

[a] Delayed branch [b] Interlocks

[c] Pipeline [d] Interrupt

## SECTION - B

[5 X 7 = 35]

### Answer ALL the Questions.

11. a) Explain the operation of universal gates for all input conditions

[OR]

b) Convert the following

i)  $(A2F.2)_{16} \rightarrow ( )_{10}$  ii)  $(1101.11)_2 \rightarrow ( )_{10}$  iii)  $(75.32)_8 \rightarrow ( )_2$

12. a) Reduce the following expression using K-map

$$F(A,B,C,D) = \sum m(0,1,5,7,10,11,13,15) + d(8,9)$$

[OR]

b) Design a 4-bit odd parity generator

13. a) Discuss the full adder circuit in detail

[OR]

b) (i) Show the subtraction in binary form  $47_{10} - 23_{10}$

ii) Express the 1's complement of the given hexadecimal notation  $(2$

iii) Represent -12 in 2's complement form

14. a) Discuss the various types of register used in computer

[OR]

b) Explain the phase of instruction cycle with neat diagram

15. a) Explain the types of addressing modes used in computer

[OR]

b) Discuss the types of interrupts used to break the normal execution of program

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**END SEMESTER EXAMINATION - NOVEMBER 2019**

Programme : B.Sc.(CS)

Date : 15.11.2019

Course Code : 17UCSC41

Time: 2.00 pm. to 5.00 pm.

Course Title : Java Programming

Max Marks : 75

[10 X 1 = 10]

**SECTION - A**

**Answer ALL the Questions.  
Choose the Correct Answer.**

1. The keyword used for creating object is \_\_\_\_\_  
[a] extends [b] new  
[c] static [d] this
2. On successful compilation a file with the \_\_\_\_\_ extension is created.  
[a] source [b] object  
[c] bin [d] class
3. \_\_\_\_\_ type in Java is called as Unicode character.  
[a] int [b] char  
[c] float [d] double
4. Casting of smaller type to larger one is \_\_\_\_\_  
[a] promotion [b] narrowing  
[c] demoting [d] shortening

18. Explain deadlock Avoidance with Dijkstra's Banker's algorithm.
19. Describe Virtual Memory Management.
20. Explain file systems in detail.

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## END SEMESTER EXAMINATION - NOVEMBER 2019

Programme : B.Sc.(CS)

Course Code: 17UCSC42

Course Title : Operating System

Date : 20.11.2019

Time: 2.00 pm. to 5.00 pm.

Max Marks :75

### SECTION - A

[10 X 1 = 10 ]

Answer ALL the Questions.

Choose the Correct Answer.

1. What are the basis process states in an operating system?

- [a] Create, Blocked, Destroy
- [b] Ready, Running, and Resume
- [c] Ready, Suspend, Resume
- [d] Ready, Running, Blocked.

2. The motivation of converting interrupts to threads is to reduce \_\_\_\_\_.

- [a] Overcome
- [b] Overhead
- [c] Overload
- [d] Over access.

3. For semaphores and binary semaphores a \_\_\_\_\_ is used to hold processes waiting on the semaphore.

- [a] Stack
- [b] Queue
- [c] Tree
- [d] Graph.

4. A minimum of \_\_\_\_\_ variables are required to be shared between processes to solve the critical section problem.

- [a] one
- [b] Two
- [c] three
- [d] four

5. Which one of the following is the deadlock avoidance algorithm?  
 [a] Banker's algorithm [b] Elevator algorithm  
 [c] Round-Robin algorithm [d] Karn's algorithm
6. The content of matrix need is \_\_\_\_\_  
 [a] allocation - available [b] Max - available  
 [c] max - allocation [d] allocation - max
7. In contiguous memory allocation, \_\_\_\_\_  
 [a] each process is contained in a single contiguous section of memory  
 [b] all processes are contained in a single contiguous section of memory  
 [c] the memory space is contiguous  
 [d] none of these.
8. Operating system maintains the page table for -----  
 [a] each process [b] each thread  
 [c] each instruction [d] each address
9. In \_\_\_\_\_ policy, when the last track has been visited in one direction, the arm is returned to the opposite end of the disk and scan begins again.  
 [a] last in first out [b] shortest service time first  
 [b] SCAN [c] Circular SCAN

10. Which file is a sequence of bytes organized into blocks understandable by the system's linker?  
 [a] Object file [b] Source file  
 [c] Executable file [d] Text file.

