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SUBJECT CODE NO:- L-2037
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-II) Examination March/April 2019
Computer Science Paper-IV CS04
Operating System-I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- N.B
- 1) Attempt all questions.
 - 2) Illustrate your answer with suitable labeled diagram.
- Q.1
- a) Explain types of schedulers. 10
 - b) Explain operation on processes with suitable example. 10
- OR
- a) Explain file system interface namely filename, file structure, file types. 10
 - b) Explain the functions of operating system. 10
- Q.2
- a) Explain characteristics of modern operating system. 10
 - b) Explain virtual memory in windows XP. 10
- OR
- Write a short notes on any four of the following. 20
- a) I/O Hardware
 - b) Network operating system
 - c) Paging
 - d) Directory structure
 - e) Classification of software
 - f) Disk management
- Q.3 Multiple choice questions. 10
- 1) _____ is a single user operating system.
 - a) DOS
 - b) UNIX
 - c) Windows
 - d) Android
 - 2) A process is ready for execution and is waiting for allocation of the CPU is called _____ state.
 - a) Run
 - b) Ready
 - c) Blocked
 - d) Exit
 - 3) The cache memory is placed between the _____ and the main memory.
 - a) Processor
 - b) Program
 - c) Process
 - d) None of above
 - 4) _____ is lightweight and process is heavy weight.
 - a) Thread
 - b) though
 - c) thin
 - d) none of above

- 5) SJFS means_____.
a) Shortest – Job – First scheduling
b) Solid – Job – first scheduling
c) Search– Job – first scheduling
d) None of above
- 6) Virtual memory is commonly implemented by_____.
a) Demand paging
b) Paging
c) Double paging
d) None of above
- 7) _____ Files consist of lines of text and each line is terminated by a new line character.
a) ASI b) ASCii c) ACSii d) None of above
- 8) A set of users who are sharing the file and similar access is_____.
a) A group
b) Owner
c) Other
d) None of above
- 9) If the address where the process is to be loaded is known at_____.
a) Compile time
b) Response time
c) Total time
d) None of above
- 10) _____Are handled using deadlock prevention and deadlock avoidance algorithm.
a) Deadlocks
b) Locks
c) Lights
d) None of above

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SUBJECT CODE NO:- L-2038
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-II) Examination March/April 2019
Computer Science Paper-V CS05
Programming in C

[Time: 1:30 Hours]

[Max.Marks: 50]

Please check whether you have got the right question paper.

N.B

Attempt all questions.

- Q.1 a) What is meant by a variable in C? How a variable is initialized? Explain the rules for defining variable names. 10
 b) What is associativity? Explain operator precedence. 10

OR

- a) Explain about the basic data types in C Language with example. 10
 b) Write a program in C to display Fibonacci series upto 10 numbers. 10

- Q.2 a) What is the need of do- while and while loops? Discuss about their usage. Discuss about their usage. Distinguish between them. 10
 b) What is Array? Discuss about the initialization and accessing of array elements in one dimensional and two dimensional arrays. 10

OR

Write short notes on (any four) 20

- 1) Library functions
- 2) Switch statement
- 3) Escape sequence
- 4) For loop
- 5) Recursion
- 6) String

- Q.3 Multiple choice questions. 10

- 1) A switch statement is used to -----
 a) Switch between functions in a program
 b) Switch from one variable to another variable
 c) To choose from multiple possibilities which may arise due to different values of a single variable
 d) All of the above

