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**G.T.N. ARTS COLLEGE SELF FINANCE  
(AUTONOMOUS)**

*(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)*

**END SEMESTER EXAMINATION - NOVEMBER - 2021**

**(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)**

**Programme : B.Sc. Computer Science**

**Course Code : 20UCSC11**

**Course Title : Programming for Problem Solving**

**Date : 18.02.2022**

**Time : 10:00 AM - 1:00 PM**

**Max. Marks : 60**

Q. No.	SECTION - A (10 * 1 = 10 Marks) Answer ALL Questions	CO(s)	K - Level
1.	The Operator a+=4 represent_____.	CO1	K1
	1.a+4=0 2.a=4 3.a=a+4 4.a=4+4		
2.	Global variable is also known as _____ variable.	CO1	K1
	1.External 2.Local 3.Internal 4.Static		
3.	Expression in a _____ statement is evaluated after the body of the loop is executed.	CO2	K2
	1.While 2.For 3.Do while 4.Switch		
4.	To read or write a short integer _____ specification is used.	CO2	K1
	1.%d 2.%s 3.%f 4.%c		
5.	Let a [5] = "INDIA". What is the value of a[4]=_____.	CO3	K2
	1.N 2.I 3.A 4.D		
6.	The _____ string manipulation function determines if a character is contained in a string.	CO3	K1
	1.strstr 2.strcmp 3.strepy 4.strncat		
7.	Identify the data types that shares the same block of memory.	CO4	K1
	1.Struct 2.Union 3.Array 4.pointer		
8.	User defined data type is also called as_____.	CO4	K2
	1.Structure 2.Union 3.Function 4.Derived datatype		
9.	To move the file position to a desired location_____ function is used.	CO5	K1
	1.fell 2.fseek		

3. rewind  
4. ferror
10. Name the mode that is in fopen() to lead a file. CO5 K2
- 1.R 2.W  
3.a 4. r+

Q. No.

**SECTION - B (5 \* 4 = 20 Marks)****Answer ALL Questions**CO(s) K -  
Level

11. (a) Explain about Identifiers and Keywords. CO1 K1  
[OR]
- (b) Discuss about the basic structure of C programming Language. CO1 K1
12. (a) Define Null Statement and Explain the use of it. CO2 K2  
[OR]
- (b) Discuss the following CO2 K2  
a) Writing a character.  
b) Formatted Input.
13. (a) Describe short notes on one dimensional array. CO3 K1  
[OR]
- (b) Explain String Handling Functions. CO3 K1
14. (a) (a) Discuss command line argument in detail with an Example. CO4 K1  
(b) Discuss short note on  
(i) fgets()  
(ii) fputs()  
[OR]
- (b) Write C program to illustrate passing of an array to a function CO4 K1
15. (a) List how defining, opening and closing a file are carried out in C with examples. CO5 K1  
[OR]
- (b) Develop a C program to find the factorial of a given number using recursion. CO5 K1

Q. No.

**SECTION - C (3 \* 10 = 30 Marks)****Answer any of 3**CO(s) K -  
Level

16. Explain the declaration of pointers with an examples. CO5 K3
17. Create a C program to illustrate the concept of structure within structure CO4 K3
18. Explain string handling functions with example. CO3 K3
19. Illustrate the switch statement with syntax and example. CO2 K2
20. Explain about precedence of arithmetic operators with example. CO1 K1



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**G.T.N. ARTS COLLEGE (AUTONOMOUS)****DINDIGUL - 624005***(Affiliated to Madurai Kamaraj University)**(Accredited by NAAC with 'B' Grade)***END SEMESTER EXAMINATION – NOVEMBER 2021****Programme : B.Sc., Computer Science****Date : 21.02.2022****Course Code: 17UCSN11****Time : 10 am. to 1 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 brain of any computer system is \_\_\_\_\_.

[a] ALU

[b] Memory

[c] Control Unit

[d] CPU

2. Which of the following computer generation use concept of artificial intelligence?

a) First Generation

[b] Second Generation

[c] Third Generation

[d] Fourth Generation

3. Which of the following is not a point-and-draw device?

[a] Keypad

[b] Trackball

[c] Touch screen

[d] Mouse Dot operator

4. Which of the following is not input device \_\_\_\_\_.

[a] Touch Pad

[b] Printer

[c] Mouse

[d] Keyboard

5. The value of radix in binary number system is \_\_\_\_\_

- [a] 2
- [b] 8
- [c] 10
- [d] 1

6. What could be the maximum value of a single digit in an octal number system?

- [a] 8
- [b] 7
- [c] 6
- [d] 5

7. The binary equivalent of the decimal number 10 is \_\_\_\_\_

- [a] 0010
- [b] 10
- [c] 1010
- [d] 010

The binary number 1110 in hexadecimal format is \_\_\_\_\_

- [a] 6
- [b] E
- [c] 14
- [d] 15

The physical devices of a computer \_\_\_\_\_.

- [a] Software
- [b] Package
- [c] Hardware
- [d] System Software

Which of the following is application software?

- [a] Compiler
- [b] Debugger
- [c] Loader
- [d] Power Point

**SECTION – B**

**[5 X 7 = 35]**

**Answer ALL the Questions.**

a) List out the characteristics of computers.

**[OR]**

12. a) Describe briefly about secondary memory?

**[OR]**

b) Explain the components of a computer.

13. a) Explain hexadecimal number system.

**[OR]**

b) Explain decimal number system.

14. a) Convert the given octal number to binary

- i) (447)<sub>8</sub>
- ii) (260)<sub>8</sub>

**[OR]**

b) Convert the given decimal to binary

- i) (4117)<sub>10</sub>
- ii) (13.15)<sub>10</sub>

15. a) What is Application Software? Explain.

**[OR]**

b) What is System Software? Explain.

**SECTION – C**

**[3 X 10 = 30]**

**Answer Any THREE Questions.**

16. Explain various generations of computers with features.

17. Elaborate the various Input and Output Devices.

18. Explain Binary, Octal and Hexadecimal number system.

19. Convert the numbers:

a) Convert the following number to decimal. (11011011.100101)<sub>2</sub>

b) Convert the following Decimal numbers to Hexadecimal numbers.