**SECTION - B** [5 X 7 = 35]  
**Answer ALL the Questions.**

11. a) What are the components of operating systems? Explain it. [OR]

- b) What are process states? Explain it.
12. a) Discuss about the Peterson's algorithms in detail. [OR]

- b) Explain about Test - and - Set instruction in detail.
13. a) Discuss about deadlock solution in detail. [OR]

- b) Explain about three levels of Scheduling in detail.
14. a) Discuss about memory management strategies in detail. [OR]

- b) Explain about page replacement in detail.
15. a) Write short notes on: - Scan disk scheduling. [OR]

- b) Discuss about Linked-list Noncontiguous file allocation in detail.

**SECTION - C** [3 X 10 = 30]  
**Answer Any THREE Questions.**

16. Explain inter process communication in detail.
17. Explain Thread synchronization and implementing Semaphores in detail.

**SECTION - C**

[ 3 X 10 = 30 ]

**Answer Any THREE Questions.**

16. Explain about SIC / XE Architecture.

17. Discuss about basic assembler function with example.

18. Briefly explain about types of loader.

19. Write a note on compiler design options with example.

20. Describe about text editor with a neat diagram.

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**END SEMESTER EXAMINATION - NOVEMBER 2019**

**Programme : B.Sc.(CS)**

**Date : 22.11.2019**

**Course Code: 17UCSS41**

**Time: 2.00 pm. to 5.00 pm.**

**Course Title : System Software**

**Max Marks : 75**

**SECTION - A [10 X 1 = 10]**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. The \_\_\_\_\_ instruction tests whether the addressed device is ready to send or receive a byte of data.  
[a] test device [b] conditional jump  
[c] RUSB [d] JSUB
2. The X86 architecture provided for the storage of integers can also be stored in \_\_\_\_\_.  
[a] binary coded decimal  
[b] floating point data format  
[c] single precision format  
[d] double precision format
3. \_\_\_\_\_ that generates their object code in memory for immediate execution.  
[a] one-pass assemblers [b] subroutine  
[c] buffer [d] loader



4. A \_\_\_\_\_ assembler avoids the overhead of writing the object program out and reading it back out.

- [a] load-and-go
- [b] RDREC
- [c] WRREC
- [d] SYMTAB

5. The object program is modified by \_\_\_\_\_.

- [a] loading
- [b] linking
- [c] processing
- [d] relocation

6. A \_\_\_\_\_ is used to describe each part of the object code that must be changed when the program is restored.

- [a] grammar
- [b] modification record
- [c] process scheduling
- [d] memory

7. \_\_\_\_\_ for a programming language is a formal description of the syntax.

- [a] grammar
- [b] analyzer
- [c] provider
- [d] compiler

8. A/An \_\_\_\_\_ processes a source program written in a high level language.

- [a] interpreter
- [b] linker
- [c] decoder
- [d] multiplexer

9. \_\_\_\_\_ are software programs that enable the user to create and edit text files.

- [a] text editors
- [b] compiler
- [c] linker
- [d] loader

10. \_\_\_\_\_ can be used to track the flow of execution logic and detect modifications.

- [a] CPU
- [b] tracing
- [c] gates
- [d] breakpoints

[5 X 7 = 35]

**SECTION - B**  
**Answer ALL the Questions.**

11. a) Write a detailed note on VAX Architecture.

[OR]

b) Describe the register and addressing mode of Pentium Architecture.

12. a) Explain assembler Algorithm and data structure.

[OR]

b) Write a note on the following assembler:

- i. one pass assembler.
- ii. multi pass assembler.

13. a) Discuss about program linking with suitable example.

[OR]

b) Explain algorithm and data structures for a linking loader.

14. a) Write a short note on lexical analysis with example.

[OR]

b) Give details about code generation.

15. a) Explain about User interface.

[OR]

b) Give a detailed account on interactive debugging system.