- 2) Choose the correct statement
 - a) Use of goto enhances the logical clarity of the code.
 - b) Use of goto makes the debugging task easier.
 - c) Use goto when you want to jump out of a nested loop
 - d) Never use goto
- 3) What is the size of an int data type ?
 - a) 4 bytes
 - b) 8 bytes
 - c) can not be determined
 - d) depends on the system / compiler
- 4) The maximum number of dimension an array can have in C is -----
 - a) 3
 - b) 4
 - c) 5
 - d) compiler dependent
- 5) The const feature can be applied to
 - a) An identifier
 - b) an array
 - c) an array argument
 - d) all of the above
- 6) Which is valid C expression?
 - a) int my_num = 100,000;
 - b) int my-num = 100000;
 - c) int my num = 1000;
 - d) int \$my_num = 10000;
- 7) How many times is a do while loop guaranteed to loop?
 - a) 0
 - b) infinitely
 - c) 1
 - d) variable
- 8) A declaration float a, b; occupies ---- of memory
 - a) 1 byte
 - b) 4 bytes
 - c) 8 bytes
 - d) 16 bytes
- 9) Continue statement is used -----
 - a) Restarts iterations from beginning of loop
 - b) To go to the next iteration in a loop
 - c) Come out of a loop
 - d) Exit and return to the main function
- 10) $X+ = Y+1$; means
 - a) $X = X+Y+1$
 - b) $X = X + Y -1$
 - c) $X = X- Y -1$
 - d) $X = X-Y + 1$

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SUBJECT CODE NO:- L-2177
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-I) Examination March/April 2019
Computer Science Paper-I CS01
Computer Fundamentals

[Time: 1:30 Hours]

[Max.Marks: 50]

Please check whether you have got the right question paper.

- N.B
1. Attempt all questions.
 2. Illustrate your answer with suitable diagram.
- Q.1
- a) What is input devices? Explain OMR and OBR. 10
 - b) Explain any two types of printers. 10
- OR
- a) What is flow chart? Explain various symbols in flow chart. 10
 - b) Explain any five characteristics of computer. 10
- Q.2
- a) Explain second & third generations of computer. 10
 - b) Explain various types of primary memory. 10
- OR
- Write short notes on (any four) 20
- a) Super computer
 - b) Hard disk
 - c) Batch operating system
 - d) Memory cell organization
 - e) Linker & loader
 - f) Plasma display
- Q.3 Multiple choice questions: 10
- 1) A ----- diagram describes a process or operation.
 - a) Flow chart b) algorithm c) picture d) image
 - 2) CISC means -----
 - a) Complete instruction set computer
 - b) Complex instruction set computers
 - c) Compiler instruction set computers
 - d) None of these

- 3) ----- is primary storage
a) CD- ROM b) DVD – ROM c) ROM d) all the above
- 4) -----is multiuser multitasking operating system.
a) DOS b) windows c) Unix d) none of these
- 5) Language which uses English like words is called-----.
a) LLL b) HLL c) Assembly language d) middle level language
- 6) DAT means -----
a) Digital Analog terminal
b) Digital Access time
c) Digital Audio tape
d) Digital Access terminal
- 7) Which of the following is a computer language.
a) Java b) Excel c) word d) Power point
- 8) Which operation is not performed by computer.
a) Inputting b) processing c) controlling d) understanding
- 9) Which of the following is input device.
a) Screen b) printer c) speaker d) key board
- 10) 1 MB means ----- bytes .
a) 1024 KB b) 1000KB c) 1024 GM d) 1024 bytes

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SUBJECT CODE NO:- L-2178
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-I) Examination March/April 2019
Computer Science Paper-II CS02
Digital Electronics

[Time: 1:30 Hours]

[Max.Marks: 50]

N.B

Please check whether you have got the right question paper.

1. Attempt all questions.
2. Illustrate your answer with suitable labeled diagram.

- Q.1 a) What is gate? Explain Ex- OR & Ex- NOR gates. 10
 b) What is K-map ? Explain k-map for 3- variables. 10

OR

- c) Explain full adder with suitable diagram. 10
 d) What is use of flip – flops? Explain JK flip – flop . 10

- Q.2 a) What is use of counters? Explain modulus counter. 10
 b) Explain parallel – in serial –out shift register with suitable diagram. 10


OR

- c) Write short notes on any four of the following each carry 5 marks. 20
 i) Decimal number system
 ii) Half subtractor
 iii) Demultiplexer
 iv) BCD counter
 v) Buffer register
 vi) RS flip – flop

- Q.3 Fill in the Blank . 10

1) Law of complements is -----.

2) $(14)_{10} = (---)_2$

3)  This is logical symbol of ---- gate .