- (i) (35)<sub>10</sub>
- (ii) (275)<sub>10</sub>
- (iii) (31)<sub>10</sub>

Reg. No:

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**G.T.N. ARTS COLLEGE (AUTONOMOUS)**

**DINDIGUL- 624005**

*(Affiliated to Madurai Kamaraj University)*

*(Accredited by NAAC with 'B' Grade)*

**END SEMESTER EXAMINATION – NOVEMBER 2021**

**Programme : B.Sc., Computer Science**

**Course Code: 17UCSC11**

**Course Title : Programming in C**

**Date : 25.02.2022**

**Time: 10 am. to 1 pm.**

**Max Marks :75**

**SECTION – A**

**[10 X 1 = 10]**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. A \_\_\_\_\_ is a data name that may be used to store a data value.  
[a] variable [b] record  
[c] field [d] file
2. The keyword ----- can be used to create a data type identifier.  
[a] int [b] decimal  
[c] float [d] string
3. The value of EOF is \_\_\_\_\_.  
[a] -1 [b] 0  
[c] 1 [d] 10
4. A built-in multiply decision statement is known as \_\_\_\_\_ statement.  
[a] if [b] if-else  
[c] switch [d] goto



5. In Dynamic Array, to use memory functions malloc, calloc and realloc \_\_\_\_\_ header file will be included.

- [a] <memory.h>
- [b] <stdlib.h>
- [c] <memorymanage.h>
- [d] <stdio.h>

6. A string function that joins two strings together is \_\_\_\_\_

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

7. The variable declared inside a function is called \_\_\_\_\_

- [a] actual
- [b] formal
- [c] global
- [d] local

8. In \_\_\_\_\_ all the members use same location.

- [a] Array
- [b] Structure
- [c] Union
- [d] Typedef

9. A Pointer is a \_\_\_\_\_ datatype in 'C'.

- [a] Built-in
- [b] Derived
- [c] Structure
- [d] Standard

10. A function that gives the current position in the file \_\_\_\_\_.

- [a] fseek()
- [b] rewind()
- [c] ftell()
- [d] fcurrent()

**SECTION – B** [5 X 7 = 35]

**Answer ALL the Questions.**

a) Describe the different types of constants in C.

[OR]

12. a) Describe the 'switch' statement with an example.

[OR]

b) Describe the 'do' statement with an example.

13. a) Write about one dimensional array with example.

[OR]

b) What are the string handling functions in C programming? Explain.

14. a) What is structure? Explain with example, how structure members can be accessed?

[OR]

b) Write short notes on unions.

15. a) Discuss the rules of pointer operations.

[OR]

b) Write a note on command line arguments.

**SECTION – C**

[ 3 X 10 = 30 ]

**Answer Any THREE Questions.**

16. Explain about various operators available in C with examples

17. Write a brief note on decision making with if statements.

18. Describe Two Dimensional Arrays with example.

19. Explain about the array of structures with an example program.

20. Discuss in detail about Files and its operations.

Reg. No.:

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**G.T.N. ARTS COLLEGE SELF FINANCE  
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*(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)*

**END SEMESTER EXAMINATION - NOVEMBER - 2021**

**(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)**

**Programme : B.Sc. Computer Science**

**Course Code : 20UCSC31**

**Course Title : Java Programming**

**Date : 07.02.2022**

**Time : 10:00 AM - 1:00 PM**

**Max. Marks : 60**

Q. No.	SECTION - A (10 * 1 = 10 Marks) Answer ALL Questions	CO(s)	K - Level
1.	Java language was initially called as _____. 1.Sumatra 2.J++ 3.Oak 4.Pine	CO1	K2
2.	Every statement in java should end with a _____. 1.Dot or Period 2.Comma 3.Semicolon 4.Colon	CO1	K1
3.	Identify which of the following is a ternary operator? 1. += 2. ?= 3. %= 4. =	CO2	K1
4.	Which is the Logical Operator in Java that works with a single operand? 1.Logical AND 2.Logical OR 3.Logical XOR 4.Logical NOT	CO2	K1
5.	Packages that are inside another package are the _____. 1.packages 2.nested packages 3.util subpackages 4.subpackages	CO3	K2
6.	Which of these keywords is used to define interfaces in java? 1.interface 2.Interface 3.intf 4.Intf	CO3	K1
7.	The _____ method is called to clear the screen and calls the paint() method. 1.update() 2.paint() 3.repaint() 4.reupdate()	CO4	K2
8.	Which of these keywords is not a part of exception handling? 1.finally 2.thrown 3.catch 4.try	CO4	K1
9.	Select the exception thrown by close() and read() methods. 1.IOException 2.FileException	CO5	K2



4.FileInputOutputException

3.FileNotFoundException

10. GUI Stands for \_\_\_\_\_

1.Graphical User Interface

3.Graphical User Interconnect

2.Graphical User Interchange

4.Graphical User Integer

CO5

Q. No.

**SECTION - B (5 \* 4 = 20 Marks)**

**Answer ALL Questions**

CO(s)

11. (a) Describe how java differs from C and C++.

**[OR]**

(b) Describe the concept of command line arguments with an example program.

12. (a) Give any Five Mathematical Functions with example.

**[OR]**

(b) Discuss the concept of jumps in loops and various jump statements with example.

13. (a) Write a java program to process student mark list using multiple inheritance.

**[OR]**

(b) Explain the concept of synchronization and its uses.

14. (a) Define Exceptions and discuss some common java exceptions.

**[OR]**

(b) What is finally block? Interpret when and how it is used?

15. (a) Illustrate the three ways of drawing polygons.

**[OR]**

(b) Explain the file operation in detail.

