(6 pages)	Reg.	No. :	3.		b is made up guage called	of docum	ents created wit	h a
Code No. : 41	405 E	Sub. Code : SACS 31		(a)	НТТР	(b)	HTML	
B.Sc. (CBCS) DE	GREE EXAM	INATION, APRIL 2019.	A MALLI	(c)	HTRL	(d)	HTTL.	
	Third Sem	ester	4.	Ah	ot text is creat	ed by		
Con	nputer Scienc	e — Allied		(a)	title	(b)	head	
V	VEB TECHN	OLOGY		(c)	anchor	(d)	prologue.	
(For those v	zho joined in a	July 2017 onwards)	õ .	Wh	ich operator to	be used co	nnect two strings?	
Fime : Three hour	8	Maximum : 75 marks		(a)	+	(b)	&	
SECTIO	$ONA - (10 \times$	1 = 10 marks)		(c)		(d)	and	
	nswer ALL qu orrect answei		6.		tement used to he while or for		the current itera	tion
l. An internat		ext system that links		(a) (c)	break exit	(b) (d)	continue loop.	
(a) WWW (c) HTTP communicati	() provi	b) HTML 1) SMTP. des datagram-oriented	7.	DO) (a) (b)	M stands for Document O Document O		•	
(a) UDP(c) HTTP		5) ТСР]) FTP.		(c) (d)	Document O Document O		d.	
Webs with an A						Page 2 (Code No. : 4140!	5 E

- 8. How do you write "Hello World" in an alert box?
 - (a) msgBox ('Hello World")
 - (b) alertBox ('Hello World')
 - (c) alertBox = "Hello World"
 - (d) alert ("Hello World").
- 9. What will be the output of below mentioned code snippet?

text

- (a) make that specific paragraph red
- (b) error
- (c) nothing happens
- (d) none of the mentioned.
- 10. The ______ allow to sort the data in Tabular Data Control.
 - (a) sort property
 - (b) sort () method
 - (c) ascrot () method
 - (d) none.

SECTION B — $(5 \times 5 = 25 \text{ marks})$

- Answer ALL questions choosing either (a) or (b). Each answer should not exceed 250 words.
- 11. (a) Describe protocols.

Or

- (b) Describe SMTP.
- 12. (a) Explain DTD elements.

Or

- (b) With suitable example explain frames.
- 13. (a) Explain if..... else statement in JavaScript with an example.

Or

- (b) Explain functions in JavaScript.
- 14. (a) Explain Document object in JavaScript.

Or

(b) Write a JavaScript that reads five integers and determines the largest and the smallest integers in the group.

> Page 4 Code No. : 41405 E [P.T.O.]

15. (a) Describe the advantages and disadvantages of CSS.

(b) Explain transitions.

SECTION C — $(5 \times 8 = 40 \text{ marks})$ Answer ALL questions choosing either (a) or (b). Each answer should not exceed 600 words.

16. (a) Describe in detail the web concepts.

Or

- (b) Describe Email protocols.
- 17. (a) Explain formatting tags in HTML in detail with example.

Or

(b) Explain hyperlinks in detail with examples.

18. (a) Discuss the various operators in Javascript.

Or

- (b) Explain in detail the looping statements in JavaScript.
- 19. (a) Discuss Window object in JavaScript.

Or

- (b) Explain Form Object, Text boxes, Text areas in JavaScript.
 - Page 5 Code No. : 41405 E

(a) Explain the four ways of adding styles to a web page in detail.

Or

20.

(b) Describe the position property of CSS with its syntax and examples.

Or

(7 pa	ges) Reg. No. :	2.	V t
Cod	le No. : 41406 E Sub. Code : SACS 41		(;
B.Sc	. (CBCS) DEGREE EXAMINATION, APRIL 2019.		0
	Fourth Semester		(0
	Computer Science - Allied	Part an	((
	E · COMMERCE	3.	E
(For those who joined in July 2017 Onwards)			
Time	: Three hours Maximum : 75 marks		(1
	PART A — $(10 \times 1 = 10 \text{ marks})$		()
	Answer ALL questions.		(0
	Choose the correct answer :		((
1.	information, products and services over the internet.	4.	in
	(a) Commerce		(;
	(b) E-Commerce		(1
	(c) E-Business		((
11 11 11	(d) Internet		

- Which of the following protocol is responsible for transferring and displaying web pages.
 - (a) HTTP
 - (b) HTML
 - (c) FTP
 - (d) TCP/IP
- - (a) B2C
 - (b) G2B
 - (c) B2G
 - (d) G2G
 - are used to achieve high value integration without hierarchical control.
 - (a) Auctions
 - (b) Aggregators
 - (c) Content
 - (d) Alliances

Page 2 Code No. : 41406 E

- 5. Who spends a good deal of time online, mainly at their places of business.
 - (a) cyber buyers
 - (b) cyber consumers
 - (c) cyber surfers
 - (d) none of the above
 - a positive feedback loop.
 - (a) E-care

6.