4) 2's complement of $(1101)_2 = -----$

- 5) $(1111)_2 = (\text{-----})_{16}$
- 6) $(110101)_2 = (\text{----})_8$
- 7) $(1111)_2 + (1111)_2 = (\text{----})_2$
- 8) In two input OR gate if both input are 1 then output is -----
- 9) $(1000)_2 = (\text{---})_{10}$
- 10) $A(A+B)$ & $A + A.B = A$ are called laws of -----

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SUBJECT CODE NO:- L-2041
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-IV) Examination March/April 2019
Computer Science CS011
Programming in C++

[Time: 1:30 Hours]

[Max.Marks: 50]

Please check whether you have got the right question paper.

- N.B
- i. Attempt all questions.
 - ii. Illustrate your answer with suitable diagrams.
- Q.1
- a) Write benefits and application of object oriented programming. 10
 - b) Write a program in C++ to swap the two integer numbers. 10
- OR
- a) Explain function overloading with example. 10
 - b) Define class. Explain object as a function argument. 10
- Q.2
- a) What is destructors? Explain with example. 10
 - b) Define friend function. Write its characteristics. 10
- OR
- Write short notes on (any four) 20
- i) Inheritance
 - ii) cin and cout
 - iii) Memory allocation for object
 - iv) Object as data type
 - v) Overloading binary operators
 - vi) Comparison operators
- Q.3 Multiple choice questions. 10
- 1) To execute a C++ program one first need to translate the source code into object code. this process is called _____.
 - a. Translating
 - b. Sourcing
 - c. Compiling
 - d. Coding
 - 2) A _____ performs the copying for value returns as well as for value parameters.
 - a. Copy constructor
 - b. Parameterize constructor
 - c. Default constructor
 - d. None of the above
 - 3) Static member functions _____
 - a. Can be used without an instantiation of an object.
 - b. Can only access static data.
 - c. Both of the above
 - d. None of the above

- 4) A class member that is to be shared among all objects of a class is called _____.
 - a. A const member
 - b. A reference parameter
 - c. A static parameter
 - d. A function member
- 5) The design of classes in a way that hides the details of implementation from the user is known as _____.
 - a. Encapsulation
 - b. Information hiding
 - c. Data abstraction
 - d. Data abstraction
- 6) Which of the following features is not available in C++ object oriented programming?
 - a. Virtual destructor
 - b. Virtual constructor
 - c. Virtual function
 - d. All of the above
- 7) A function that changes the state of the cout object is called a(n) _____.
 - a. Member
 - b. Adjuster
 - c. Manipulator
 - d. Operator
- 8) The preprocessor directive always starts with the symbol _____.
 - a. %
 - b. &
 - c. #
 - d. “ ”
- 9) Which of the following is a C++ class?
 - a. >>
 - b. read ()
 - c. cin
 - d. iostream
- 10) How many ways of passing a parameter are there in C++?
 - a. 1
 - b. 2
 - c. 3
 - d. 4

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SUBJECT CODE NO:- L-2042
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-IV) Examination March/April 2019
Computer Science CS012
Database Management and System Using SQL

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- N.B
- i. Attempt all questions.
 - ii. Illustrate your answer with suitable diagrams.
- Q.1
- a) What is DBMS? Explain advantages & disadvantages of DBMS. 10
 - b) Explain different uses of DBMS. 10
- OR
- a) What is normalization? Explain 1NF, 2NF & 3NF with example. 10
 - b) What is E-R diagram? Explain with suitable example. 10
- Q.2
- a) Explain integrity rules with suitable example. 10
 - b) Explain SQL plus worksheet in detail. 10
- OR
- Write short notes on. (any four) 20
- a) Abstraction and Data integration
 - b) Relational data model
 - c) Functional dependency
 - d) Projection and selection
 - e) Versions of oracle
 - f) Types of attributes
- Q.3 Multiple choice questions. 10
1. In the relational mode cardinality is termed as _____.
 - a. Number of tuples
 - b. Number of attributes
 - c. Number of tables
 - d. Number of constraints
 2. Relational calculus is a _____.
 - a. Procedural language
 - b. Non procedural language
 - c. Data definition language
 - d. High level language
 3. The view of total database content is _____.
 - a. Conceptual view
 - b. Internal view
 - c. External view
 - d. Physical view
 4. In an ER diagram, attributes are represented by _____.
 - a) Rectangle
 - b) Square
 - c) Ellipse
 - d) Triangle