Q. No.

**SECTION - C (3 \* 10 = 30 Marks)**

**Answer any of 3**

16. List out the features of java in detail.

17. Define constructors and describe the concept of constructors in detail.

18. Identify the various forms of implementing interface and give example of java code for each class.

19. Classify the various section of web page.

20. Explain Byte Stream Class in detail.

\*\*\*\*\*

CO1

CO1

CO2

CO2

CO3

CO3

CO4

CO4

CO5

CO5

CO(s)

CO1

CO2

CO3

CO4

CO5



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Reg. No.:



**E.T.N. ARTS COLLEGE (AUTONOMOUS)**  
**DINDIGUL - 624005**

*(Affiliated to Madurai Kamaraj University)  
 (Accredited by NAAC with 'B' Grade)*

**END SEMESTER EXAMINATION - NOVEMBER 2021**

Programme: B.Sc. Computer Science

Date : 07.02.2022

Course Code: 17UCSC52

Time : 10 am. to 1 pm.

Course Title : System Analysis and Design

Max. Marks : 75

**SECTION - A**

[10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. A collection of components that work together to realize some objectives forms a \_\_\_\_\_  
 [a] Organization [b] System  
 [c] Flowchart [d] Integration

2. \_\_\_\_\_ phase defines the elements of a system, the components, the security level, modules, architecture and the different interfaces and type of data that goes through the system.  
 [a] Planning [b] Analysis  
 [c] Design [d] Implementation

12. a) List out steps of feasibility study analysis.

[OR]

b) Discuss about cost and benefit categories.

13. a) Summarize Data Dictionary

[OR]

b) Discuss about Decision table.

14. a) List out types of Cohesion

[OR]

b) What are the guidelines for designing good screen dialog?

15. a) Write about System testing.

[OR]

b) Illustrate System documentation in implementation.

**SECTION - C**

[ 3 X 10 = 30 ]

Answer Any THREE Questions.

16. Describe about types of system in system analysis and design.
17. Discuss in detail about Gantt chart system modeling analysis.
18. Briefly explain about Decision Tree.
19. Explain in detail about input media and device.
20. Describe about the Post Implementation Review.

3. The main objective of feasibility study is \_\_\_\_\_

[a] to assess whether it is possible to meet the requirements specifications

[b] to assess if it is possible to meet the requirements specified subject to constraints of budget, human resource and hardware

[c] to assist the management in implementing the desired system

[d] to remove bottlenecks in implementing the desired system

4. \_\_\_\_\_ is the design of Gantt Chart .

[a] Work flow

[b] Work schedule

[c] Work rate

[d] Work output

5. A decision table is \_\_\_\_\_

[a] a truth table

[b] a table which facilitates taking decisions

[c] a table listing conditions and actions to be taken based on the testing of conditions

[d] a table in a Decision Support System

6. Structured English is used to describe \_\_\_\_\_

[a] how programs are to be written

[b] processes in a DFD in a reasonably precise manner

[c] how DFDs are used in data processing

[d] data flows in DFD

7. In a \_\_\_\_\_ coupling, one module can modify the data of another module or control flow is passed from one module to the other module.

[a] common

[b] stamp

[c] content

[d] data

8. \_\_\_\_\_ provide a graphical method of specifying the sequence of screens that are designing.

[a] Input design

[b] Output design

[c] User interface

[d] Dialogue screen

9. \_\_\_\_\_ testing is a method of software testing where a system is tested for acceptability.

[a] Unit

[b] System

[c] Acceptance

[d] Stress

10. \_\_\_\_\_ is a project management tool used to schedule, organize and coordinate tasks within a project.

[a] PERT

[b] Report

[c] Implementation

[d] Documentation

**SECTION – B**

**[5 X 7 =**

**Answer ALL the Questions.**

11. a) Explain about objectives of a System.

**[OR]**

b) Write short notes on Programmer.  
Rev Nov | | | | | | | | | | | |



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

16. Explain the steps involved in Apriori algorithm with an illustration.
17. Write a brief note on Datawarehouse design.
18. Explain the Naïve Bayes classification method with illustration.
19. List out the parameters of the density based methods and explain the outline of the algorithm.
20. Explain the architecture of search engine with a flow diagram



**G.T.N. ARTS COLLEGE (AUTONOMOUS)**  
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**END SEMESTER EXAMINATION – NOVEMBER 2021**

**Programme : B.Sc. Computer Science**  
**Course Code: 17UCSE52**  
**Course Title : Data mining**

**Date : 08.02.2022**  
**Time : 10 am. to 1 pm.**  
**Max. Marks :75**

**SECTION – A** [10 X 1 = 10]

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. Which one of the following is not an application of Data mining?
  - [a] Outlier identification
  - [b] Encryption
  - [c] Detecting Fraud
  - [d] Marketing
2. Support(XY) is \_\_\_\_\_.
  - [a]  $p(x \cup y)$
  - [b]  $p(x \cap y)$
  - [c]  $p(xy)$
  - [d]  $p(x | y)$
- 3 The lowest level in the architecture of datawarehouse consist of \_\_\_\_\_.
  - [a] Datamarts
  - [b] Global database
  - [c] OLTP
  - [d] Central database
4. Which of the following is false?
  - [a] OLTP systems store historical data
  - [b] OLTP systems store valuable information
  - [c] OLTP systems are indexed and designed
  - [d] OLTP systems are similar to RDBMS.



5. If the classes are created empirically, it is called \_\_\_\_\_.

- [a] Priori classification
- [b] Supervised classification
- [c] Posteriori classification
- [d] Unsupervised classification

6. The output attribute is known as \_\_\_\_\_.

- [a] Dependent attribute
- [b] split attribute
- [c] Independent attribute
- [d] numerical attribute

7. Which of the following is a hierarchical clustering method?

- [a] Agglomerative
- [b] K means
- [c] EM method
- [d] Density based

8. Which one of the following is not used for computing distance between clusters?

- [a] Single link
- [b] Wards minimum variance
- [c] Centroid link
- [d] Minmax method

9. Copying an entire web site is called

- [a] Mirroring
- [b] Resemblance
- [c] Replication
- [d] containment

10. If a first document is completely contained in the second, then the containment number is

- [a] Exactly one
- [b] Between 0 to 1
- [c] Exactly zero
- [d] Any value close to 1

## SECTION – B

[5 X 7 = 35]

### Answer ALL the Questions.

11. a) Explain how data mining is used in outlier and Fraud detection.

[OR]

b) List out the issues in the frequent itemsets generation of the Aprioriate algorithm.

12. a) Explain the design of ODS and its implementation.