7.

- (b) E-mail
- (c) Affiliate network
- (d) Spiral
- - (a) Back door
 - (b) NASDAG
 - (c) Guesses
 - (d) PEM

Page 3 Code No. : 41406 E

- (a) Intrusion detection
- (b) Firewall

8.

- (c) Password
- (d) Virus
- 9. In bank, ——— key is used for Encryption.
 - (a) Public
 - (b) Private
 - (c) Secret
 - (d) None of the above
- 10. In digital signature algorithm is used to calculate a message digest.
 - (a) RSA
 - (b) DES
 - (c) AES
 - (d) Both (a) and (b)

Page 4 Code No. : 41406 E [P.T.O.] PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain emergence of the internet as an E-Commerce.

Or

- (b) How E-Commerce provides opportunities to various industries?
- 12. (a) What are the advantages of B2B model?

Or

- (b) Write a short on different kinds of aggregator models.
- 13. (a) Write about traditional marketing and its problems.

Or

- (b) Explain spiral branding with example.
- 14. (a) How to secure over E-mail? Explain the various methods to secure E-mail.

Or

(b) What are the significant features of firewall?

Page 5 Code No. : 41406 E

15. (a) Explain micro payment system with suitable example.

Or

(b) State the features of E-banking in India.

PART C — $(5 \times 8 = 40 \text{ marks})$

- Answer ALL questions, choosing either (a) or (b).
- 16. (a) What are the advantages of E-Commerce? Explain.

Or

- (b) Write in detail about origin of world wide web.
- 17. (a) Briefly explain about business-to-consumer model.

Or

- (b) Discuss brokerage model.
- 18. (a) Explain online marketing.

Or

- (b) Discuss marketing strategies with suitable example.
 - Page 6 Code No. : 41406 E

19. (a) Explain security risks associated with a network and a website.

Or

- (b) Discuss security premises on physical infrastructure.
- 20. (a) Explain in detail about E-Banking at ICICI Bank.

Or

(b) Discuss different kinds of methods of secure E-Payment process.

Page 7 Code No. : 41406 E

(6	pages)
10	pageo

Reg. No. :

Code No. : 40382 E Sub. Code : JMCS 53/ JMSE 53/SMCS 53

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Fifth Semester

Computer Science / Software Engineering – Main

DOT NET TECHNOLOGIES

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer:

- 1. The software that requests files, data and services
 - (a) FTP
 - (b) HTTP
 - (c) Web Client
 - (d) Web Server

- 2. Data that cannot be modified once defined in a program.
 - (a) constants (b) variables
 - (c) operators (d) string
- 3. _____ are required when the user of the web application expects a meaningful response to a query issued from an HTML form.
 - (a) code behind (b) round trips
 - (c) View State (d) Objects
- 4. Visual appearance of ———— are controlled by shared properties.
 - (a) HTML Controls (b) Web Controls
 - (c) Validation Controls (d) Datalist Controls
- 5. _____ are structures that allow for insertion of elements at one end and removal of elements from the other.
 - (a) Stacks (b) Arrays
 - (c) Queues (d) Hash tables
- 6. Which function handles pushing and popping phrases onto and off of the stack?
 - (a) AddPhrase() (b) Peek()
 - (c) Pop() (d) Push()
 - Page 2 Code No. : 40382 E

- The run time environment for the .NET Framework is called
 - (a) Internet Information Server
 - (b) Common Language Runtime
 - (c) NET Framework Class Library
 - (d) Managed Components
- 8. Classes of Web Services are contained within a ______ file.
 - (a) aspx , (b) ascx
 - (c) asax (d) asmx
- 9. An arcane process known as <u>retrieves</u> data from a virtual terminal session with the mainframe.
 - (a) Screen Scraping
 - (b) Scrap file
 - (c) SQL

7:

- (d) API
- 10. The area in which the user accounts database may live is on a machine called ———.
 - (a) Local user accounts
 - (b) Primary Domain Controller
 - (c) Access Control List
 - (d) Security Identifiers.

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

• Each answer should not exceed 250 words.

11. (a) List the components of ASP.NET and the .NET framework.

\mathbf{Or}

- (b) Describe the characteristics of variables in VB.NET.
- 12. (a) Discuss the features of ASP.

Or

- (b) Explain AdRotator Control with its syntax and properties.
- 13. (a) Brief on the common data set types in Data collections.

Or

- (b) Write about the providers that can be used with Active Directory Services.
- 14. (a) Explain on the overview of transactions.