5. In case of entity integrity, primary key may be _____.
 - a) NOT NULL
 - b) Unique
 - c) Both a & b
 - d) NULL
6. Related fields in a database are grouped to form a _____.
 - a) Data file
 - b) Data record
 - c) Menu
 - d) Bank
7. Architecture of database can be viewed as _____.
 - a) One level
 - b) Two level
 - c) Three level
 - d) Four level
8. Count function in SQL returns the number of _____.
 - a) Values
 - b) Distinct values
 - c) Groups
 - d) Columns
9. In relational model, relations are termed as _____.
 - a) Tuples
 - b) Attributes
 - c) Tables
 - d) Rows
10. In SQL, to modify value of a field _____ query is used.
 - a) Alter
 - b) Modify
 - c) Update
 - d) Change

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SUBJECT CODE NO:- L-2182
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-III) Examination March/April 2019
Computer Science Code -CS08
Data Structures

[Time: 1:30 Hours]**[Max.Marks: 50]**

Please check whether you have got the right question paper.

- N.B 1. All questions are compulsory.
 2. Illustrate answer with suitable example.
- Q.1 a) What is array? Explain various operations performed on array with example. 10
 b) Explain recursion? Describe recursion using factorial function. 10
 OR
 c) What is stack? Explain array representation and operations on stack. 10
 d) Explain bubble sort with its algorithm and example. 10
- Q.2 a) What is linked list? Explain searching in linked list with suitable example. 10
 b) What is queue? Explain dequeues with suitable example. 10
 OR
 Write short notes (any four):- 20
 a) Record structure
 b) Traversing linked list
 c) Postfix notation
 d) Header linked list
 e) Multidimensional array
 f) Quick sort
- Q.3 Multiple choice questions:- 10
 1) ----- refers to a single unit of values.
 a) Data item b) Database
 c) Data structure d) Array
 2) An entity always has some -----
 a) Records b) Data items c) Attributes d) All
 3) A file is a collection of -----
 a) Attributes b) Strings c) Records d) Entity
 4) A data structure is ----- model of a particular organization of data
 a) Logical b) Mathematical
 c) Both (a) and (b) d) None of above

- 5) Accessing & processing each data item exactly once is called -----
a) Sorting b) Searching c) Traversing d) None
- 6) tAB is an example of ----- notation.
a) Infix b) Polish
c) Reverse polish d) None of above
- 7) In stack, data elements are removed from ----- side.
a) TOP b) Bottom
c) Any position d) None of above
- 8) ----- searching algorithm is extremely efficient in searching item in a sorted array.
a) Linear b) Binary c) Bubble d) All
- 9) In linked list, each node has -----
a) Info part b) Link field
c) Both (a) & (b) d) Pointer only
- 10) Recursion can be used in -----
a) Factorial function b) Fibonacci sequence
c) Tower of Hanoi d) All of above

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SUBJECT CODE NO:- L-2181
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-III) Examination March/April 2019
Computer Science Code - CS07
Advance C Programming

[Time: 1:30 Hours]

[Max.Marks: 50]

Please check whether you have got the right question paper.

- N.B
1. Attempt all questions.
 2. Illustrate your answer with suitable example.
- Q.1
- a) What is function? Explain different types of functions with example. 10
 - b) Define structure. Explain in detail initializing of structure with example. 10
- OR
- a) Differentiate between structure and union. 10
 - b) Explain any five string handling function in C. 10
- Q.2
- a) What is preprocessor directive in C? Explain macro substitution with suitable example. 10
 - b) Explain use of argc and argv in command line arguments. 10
- OR
- Write short notes on any four of the following:- 20
- a) Nested structure
 - b) Pointer
 - c) Random access functions in C
 - d) Graphics in C
 - e) Recursion
 - f) malloc ()
- Q.3 Multiple choice questions:- 10
- 1) Functions in C are always -----
 - a) External
 - b) Internal
 - c) Both internal and external
 - d) None of these
 - 2) Array sizes are optional during array declaration by using ----- keyword.
 - a) Auto
 - b) Static
 - c) Extern
 - d) Register
 - 3) What is sizeof() in C?
 - a) Operator
 - b) Function
 - c) Macro
 - d) None of these
 - 4) Which of the following is not a proper storage class in C?
 - a) Auto
 - b) Dec
 - c) Static
 - d) Extern