[OR]

b) Write a note on MOLAP.

13. a) List out the different metrics of evaluation criteria of classification methods.

[OR]

b) How the decision tree algorithms are used in classification?

14. a) Write briefly about any one method of partition based method of clustering.

[OR]

b) Explain the basic concept behind the agglomerative method with an illustrate on.

15. a) Explain the page rank algorithm with an illustration.

[OR]

b) What is web content mining? Explain the algorithm DIPRE.

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Reg. No:



**E.T.N. ARTS COLLEGE (AUTONOMOUS)**

**DINDIGUL - 624005**

*(Affiliated to Madurai Kamaraj University)  
(Accredited by NAAC with 'B' Grade)*

**END SEMESTER EXAMINATION – NOVEMBER 2021**

Programme : B.Sc. Computer Science

Date: 08.02.2022

Course Code: 17UCSE51

Time: 10 am. to 1 pm.

Course Title : Advanced Visual Programming

Max. Marks : 75

**SECTION – A**

**[10 X 1 = 10]**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

**SECTION – C**

**[ 3 X 10 = 30 ]**

**Answer Any THREE Questions.**

16. Explain conditional statements with examples..

17. Explain the following

- i) Showing and hiding controls form.
- ii) The msgbox function.
- iii) The inputbox function

18. Explain checkedlistbox class.

19. Briefly write main menu class.

20. Explain the types of inheritance with example

1. Which of the following arithmetic operations has the highest level of precedence?

- [a] + -
- [b] \* /
- [c] ^ exponentiation
- [d] ( )

2. What value will be assigned to the numeric variable x when the following statement is executed?  $x = 2 + 3 * 4$

- [a] 20
- [b] 14
- [c] 92
- [d] 234

3. The Get and Set methods in the \_\_\_\_\_ property to get and set the text in the text box.

- [a] GetData
- [b] Textdata
- [c] Textproperty
- [d] GetSet



Reg. No.:

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## G.T.N. ARTS COLLEGE (AUTONOMOUS)

(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)

**END SEMESTER EXAMINATION - APRIL - 2022**

(CHOICE BASED CREDIT SYSTEM - OUTCOME BASED EDUCATION)

Programme : B.Sc. Computer Science

Date : 08.07.2022

Course Code : 20UCSC11

Time : 2:00 PM - 5:00 PM

Course Title : Programming for Problem Solving

Max. Marks : 60

Q. No.	SECTION - A Answer ALL Questions	(10 * 1 = 10 Marks)	CO(s)	K - Level
1.	C has _____ types of keywords.		CO1	K1
	1.31	2.36		
	3.34	4.32		
2.	Tokens are also named as _____.		CO1	K2
	1.Smallest individual unit	2.Largest individual unit		
	3.Medium individual unit	4.Maximum individual unit		
3.	Switch statement accepts _____.		CO2	K1
	1.Float	2.Double		
	3.Long	4.Break		
4.	Continue statement cannot be used with _____.		CO2	K2
	1.For	2.While		
	3.Do while	4.Switch		
5.	Int a[5]={1,2,3} _____ is the value of a[4];		CO3	K1
	1.1	2.3		
	3.0	4.2		
6.	String constant are represented within _____.		CO3	K2
	1.Double quotes	2.Single quotes		
	3.Curly braces	4.Square brackets		
7.	Size of Structure is _____.		CO4	K2
	1.C structure is always 128 bytes	2.Size of C structure is total bytes of all elements of structure		
	3.Size of C structure is larger element	4.C structure is always 208 bytes		
8.	The parameters in a function call are defined as _____.		CO4	K1
	1.Actual	2.Formal		
	3.Dummy	4.Real		





# G.T.N. ARTS COLLEGE(AUTONOMOUS)

(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)

END SEMESTER EXAMINATION - APRIL - 2022

(CHOICE BASED CREDIT SYSTEM - OUTCOME BASED EDUCATION)

Programme : ALL UG PROGRAMMES

Course Code : 20UVEV11

Course Title : Value Education

Date : 25.07.2022

Time : 2:00 PM - 4:00 PM

Max. Marks : 30

Q. No.	SECTION - A Answer ALL Questions	(5 * 3 = 15 Marks)	CO(s)	K - Level
1. (a)	State the Basic Characteristics of Values. மதிப்புகளின் அடிப்படைப் பண்புகளைக் கூறுக. [OR]		CO1	K1
(b)	Describe Forgiveness. மன்னிப்பு - விளக்குக.		CO1	K1
2. (a)	List out the kinds of Karma in Hindu Scriptures. இந்து வேதங்களில் உள்ள கர்ம வகைகளைப் பட்டியலிடுக. [OR]		CO2	K1
(b)	"religion promotes social harmony and gives positive goals in life"-state the reason. "மதங்கள் சமூக நல்லிணக்கத்தையும் நேர்மறை இலக்குகளையும் அளிக்கின்றன"-காரணம் கூறுக.		CO2	K1
3. (a)	Define Nehru's part in religious secularism. மதச்சார்பின்மையில் நேருவின் பங்கு குறித்து விவரிக்க. [OR]		CO3	K2
(b)	Explain the actions to be followed during Secularism. மதச்சார்பின்மையின் போது பின்பற்ற வேண்டிய நடவடிக்கைகளை விளக்குக.		CO3	K2
4. (a)	Define professional values. தொழில்முறை மதிப்புகளை விளக்குக. [OR]		CO4	K2
(b)	Describe how Television stands primordial in supporting Democracy. குடியரசை ஆதரிக்கின்ற ஊடகங்களில் முதன்மையானது தொலைக்காட்சி என்பதை விவரிக்க.		CO4	K2
5. (a)	Briefly write the role of educational institutions in value formation. மதிப்புக்கல்வி உருவாக்கத்தில் கல்வி நிறுவனங்களின் பங்கை விவரிக்க. [OR]		CO5	K2
(b)	Explain the role of family in value formation. மதிப்பு உருவாக்கத்தில் குடும்பத்தின் பங்கினை விளக்குக.		CO5	K2
Q. No.	SECTION - B Answer ANY THREE Questions	(3 * 5 = 15 Marks)	CO(s)	K - Level
6.	What do you mean by Honesty and describe any one its theories.		CO1	K2