\mathbf{Or}

(b) Describe the need for Web Services.

Page 4 Code No. : 40382 E [P.T.O.] 15. (a) Discuss ADO.NET: The Next Generation of Data Access Technology.

Or

(b) Explain Windows Security.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the Web Client/Server model.

Or

- (b) Explain the different operators used in 'VB.NET.
- 17. (a) Explain the Anatomy of ASP.NET.

Or

- (b) Explain ASP.NET Page Directives.
- (a) List the properties and methods of the FileSystem Watcher Class.

Or

(b) Explain in detail Using Message Queues.

Page 5 Code No. : 40382 E

19. (a) Explain the Common Language Runtime.

\mathbf{Or}

- (b) Discuss the Web Service Wire formats of in detail.
- 20. (a) Explain how to filter and sort data with the Data View Class.

Or

(b) Describe IIS Authentication and Authorization Security.

(6 pages)

Reg. No. :

Code No. : 40602 E Sub. Code : SACS 11/ SASE 11

> B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

> > First Semester

Computer Science/Software Engineering

DISCRETE MATHEMATICS

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL the questions.

Choose the correct answer :

1. _____ is relaton R on a set A is symmetric if whenever (a,b) ER Then (b,a) ER.

- (a) Reflexive (b) Symmetric
- (c) Non reflexive (d) Irreflexive

A relation is ______ if no two distinct points in the diagraph have an edge going between then in both directions.
 (a) Reflexive (b) Transitive
 (c) Antisymmetric (d) Symmetric

3. The inverse of the exponential function is called the ______ function.

(a) Irrational (b) Rational

(c) Logarithm (d) Exponential

4. The floor function is often also called the ______ function.

(a) Smaller integer (b) Greater integer

(c) Simple integer (d) Complex integer

5. A proposition consisting of only a Single Propositional Variable is called ______ proposition.

(a) Composite (b) molecular

(c) atomic (d) Compond

6. The normal forms also called as ______ forms

(a) Conjuntion (b) Disjuction

(c) Canonical (d) Complex

Page 2 Code No. : 40602 E

7. The numbers all, an matrix are called —	2, anm Constituting m x n
(a) values (c) elements	(b) properties(d) domain
8. if aij = 0 for all i mat	≠j and aii=C then its called rix.
(a) Square	(b) Row
(c) Null	(d) Scalar .
9. A Graph consists of	set of
(a) Order	(b) Lines
(c) Arc	(d) Vertices
and a pot of ed	graph consists of set of Vertices ges such that each edge is unordered pair of Vertices.
(a) Directed	(b) Undirected
(c) Unidirected	(d) Bidirected
PART B -	$-(5 \times 5 = 25 \text{ marks})$
Answer ALL questic Each answer sho	ons, choosing either (a) or (b). ould not exceed 250 words.
11. (a) Prove that transitive asymmetric.	if a Relation R on set A is and irreflexive, then it is
	Or
	Page 3 Code No. : 40602 E

(b) Let R be the Relation represented by the matrix $M_R = \begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 1 \\ 1 & 1 & 0 \end{bmatrix}$ find the matrix

representation of R^{-1} and R'.

12. (a) Define functions and its terms.

Or

- (b) Show that if (x,y) = x^y is a primitive recursive function.
- 13. (a) Write short notes on Connectives and Negation.

Or

- (b) Prove that the following propositions are tautology.
 - (i) $pv \sim p$ (ii) $P \Rightarrow (pvq)$
- 14. (a) List out the properties of Matrix addition.

Or

(b) By using elementary row transformation find the inverse of the matrix $A = \begin{bmatrix} 1 & 2 \\ 3 & 7 \end{bmatrix}$

> Page 4 Code No. : 40602 E [P.T.O.]

15. (a) Find the degree of each vertex of the following graph.



(b) Discuss about Sub graph.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the types of Relations in a set

Or

- (b) Let R and S be relation from A to B show that
 - (i) if $R \subseteq S$, the $R^{-1} \subseteq S^{-1}$
 - (ii) $(R \cap S)^{-1} = R^{-1} \cap S^{-1}$
- 17. (a) Write detail notes on classification of functions.

Or

Page 5 Code No. : 40602 E

- (b) Show that function f(x,y)=xty is primitive recursive function. Hence compute the value of f(2,4).
- 18. (a) Discuss about Drived Connectives.

• Or

- (b) Obtain the Conjuctive normal form of the following.
 - (i) $p \land (p \Rightarrow q)$
 - (ii) $[qv(p \land q)] \land \sim [(pvr) \land q]$
- 19. (a) Solve, with help of matrices

x + 2y + 3z = 4

$$x + 4y + 9z = 6$$

xty + z = 3

Or

- (b) Explain the properties of Inverse of matrix.
- 20. (a) Discuss about types of graphs.