- 5) The "C" language is -----
- a) Context free language
 - b) Context sensitive language
 - c) Regular language
 - d) None of the above
- 6) What will be the output of the following statements?
- ```
int a=4, b = 7, c;
c = a = b;
printf ("%i", c);
```
- a) 0
  - b) Error
  - c) 1
  - d) Garbage value
- 7) A C variable cannot start with -----
- a) An alphabet
  - b) A number
  - c) A special symbol other than underscore
  - d) Both b and c
- 8) If a=8, b=3 and c=-5 are integers, then value of a\*b/c is -----
- a) -4
  - b) -2.8
  - c) +2.8
  - d) +3
- 9) Which header file should be included to use function like malloc ( ) and calloc ( )?
- a) memory .h
  - b) stdlib.h
  - c) string.h
  - d) dos.h
- 10) Which of the following standard library function will you use to find the last occurrence of a character in a string in C?
- a) strnchar ( )
  - b) strchar ( )
  - c) strrchar ( )
  - d) strrchr ( )



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**SUBJECT CODE NO:- L-2179**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y. (Sem-V) Examination March/April 2019**  
**Computer Science Paper CS 015**  
**(Software Engineering)**

[Time: 1:30 Hours]

[Max.Marks: 50]

Please check whether you have got the right question paper.

- N.B
- 1) All questions are compulsory.
  - 2) All question carry equal marks.
- Q.1
- a) Explain modeling principles used in software development? 10
  - b) Define software? Explain characteristics of software in detail? 10
- OR
- a) Differentiate between product and process. 10
  - b) Explain software myths in detail. 10
- Q.2
- a) Explain incremental model with well suitables diagram? 10
  - b) Give planning principles in detail. 10
- OR
- Write short notes on:- (Any four) 20
- a) Phases of unified process
  - b) Agility principles
  - c) Construction principles
  - d) Industrial XP
  - e) Web app attributes
  - f) Construction principles
- Q.3 Multiple Choice Questions:- 10
- 1) SDLC stands for -----
    - a) System development life cycle
    - b) Simple development life cycle
    - c) Software development life cycle
    - d) Soft development life cycle
  - 2) ----- is layered technology.
    - a) System engineering
    - b) Manufacturing
    - c) Software engineering
    - d) Hardware
  - 3) ----- is data structure that enables the program to adequately manipulate information.
    - a) Requirement
    - b) System
    - c) Synchronization
    - d) Software
  - 4) Software is that -----, when executed provide desired features, functions and performance.
    - a) Set of programs
    - b) SICS
    - c) Set of Instructions
    - d) Element

- 5) Software is developed or engineered; it is not, ----- in the classical sense.  
a) Manufactured      b) System      c) Hardware      d) Element
- 6) The foundation for software engineering is the ----- layer.  
a) Problem statement      b) Hardware      c) Process      d) Product
- 7) The spiral model was originally proposed by -----  
a) Barry Richards      b) Barry Boehm      c) Ritchie      d) Dijkstra
- 8) ----- is collection of activities, actions and tasks that are performed when some work product is to be created.  
a) Process      b) People      c) Product      d) Personal S/W
- 9) Agile software development is based on ----- development.  
a) Prototype      b) Incremental      c) Complex      d) Stepwise
- 10) ----- model combines elements of linear and parallel process flows.  
a) Random      b) Linear      c) Incremental      d) Layered

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**SUBJECT CODE NO:- L-2180**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y. (Sem-V) Examination March/April 2019**  
**Computer Science Paper- CS- 016**  
**(Web Designing)**

**[Time: 1:30 Hours]****[Max.Marks: 50]**

Please check whether you have got the right question paper.