- நேர்மை என்றால் என்ன என்பதைக் கூறி அதன் கோட்பாடுகள் ஏதேனும் ஒன்றினை விவரிக்க.
7. Explain the value of 'Brotherhood' in Islam.  
இஸ்லாம் சமயம் வலியுறுத்தும் சகோதரத்துவத்தின் மதிப்பினை விளக்குக CO2 K2
8. Sketch the Five levels of Political Awareness.  
அரசியல் விழிப்புணர்வின் ஐந்து நிலைகளை வரையறுக்க. CO3 K3
9. Interpret the accountability and Team Spirit.  
பொறுப்புணர்வு மற்றும் குழுஉணர்வு - வரையறுக்க. CO4 K2
10. Describe the role of the family in social institutions.  
சமூக நிறுவனங்களில் குடும்பத்தின் பங்களிப்பைப் பற்றி விவரி. CO5 K3
- .....



# G.T.N. ARTS COLLEGE (AUTONOMOUS)

(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)

END SEMESTER EXAMINATION - APRIL - 2022

(CHOICE BASED CREDIT SYSTEM - OUTCOME BASED EDUCATION)

Programme : B.Sc. Computer Science

Course Code : 20UCSC21

Course Title : C++ and Data Structures

Date : 08.07.2022

Time : 10:00 AM - 1:00 PM

Max. Marks : 60

Q. No.	SECTION - A Answer ALL Questions	(10 * 1 = 10 Marks)	CO(s)	K - Level
1.	Wrapping data and its related functionality into a single entity is known as _____ 1. Abstraction 2. Encapsulation 3. Polymorphism 4. Modularity		CO1	K2
2.	Which of the following is called address operator? 1. * 2. & 3. - 4. %		CO1	K1
3.	Which among the following best defines single level inheritance? 1. A class inheriting a derived class 2. A class inheriting a base class 3. A class inheriting a nested class 4. A class which gets inherited by 2 classes		CO2	K2
4.	Which is the correct interpretation of the member function call from an object, object.function(parameter); 1. object.function(&this, parameter) 2. object(&function, parameter) 3. function(&object, &parameter) 4. function(&object, parameter)		CO2	K1
5.	What differentiates a circular linked list from a normal linked list? 1. You cannot have the 'next' pointer point to null in a circular linked list 2. It is faster to traverse the circular linked list 3. You may or may not have the 'next' pointer point to null in a circular linked list 4. Head node is known in circular linked list		CO3	K2
6.	In linked list each node contains a minimum of two fields. One field is data field to store the data second field is? 1. Pointer to character 2. Pointer to integer 3. Pointer to node 4. Node		CO3	K1

7. Minimum number of queues to implement stack is \_\_\_\_\_.
- 2.4  
1.3  
3.1  
4.2
8. Which of the following is not the type of queue?
1. Ordinary queue  
2. Single ended queue  
3. Circular queue  
4. Priority queue
9. Five node splitting operations occurred when an entry is inserted into a B-tree. Then \_\_\_\_\_ nodes are written.
- 1.14  
3.11  
2.7  
4.5
10. The number of edges from the root to the node is called \_\_\_\_\_ of the tree.
1. Height  
2. Depth  
3. Length  
4. Width

Q. No.	<b>SECTION - B</b>	<b>(5 * 4 = 20 Marks)</b>	CO(s)	K.
	<b>Answer ALL Questions</b>			Level
11. (a)	Enumerate the structure of the C++ program		CO1	K1
	<b>[OR]</b>			
(b)	Tabulate the Difference between Class and structure		CO1	K1
12. (a)	Generalize the Need for initialization of object using Constructor.		CO2	K2
	<b>[OR]</b>			
(b)	Explain function template		CO2	K2
13. (a)	Explain the operations of Deleting a specified node and Insertion after specified node on single linked list with algorithm		CO3	K3
	<b>[OR]</b>			
(b)	Discuss the concept of circular linked list		CO3	K3
14. (a)	Explain the operations of stack with an example		CO4	K3
	<b>[OR]</b>			
(b)	Explain the process of conversion from infix expression to postfix using stack		CO4	K3
15. (a)	What are the advantages and disadvantages of sequential representation of a binary tree?		CO5	K3
	<b>[OR]</b>			
(b)	Explain tree traversal techniques with an example		CO5	K3

Q. No.	<b>SECTION - C</b>	<b>(3 * 10 = 30 Marks)</b>	CO(s)	K.
	<b>Answer ANY THREE Questions</b>			Level
16.	Enumerate the inline functions in detail			
17.	Explain the types of inheritance		CO1	K1
18.	Describe in detail about Polynomial manipulation in linked list.		CO2	K2
19.	Describe the function to examine whether the stack is full() or empty().		CO3	K2
20.	Explain the applications of binary tree		CO4	K3
			CO5	K4



Reg. No.: 

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**G.T.N. ARTS COLLEGE (AUTONOMOUS)**  
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**END SEMESTER EXAMINATION - APRIL - 2022**

(CHOICE BASED CREDIT SYSTEM - OUTCOME BASED EDUCATION)

**Programme : B.Sc. Computer Science**  
**Course Code : 20UCSC31**  
**Course Title : Java Programming**

**Date : 07.07.2022**  
**Time : 2:00 PM - 5:00 PM**  
**Max. Marks : 60**

Q. No.	SECTION - A Answer ALL Questions	(10 * 1 = 10 Marks)	CO(s)	K - Level
1.	Identify the constraint to be considered at the time of variable declaration. 1.It should not be keyword 3.White space not allowed	2.It must not begin with digit 4.All of above	CO1	K2
2.	Java interpreter translates _____ into machine code. 1.Bitcode 3.Machine Code	2.Bytecode 4.User code	CO1	K1
3.	Which of the following is a loop construct that will always be executed once? 1.switch 3.while	2.for 4.do..while	CO2	K2
4.	Tell what is the data type of output of any comparison operation in Java? 1.int 3.boolean	2.char 4.byte	CO2	K1
5.	What is the name of the method used to start a thread execution? 1.run(); 3.start();	2.init(); 4.resume();	CO3	K2
6.	Which keyword is used to declare an interface in java? 1.class 3.implements	2.interface 4.abstract	CO3	K1
7.	The class at the top of the AWT hierarchy is _____. 1.Component 3.Container	2.Window 4.Frame	CO4	K2
8.	Which of these keywords must be used to monitor for exceptions? 1.finally 3.Catch	2.throw 4.try	CO4	K1