**SECTION – C**

[ 3 X 10 = 30 ]

**Answer any THREE Questions.**

- a) Explain relational data structures with a diagram
- b) Write about CODD'S rules.
- c) Describe about second and Boyce-coded normal forms with examples
- d) Explain different types of relational algebraic operations by example.
- e) How to create a package in PL/SQL. Illustrate with an example program.
- f) Describe about various concurrency control schemas.

Reg. No:

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**END SEMESTER EXAMINATION - NOVEMBER 2019**

**Programme : B.Sc. (CS)**

**Date : 13.11.2019**

**Course Code: 17UCSC51**

**Time: 10.00 am. to 1.00 pm.**

**Course Title : Relational database management system**

**Max Marks : 75**

[ 10 X 1 = 10 ]

**SECTION – A**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. Which of the following is not an element of information system?  
[a] People [b] Procedures  
[c] Data [d] Money
2. \_\_\_\_\_ defines how and where data are organized in physical data storage  
[a] Internal schema [b] External  
[c] Conceptual [d] both a & b
3. An entity type that is not existence dependent on some other entity type is called \_\_\_\_\_  
[a] Weak [b] Strong  
[c] Participation [d] Connectivity

16. a) Explain about Unit Testing.

[OR]

b) Discuss the Acceptance testing

SECTION - C

[ 3 X 10 = 30 ]

Answer Any THREE Questions.

16. Explain about System development life cycle model.
17. Explain in detail about interview process.
18. Illustrate on Graphical representation of data.
19. Describe the following. a) Transform analysis b) Transaction analysis
20. Discuss in detail about report and system documentation.

Reg. No:

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**END SEMESTER EXAMINATION - NOVEMBER 2019**

Programme : B.Sc., Computer Science      Date : 15.11.2019  
Course Code: 17UCSC52      Time: 10.00 am to 1.00 pm.  
Course Title : System Analysis & Design      Max Marks : 75

SECTION - A

[ 10 X 1 =

Answer ALL the Questions.

Choose the Correct Answer.

1. \_\_\_\_\_ uses powerful development software and small, highly trained teams of programmers.  
[a] Prototyping      [b] RAD  
[c] Coding      [d] Modeling
2. The final step of the system analysis phase in the SDLC is to  
[a] gather data      [b] write system analysis requirements  
[c] propose changes      [d] analyze data
3. In a feasibility study, the \_\_\_\_\_ feasibility always focuses on the extent of computer hardware and software.  
[a] economic      [b] technical  
[c] behavioral      [d] logical

Breaking the system modules in to smaller programs and allocating these programs to the members of the system development team is the activity involved in \_\_\_\_\_

- [a] System Design Phase
- [b] System Development phase
- [c] System Analysis
- [d] System Implementation phase

The primary tool used in structured design is a \_\_\_\_\_

- [a] module
- [b] structure chart
- [c] data-flow diagram
- [d] program flow chart

\_\_\_\_\_ gives defining the flow of the data through and organization or a company or series of tasks that may or may not represent computerized processing

- [a] System process
- [b] System flowchart
- [c] System design
- [d] Structured system

Which of the following is the best type of module cohesion?

- [a] Function Cohesion
- [b] Temporal cohesion
- [c] Functional Cohesion
- [d] Sequential Cohesion

\_\_\_\_\_ is a measure of the degree of interdependence between modules

- [a] Cohesion
- [b] Coupling
- [c] Modules
- [d] All the above

During the systems audit, the system performance is compared to \_\_\_\_\_

- [a] Similar systems
- [b] newer systems
- [c] the design specifications
- [d] Competing systems

10. The testing technique that presumes that the path of the logic in a program unit or component is known as \_\_\_\_\_

- [a] Black box Testing
- [b] White box Testing
- [c] Integration Testing
- [d] Acceptance Testing

**SECTION – B** [5 X 7 = 35]

**Answer ALL the Questions.**

11. a) Define the term prototyping. [OR]

b) List out the roles of system analyst.

12. a) Discuss about questionnaires [OR]

b) Explain the steps involved in problem identification

13. a) What is a DSD? Explain. [OR]

b) Explain about Decision table

14. a) Write a short note on Cohesion [OR]

b) Discuss the output form.