- N.B
- 1) All questions are compulsory.
  - 2) All questions carry equal marks.
- Q.1
- a) Describe Array in JavaScript with example. 10
  - b) Explain the working of table tag with its Attributes. (any 2) 10
- OR
- c) How to add images to HTML documents? Explain? 10
  - d) What cascading style sheet? Explain? 10
- Q.2
- a) Explain String function in JavaScript with example. 10
  - b) Explain CSS property in brief with example. 10
- OR
- Write short note on. (Any 4) 20
- a) Semantic Markup
  - b) Mouse event
  - c) DOM objects
  - d) Inline JavaScript
  - e) Id selector
- Q.3 Multiple Choice Questions. 10
- 1) ----- indicates to the browser that this is an HTML5 documents.  
a) <HTML>    b) <DOCTYPE>    c) <XHTML>    d) None
  - 2) Each piece of data objects can hold is called-----.  
a) Objects    b) Item    c) Property    d) Array
  - 3) ----- concatenates multiple arrays & produces a resultant array.  
a) Concat    b) Join    c) Push    d) None
  - 4) The ----- locates the elements in HTML document to be styled.  
a) Selector    b) Declaration block    c) Both a & b    d) None
  - 5) Language that was used is document publishing called -----.  
a) XHTML    b) SGML    c) HTML    d) None

- 6) Attribute values always be quoted using ----- quotes.  
a) Single    b) Double    c) Both a & b    d) None
- 7) ----- Tag is used for description list.  
a) <dl>    b) <dt>    c) <div>    d) <none>
- 8) ----- is defined as the study of meaning of linguistic expression.  
a) Elements    b) Semantic    c) Objects    d) None
- 9) Which technology is HTML5 preceded by and derived from-----.  
a) HTML 4.01    b) XHTML 1.0    c) SGML    d) XML
- 10) ----- Tag is used to Table row.  
a) <Col>    b) <CO>    c) <code>    d) <row>

OR

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**SUBJECT CODE NO:- L-2180**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y. (Sem-V) Examination March/April 2019**  
**Computer Science Paper- CS- 016**  
**(VB .Net)**

**[Time: 1:30 Hours]****[Max.Marks: 50]**

Please check whether you have got the right question paper.

- N.B
- 1) Attempt all questions.
  - 2) Illustrate your answer with suitable labelled diagram.

- Q.1
- a) Explain CLR and class library of the .Net framework. 10
  - b) What is mean by event driven programming? Explain keyboard events with example. 10

OR

- c) Explain looping statement with suitable example. 10
- d) Explain class and object concept with suitable example. 10

- Q.2
- a) Explain structures and modules with suitable example. 10
  - b) Explain MDI in detail. 10

OR

Write short notes on. (Any four) 20

- a) Timer
- b) Radio button
- c) Show and hide method
- d) Sub procedures
- e) Properties window
- f) Data members

- Q.3 Multiple Choice Questions:- 10

- 1) MSIL means -----
  - a) Microsoft Service Internal Language
  - b) Microsoft Intermediate Language
  - c) Microsoft Internal Language
  - d) None
- 2) The properties window is divided into ----- columns.
  - a) One    b) Two    c) Three    d) Four
- 3) ----- words are reserved for visual basic.
  - a) R-words    b) Special    c) Keywords    d) None
- 4) Following is the one of the data type of VB.Net.
  - a) Float    b) Variant    c) Byte    d) None

- 5) VB.Net identifiers are case sensitive.  
a) True   b) False
- 6) The ----- statement declares elements to be accessible from within the same project, but not outside the project.  
a) Friend   b) Private   c) a & b both   d) None
- 7) Visual Basic.Net supports structured exception handling.  
a) True   b) False
- 8) Following is not a mouse events  
a) Mousedown   b) Mouseup   c) Mousewheel   d) Keydown
- 9) RTF means -----  
a) Rich Transform   b) Rich Tech format  
c) Rich text format   d) Rich top format
- 10) ----- allows you to derive new classes from other classes.  
a) Abstraction   b) Inheritance   c) Polymorphism   d) None

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**SUBJECT CODE NO:- L-2039**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y. (Sem-VI) Examination March/April 2019**  
**Computer Science Paper-CSO-19**  
**(Data Communication & Networking)**

**[Time: 1:30 Hours]****[Max.Marks:50]**

- N.B Please check whether you have got the right question paper.
- i. Attempt all questions.
  - ii. All questions carry equal marks.