Reg. No.:

**G.T.N. ARTS COLLEGE (AUTONOMOUS)***(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)***END SEMESTER EXAMINATION - APRIL - 2022****(CHOICE BASED CREDIT SYSTEM - OUTCOME BASED EDUCATION)****Programme : B.Sc. Computer Science****Date : 11.07.2022****Course Code : 20UCSC32****Time : 2:00 PM - 5:00 PM****Course Title : Markup and Scripting Languages****Max. Marks : 60**

Q. No.	SECTION - A Answer ALL Questions	(10 * 1 = 10 Marks)	CO(s)	K - Level
1.	_____ is a connectionless transport layer protocol. 1.TCP 2.UDP 3.TFTP 4.FTP		CO1	K2
2.	The program that displays the web pages in the client system is called _____. 1.Internet 2.Intranet 3.Web browser 4.Protocol		CO1	K1
3.	The _____ method searches a string to see if it contains a specified character, and if it does return the position of that character. 1.charAt () 2.indexOf () 3.substr () 4.toString ()		CO2	K2
4.	_____ property is used to find the number of elements in an Array object. 1.Width 2.Length 3.Index 4.Action		CO2	K1
5.	The expiry date of a cookie is set by using _____ attribute. 1.End 2.Expire 3.Expirydate 4.expires		CO3	K2
6.	Which of the following is an unary operator? 1.Addition 2.Subtraction 3.Multiplication 4.Negation		CO3	K1
7.	_____ method returns the comment describing the purpose of the cookie. 1.getName() 2.getComment() 3.getValue() 4.getPath()		CO4	K2
8.	_____ object is instantiated implicitly from JSP Writer class and can be used for displaying anything within delimiters. 1.Request 2.Response 3.Out 4.Page		CO4	K1









**G.T.N. ARTS COLLEGE (AUTONOMOUS)**

**DINDIGUL – 624 005**

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**END SEMESTER EXAMINATIONS – APRIL 2022**

**Programme: B.Sc., Computer Science**

**Course Code: 17UCSC51**

**Course Title: Relational Database**

**Management Systems**

**Date: 06.07.2022**

**Time: 2 pm – 5 pm**

**Max. Marks :75**

**SECTION – A**

**[10 X 1 = 10]**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. Information consist of \_\_\_\_\_.

[a] data

[b] images

[c] text

[d] all the above

2. \_\_\_\_\_ is backbone of any organization.

[a] Information

[b] Program

[c] Business

[d] Job

3. The E-R model developed by \_\_\_\_\_.

[a] Google

[b] Oracle

[c] Chen

[d] Charles

4. Who developed the BCNF?

[a] Byod and cromwell

[b] Date and Codd

[c] Date and White

[d] Boyce and Codd

[a] DROP VIEW

[b] DEL VIEW

[c] REMOVE VIEW

[d] DELETE VIEW

1. Which error occurs while the program is running and cannot be detected by the PL/SQL compiler?

[a] Syntax error

[b] Runtime error

[c] Both A & B

[d] None of the above

2. What is a subquery?

[a] A subquery is a select-from-where expression that is nested within another query

[b] A subquery is any query that is nested within another query

[c] A subquery is a relation that is externally specified which can be used to handle data in queries

[d] A subquery is a condition that excludes all the invalid tuples from the database

3. Which of the following keyword is used to define a candidate key in

CREATE TABLE command?

[a] CANDIDATE

[b] PRIMARY KEY

[c] CANDIDATE KEY

[d] PRIVATE KEY

SECTION - B

15 X 7 =

Answer ALL the Questions.

11. a) Write a notes on operations in Files.

[OR]

b) Demonstrate the need for database.

12. a) Describe components of an E-R mode.l

[OR]

b) Brief notes on Denormalization.

13. a) Demonstrate the fundamental set operations with example.

[OR]

b) Write a short notes on logical operators in SQL.

14. a) Write short notes on structure of PL/SQL.

[OR]

b) Discuss about Triggers and its types.

15. a) Discuss about domain constraints with example.

[OR]

b) Write about types of database users.





# G.T.N. ARTS COLLEGE (AUTONOMOUS)

DINDIGUL – 624 005

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## END SEMESTER EXAMINATIONS – APRIL 2022

Programme : B.Sc. Computer Science

Date: 13.07.2022

Course Code: 17UCSE51

Time: 2 pm – 5 pm

Course Title : Advanced Visual Programming

Max. Marks :75

### SECTION – A

[10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. Visual Basic responds to events using which of the following?  
[a] a code procedure [b] an event procedure  
[c] a form procedure [d] a property
2. What property of controls tells the order they receive the focus when the tab key is pressed during run time?  
[a] Focus order [b] Focus number  
[c] Tab index [d] Control order
3. \_\_\_\_\_ event occurs when a key is pressed while the form has the focus.  
[a] Keydown [b] Keypress  
[c] Keyup [d] KeyEnter
4. We can limit the amount of text entered into TextBox control by setting \_\_\_\_\_ property to a specific number of characters  
[a] MaxLength [b] TotalLength  
[c] TextAmount [d] TextLimit

[c] both (a) and (b)

[d] with the form's Default Button property

6. A Radio button can be directly accessed from the keyboard using a

- [a] Access key
- [b] Shortcut key
- [c] Assigned key
- [d] Designated key

7. The \_\_\_\_\_ method converts an OLE automation date value to a

Date Time Instance.

- [a] Today
- [b] Time Of Day
- [c] Now
- [d] From OA Date

8. The form module has file extension \_\_\_\_\_.

- [a] .frb
- [b] .fra
- [c] .frm
- [d] .fru

9. \_\_\_\_\_ do not return a value.

- [a] Sub procedure
- [b] Function procedure
- [c] Property procedures
- [d] None of these

10. Which statement about objects is true?

- [a] One object is used to create one class
- [b] One class is used to create one object.
- [c] One object can create many classes
- [d] One class can create many objects.

--2--

[OR]

b) How to creating a VB function ? Write a example.

12. a) Explain creating dialog boxes.

[OR]

b) Describe rich text boxes.

13. a) Discuss about using the panel class.

[OR]

b) Write a note on the picture box class.

14. a) Define the date time picker class with example.

[OR]

b) Derive the popup event.

15. a) Explain the tree node class

[OR]

b) How to creating class data members and function?

--3--

**Answer Any THREE Questions.**

16. Explicate CRT monitor in detail with necessary diagrams.
17. Illustrate the basic concepts of Midpoint ellipse drawing algorithm. Write down the algorithm steps.
18. Explain the following
  - A. Character Attributes and
  - C. Area Fill Attributes.
19. Elaborate the Scaling and Shearing transformation techniques with neat diagram and transformation matrix.
20. Discuss the Cohen-Sutherland Line clipping algorithm with neat procedures and diagrams.



**G.T.N. ARTS COLLEGE (AUTONOMOUS)**

DINDIGUL - 624 005

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**END SEMESTER EXAMINATIONS - APRIL 2022**

Programme: B.Sc. Computer Science

Date: 09.07.2022

Course Code: 17UCSC62

Time: 10 am - 1 pm

Course Title : Computer Graphics

Max. Marks :75

**SECTION - A**

[10 X 1 = 10]

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. The graphics can be \_\_\_\_\_.
  - [a] drawing
  - [b] photograph and movies
  - [c] simulation
  - [d] all of these
2. Which is the primary output device in the graphics system?
  - [a] Printer
  - [b] Platter
  - [c] Keyboard
  - [d] Video Monitor
3. Expansion of line DDA algorithm is \_\_\_\_\_.
  - [a] Digital Difference Analyzer
  - [b] Direct Differential Analyzer
  - [c] Digital Differential Analyzer
  - [d] Data Differential Analyzer
4. Which filling algorithm proceeds outward pixel by pixel until the boundary color is encountered?
  - [a] Boundary-fill algorithm
  - [b] Area-filling algorithm
  - [c] Scan-Line Polygon fill algorithm
  - [d] None of These



(c) Dotted Line (d) Solid Line

range that specifies the gray or grayscale levels is \_\_\_\_\_.

[a] the value range from -1 to 1 [b] the value range from 0 to -1

[c] the value range from 0 [d] any one of the above

original coordinates of the point in polar coordinates are \_\_\_\_\_.

[a]  $X' = r \cos(\Phi + \Theta)$  and  $Y' = r \cos(\Phi + \Theta)$

[b]  $X' = r \cos(\Phi + \Theta)$  and  $Y' = r \sin(\Phi + \Theta)$

[c]  $X' = r \cos(\Phi - \Theta)$  and  $Y' = r \cos(\Phi - \Theta)$

[d]  $X' = r \cos(\Phi + \Theta)$  and  $Y' = r \sin(\Phi - \Theta)$

which transformation changes the shape of the object?

[a] Rotate

[b] Scale

[c] Shear

[d] Translate

The area around the clipping window is divided into a number of different

[a] pixels

[b] squares

[c] areas

[d] lines

Sutherland-Hodgeman clipping is an example of \_\_\_\_\_ algorithm.

[a] line clipping

[b] polygon clipping

[c] text clipping

[d] curve clipping

areas of computer graphics.

[OR]

b) State the differences between Raster and Random scan systems.

12. a) Write the differences of DDA and Bresenham's Line drawing algorithms.

[OR]

b) How can you draw a circle using Mid-Point Circle algorithm? Explain the algorithm neatly.

13. a) Discuss Curve attributes with an example.

[OR]

b) Explain the Bundle attributes in brief.

14. a) Elucidate the Two Dimensional Translation with an example.

[OR]

b) Obtain a transformation matrix for rotating an object about a specified pivot point.

15. a) Illustrate the Window to Viewport transformation in brief.

[OR]

b) Compare Concave and Convex Polygons.





**G.T.N. ARTS COLLEGE (AUTONOMOUS)**

**DINDIGUL – 624 005**

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**END SEMESTER EXAMINATIONS – APRIL 2022**

**Programme: B.Sc Computer Science**

**Course Code: 17UCSE61**

**Course Title : Android Programming**

**Date: 13.07.2022**

**Time: 10 am – 1 pm**

**Max. Marks :75**

**SECTION – A**

**[10 X 1 = 10]**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. Android is \_\_\_\_\_.

[a] An operating system

[b] A web browser

[c] A web server

[d] all of the above

2. For which of the following Android is mainly developed?

[a] Servers

[b] Desktops

[c] Laptops

[d] Mobile Devices

3. The layout classes are the subclasses of \_\_\_\_\_.

[a] android.widget

[b] android.view.View

[c] android.view.ViewGroup

[d] all of the above

4. In android, mini activities are also known as \_\_\_\_\_.

[a] Adapter

[b] Fragments

[c] Activity

[d] Emulators

[4] 4.4

log boxes are a common UI metaphor in \_\_\_\_\_

- [a] Desktop
- [b] Web
- [c] Mobile Applications
- [d] All of the above

\_\_\_\_\_ class is used to create widget?

- [a] WidgetProvider
- [b] AppWidgetProvider
- [c] ApplicationWidgetProvider
- [d] Provider

\_\_\_\_\_ widgets can be placed on \_\_\_\_\_.

- [a] Application Splash Screen
- [b] Notification Bar
- [c] Status Bar
- [d] Device Home Screen

\_\_\_\_\_ choose the build-in database of Android.

- [a] SQLite
- [b] MySQL
- [c] Oracle
- [d] Access

\_\_\_\_\_ BS stands for \_\_\_\_\_.

- [a] Location Based Servers
- [b] Location Based Services
- [c] List Based Services
- [d] List Based Servers

**SECTION – B [5 X 7 = 35]**

**Answer ALL the Questions.**

a) Give a brief account on android applications and its types.

**[OR]**

b) Enlist the various activities of android.