- Q.1 a) Explain different types of guided media with an example. 10  
 b) What is topology? Explain mesh, star and Bus topology with its advantages and disadvantages. 10

OR

- a) What is modulation? Explain phase modulation techniques. 10  
 b) Define computer network. Explain different types of computer network. 10

- Q.2 a) Explain Digital-to-analog conversion techniques. 10  
 b) Explain any two modulation techniques. 10

OR

- Write short notes on. (any Four) 20
- a) ADSL
  - b) Demodulation techniques
  - c) Analog and digital signals
  - d) Satellite communication
  - e) Optical Fiber Cable
  - f) Full – duplex

- Q.3 Multiple choice questions. 10

- 1) The signal rate is sometimes called the \_\_\_\_\_ rate.  
 a) Bit                      b) Baud                      c) Signal                      d) None of the above
- 2) \_\_\_\_\_ refers to the physical or logical arrangement of a network.  
 a) Topology                      b) Mode of operation  
 c) Data flow                      d) None of the above
- 3) \_\_\_\_\_ Cable consists of an inner copper core and a second conducting outer sheath.  
 a) Twisted pair                      b) Shielded twisted pair  
 c) Coaxial                      d) Fiber – optic
- 4) In computer, converting a digital signal into an analog signal is called \_\_\_\_\_.  
 a) Modulation                      b) Demodulation  
 c) Conversion                      d) Transformation

- 5) How many types of multiplexing techniques are \_\_\_\_\_.  
a) One                      b) Two                      c) Three                      d) Four
- 6) Second generation of cellular phone network was developed, to provide higher quality mobile \_\_\_\_\_.  
a) Video communications                      b) Signal Generation  
c) Frame communication                      d) Voice communications
- 7) Parallel transmission is good in speed but it is very \_\_\_\_\_.  
a) Cheap                      b) Costly                      c) Time consuming                      d) Both B and C
- 8) The minimum spectrum allocation required for W – CDMA is \_\_\_\_\_.  
a) 5 MHz                      b) 2MHz                      c) 500KHz                      d) 100KHz
- 9) A communication path way that transfer data from one point to another is called \_\_\_\_\_.  
a) Link                      b) Node                      c) Medium                      d) Topology
- 10) An asymmetric digital subscriber line (ADSL) is not suitable for \_\_\_\_\_.  
a) Games                      b) Businesses  
c) Residential users                      d) Downloading



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**SUBJECT CODE NO:- L-2040**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y. (Sem-VI) Examination March/April 2019**  
**Computer Science Paper-CSO-20**  
**(Ethics & Cyber Law)**

[Time: 1:30 Hours]

[Max.Marks:50]

N.B

Please check whether you have got the right question paper.

- i. All questions are compulsory.
- ii. All questions carry equal marks.

Q.1 Multiple choice questions.

10

- 1) \_\_\_\_\_ right is a discipline which protects the copyrights trade mark of the inventors.
  - a) IT act
  - b) Intellectual property
  - c) E- Governance
  - d) None
- 2) \_\_\_\_\_ Provides legal recognition of transaction carried out by means of electronic commerce.
  - a) Cyber law
  - b) Cyber crime
  - c) IT act
  - d) None
- 3) Encryption of text mean \_\_\_\_\_.
  - a) Compressing it
  - b) Expanding it
  - c) Scrambling it to preserve its security
  - d) Hashing it
- 4) \_\_\_\_\_ indicates rules & regulations to be obeyed in the organization.
  - a) Ethics
  - b) Law
  - c) Moral
  - d) None
- 5) A computer virus \_\_\_\_\_.
  - a) Is hidden program
  - b) Enter a computer without owners knowledge
  - c) Can alter how a computer operator, computer bug
  - d) None
- 6) \_\_\_\_\_ are used to provide computer security in businesses.
  - a) Digital signature
  - b) Firewalls
  - c) Virus protection
  - d) All of above
- 7) The legal & regulatory aspects of internet refer to \_\_\_\_\_.
  - a) Cyber Law
  - b) Cyber crime
  - c) Criminal Law
  - d) IT act

- 8) \_\_\_\_\_ is to make exact copy of a program.
- a) Software piracy                      b) Copyrights  
c) Fairs use                                d) Law
- 9) Software available on Internet are\_\_\_\_\_.
- a) Freeware                                b) Shareware  
c) Public domain                        d) None
- 10) \_\_\_\_\_ means a representation of information, knowledge, facts, concepts or instruction.
- a) Data                                        b) Signature  
c) Access                                    d) Program

- Q.2      a) What is cryptography? Explain its components.                      10  
b) What are the ethics of computer security? Explain in brief.                      10
- OR
- a) Explain the concept of intellectual property.                      10  
b) What are the issues in cyber evidence management?                      10
- Q.3      a) What is cyber Jurisprudence? Explain.                      10  
b) What is topology? Explain its types.                      10

OR

Short note on. (any 4)

- 1) IT act 2008
- 2) E –Governance
- 3) Law of Digital contracts
- 4) Technology of Internet
- 5) E – Business management

20

OR

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**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y. (Sem-VI) Examination March/April 2019**  
**Computer Science Paper-CSO-20**  
**(E-Commerce)**

**[Time: 1:30 Hours]****[Max.Marks:50]**

Please check whether you have got the right question paper.

- N.B
- i. Attempt all questions.
  - ii. All questions carry equal marks.
- Q.1
- a) Define Electronic Data Interchange (EDI). Give advantages of EDI. 10
  - b) Write in detail cryptographic techniques. 10
- OR
- a) What are the different security methods for E – Commerce? 10
  - b) Write in detail certification and key distribution. 10
- Q.2
- a) Explain in detail electronic billing system. 10
  - b) Explain a working of secure Electronic transaction (SET) in detail. 10
- OR
- Write short notes on. (any four) 20
- a) Hashing technique
  - b) IT and business
  - c) Public key algorithm
  - d) Symmetric key encryption
  - e) Digital wallets
  - f) Pretty Good Privacy (PGP) email
- Q.3 Multiple choice questions. 10
- 1) Which is not function of E – commerce?
    - a) Marketing
    - b) Advertising
    - c) Ware housing
    - d) All of the above
  - 2) Which of the following is not related to security mechanism?
    - a) Encryption
    - b) Decryption
    - c) E – cash
    - d) All the above
  - 3) A combination of software and information designed to provide security and information for payment is called a what?
    - a) Digital wallet
    - b) Pop up ad
    - c) Shopping cast
    - d) Encryption

- 4) Which one is also known as plastic money?
- a) Credit card
  - b) Debit card
  - c) Paper cash
  - d) All of the above
- 5) E- cheques are \_\_\_\_\_.
- a) Prepaid
  - b) Postpaid
  - c) Both A and B
  - d) None of the above
- 6) Which one is not a encryption techniques \_\_\_\_\_.
- a) RSA
  - b) DES
  - c) AES
  - d) None of the above
- 7) The study of encryption is called \_\_\_\_\_.
- a) Decryption
  - b) Cryptography
  - c) Firewall
  - d) All of the above
- 8) By symmetric key encryption we mean \_\_\_\_\_.
- a) One private key is used for both encryption and decryption
  - b) Private and public key used are symmetric
  - c) Only public keys are used for encryption
  - d) Only symmetric key is used for encryption
- 9) How the transactions occur in e – commerce?
- a) Using e-medias
  - b) Using computer only
  - c) Using mobile phones only
  - d) None of the above
- 10) When a transaction is processed online, how can the merchant verify the customer's identity?
- a. Use secure sockets layers
  - b. Use secure electronic transactions
  - c. Use electronic data interchange
  - d. Use financial electronic data interchange