13. a) How will you work with animations? Explain. **[OR]**

b) Elucidate about action bar.

14. a) Write a note on app widget manager and remote views. **[OR]**

b) Describe about recording video.

15. a) Give an account on content providers. **[OR]**

b) Explain about location based services with example.

**SECTION – C [3 X 10 = 30]**

**Answer Any THREE Questions.**

16. Discuss about android development tools with example.

17. Elaborate note on intents and broadcast receivers.

18. Illustrate about notification manager.

19. Detail about playing audio and video with the media player.

20. Explain in detail about map based activities.



**G.T.N. ARTS COLLEGE (AUTONOMOUS)**

**DINDIGUL – 624 005**

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**END SEMESTER EXAMINATIONS – APRIL 2022**

**Programme: B.Sc., Computer Science**

**Course Code: 17UCSE52**

**Course Title : Data mining**

**Date: 13.07.2022**

**Time: 2 pm – 5 pm**

**Max. Marks :75**

**SECTION – A**

**[10 X 1 = 10]**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. Which one of the following is not an application of Data mining?

[a] Prediction

[b] Visualization

[c] Detection

[d] Designing

2. Confidence of  $x \rightarrow y$  is \_\_\_\_\_.

[a]  $\frac{p(x \cup y)}{p(x)}$

[b]  $\frac{p(x \cap y)}{p(x)}$

[c]  $\frac{p(x \cap y)}{p(x)}$

[d]  $\frac{p(x \cup y)}{p(y)}$

3. The top level in the architecture of data warehouse consist of \_\_\_\_\_.

[a] Datamarts

[b] Legacy systems

[c] OLTP

[d] Central database

4. Which one of the following is false?

[a] OLTP systems are mostly RDBMS

[b] OLTP system can handle management queries effectively

[c] OLTP systems are indexed and designed

[d] OLTP systems store valuable information.



The next splitting attribute in decision trees is attributes with \_\_\_\_\_

- [a] Highest
- [b] zero
- [c] Lowest
- [d] Medium

Which of the following is not a partition based cluster analysis method?

- [a] K means
- [b] EM method
- [c] Density based
- [d] model based

Euclidean distance measure is used in \_\_\_\_\_ method

- [a] K means
- [b] Density based
- [c] K median
- [d] Hierarchical

Copying a single web page is called \_\_\_\_\_.

- [a] Mirroring
- [b] Resemblance
- [c] Replication
- [d] containment

10. HITS stands for \_\_\_\_\_.

- [a] Hyperlink induced topic search
- [b] Hyperlink iterative topic search
- [c] Hyperlink induced trend search
- [d] Hyperlink induced time series search

b) How the frequent item sets are generated using the a priori algorithm?

12. a) List out the properties of operational data store and explain its design.

[OR]

b) Explain the differences between OLAP and OLTP systems.

13. a) Write a note on decision tree algorithm.

[OR]

b) What are the categories in classification software used for classification?

14. a) Write the steps involved in the K means method.

[OR]

b) Give an outline of the basic algorithm of density based method.

15. a) What is web content mining? Explain the algorithm DIPRE.

[OR]

b) Explain the architecture of search engine with a flow diagram

SECTION - C [ 3 X 10 = 30 ]

Answer Any THREE Questions.

16. Explain briefly the FP growth algorithm with an illustration.

17. List out the Codd's OLAP characteristics and explain.

18. How will you estimate the predictive accuracy of classification method

19. Write briefly about the Hierarchical method of clustering.

20. Explain the page rank algorithm with an example





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**END SEMESTER EXAMINATIONS – APRIL 2022**

**Programme: B.Sc. Computer Science**

**Course Code: 17UCSC61**

**Course Title : Data Communication Networks**

**Date: 06.07.2022**

**Time: 10 am – 1 pm**

**Max. Marks :75**

**SECTION – A**

**[10 X 1 = 10]**

**Answer ALL the Questions.**

**Choose the Correct Answer.**

1. In \_\_\_\_\_ transmission, the channel capacity is shared by both communicating devices at all times.

[a] Simplex

[b] Half-duplex

[c] Full-duplex

[d] Half-simplex

2. Which topology requires a central controller or hub?

[a] Mesh

[b] Star

[c] Bus

[d] Ring

3. \_\_\_\_\_ consists of a central conductor and a shield.

[a] Coaxial

[b] Fiber-optic

[c] Twisted pair

[d] None of the above

4. In cyclic redundancy checking, what is the CRC?

[a] The divisor

[b] The Quotient

[c] The dividend

[d] The remainder

6. Both Go-Back-N and Selective Repeat protocol use a \_\_\_\_\_

[a] Sliding Frame

[b] Sliding Window

[c] Sliding Packet

[d] None of the above

7. To avoid collisions on wireless networks, \_\_\_\_\_ was invented.

[a] CSMA / CA

[b] CSMA / CD

[c] Both A and B

[d] Either A or B

8. \_\_\_\_\_ is the most widely used local area network protocol.

[a] Token Ring

[b] Token Bus

[c] Ethernet

[d] None of the above

9. Circuit switching takes place at the \_\_\_\_\_ layer.

[a] Transport

[b] Network

[c] Data link

[d] Physical

10. In \_\_\_\_\_ switching, each packet is treated independently of all others.

[a] Datagram

[b] Circuit

[c] Frame

[d] None of the above

**SECTION – B [5 X 7 = 35]**

**Answer ALL the Questions.**

11. a) Give a brief account on network topologies and its types.

**[OR]**

b) Elucidate the categories of networks with example.

13. a) Give a brief account on line discipline.

**[OR]**

b) Describe about HDLC with example.

14. a) Add a note on Ethernet with example.

**[OR]**

b) Outline on token ring with neat diagram.

15. a) Write a brief note on packet switching.

**[OR]**

b) Explain about ISDN layers with example.

**SECTION – C**

**Answer Any THREE Questions.**

16. Discuss about OSI reference model with neat diagram.

17. Elaborate note on guided media with example.

18. Explain about character oriented protocols.

19. What is FDDI? Illustrate about FDDI with example.

20. Explain in detail about circuit switching with neat diagram