Or

(b) Write detail notes on operations of graphs.

Page 6 Code No. : 40602 E

(6 pages)

Reg. No. :

Code No. : 40586 E

Sub. Code : SMCS 31/ SMSE 31

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Third Semester

Computer Science / Software Engineering — Main

JAVA PROGRAMMING

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

- 1. Literals can be of which of these data types?
 - (a) Integer (b) Float
 - (c) Boolean (d) All of the above

 An array elements are always stored in – memory locations.

- (a) Sequential
- (b) Random
- (c) Indexed Sequential
- (d) Hash
- 3. What is the return type of a method that does not returns any value?
 - (a) int (b) float
 - (c) void (d) double
- 4. Which of these keywords is used to refer to member of base class from a subclass?
 - (a) Upper (b) Super
 - (c) This (d) Extends
- 5. Which of the following keywords is used for throwing exception manually?
 - (a) finally (b) try
 - (c) throw (d) catch

Page 2 Code No. : 40586 E

6.	Which of these method wakes up the first thread that called wait()?						
	(a)	Wake ()	(b)	Notify ()			
	(c)	Start ()	(d)	NotifyAll()			
7.	outp	function out of an applet	is ca	alled to display the			
	(a)	Display ()	(b)	Paint ()			
	(c)	DisplayApplet()	(d)	PrintApplet ()			
8.		ch of these method any button by mou		ll respond when you			
	(a)	MouseClicked ()					
	(b)	MouseEntered ()					
	(c)	MousePressed ()					
	(d)	All of the above					
9.	Too	method is lkit (AWT)?	s a pa	rt of Abstract window			
	(a)	Display ()	(b)	Paint ()			
	(c)	Drawstring ()	(d)	Transient ()			
10.	operator can be used to get run time information about an object						
	(a)	getinto	(b)	info			
	(c)	instanceof	(d)	getintoof			
		Pag	e 3	Code No. : 40586 E			

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain Type Conversion and Casting.

Or

- (b) Discuss about Class fundamentals.
- 12. (a) Explain Argument passing with sample program.

Or

- (b) Discuss about static.
- 13. (a) Write notes on Access protection.

Or

- (b) Explain the uses of throws clause with a sample program.
- 14. (a) Explain the skeleton of an Applet.

Or

(b) Explain the sources of Events generation.

Page 4 Code No. : 40586 E [P.T.O.] 15. (a) Explain the methods when working with frame windows.

Or

(b) Write about Text Area with a sample program.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss in detail about variables.

Or

- (b) Explain the fundamentals of methods.
- 17. (a) Explain the following
 - (i) Access control
 - (ii) Nested and Inner classes.

Or

- (b) Explain the uses of super.
- 18. (a) Discuss in brief on Interfaces.

Or

(b) Explain the Java Thread Model.

Page 5 Code No. : 40586 E

19. (a) Explain the parts of HTML APPLET tag.

Or

- (b) Explain any four Event Listener Interfaces.
- 20. (a) Explain any two methods when working with Graphics.

Or

(b) Explain about Layout Managers.

Page 6 Code No. : 40586 E

(6 pages) Re	g. No. :	3.	rela	command tion from the SQL.	is ı	used to remove the
Code	No. : 40592 E	Sub. Code : SMCS 43		(a)	DROP TABLE	(b)	DELETE TABLE
				(c)	REMOVE	(d)	All the above
	B.Sc. (CBCS) DEGREI NOVEMBE		- 4.	unk		ifies,	, that the value is
	Fourth Ser	mester		(a)	Null value	(h)	Domain value
	Computer Scien	nce — Main		(c)	Atomic value		None of the above
RELAT	YIONAL DATABASE N	AANAGEMENT SYSTEM	5.		sumbol con b		ed in the select clause
(1	for those who joined in	July 2017 onwards)	υ.	to d	enote all attribute.	e us	eu mi the select clause
Time : 7	Three hours	Maximum : 75 marks		(a)	;	(b)	*
	PART A (10 ×	1 = 10 marks)		(c)	/	(d)	all the above
Cl	Answer ALL on oose the correct answer		6.	a qu	clause causes ary to appear in a sc		e tuples in the result of l order.
1. Tl	ne overall design of a d	atabase is ———		(a)	group by	(b)	order by
(a		(b) Logical schema		(c)	asc or desc	(d)	none of the above
(c)	Schema	(d) None of the above	7.	A s	ub class with more	tha	an one super class is
2. A	relational database is	based on ———					
(a) Network model	(b) Hierarchical model		(a)	derived classes	(b)	sub classes
(c)	Relational model	(d) All the above		(c)	shared classes	(d)	all the above
				1.0			

Page 2 Code No. : 40592 E

- 8. 2NF is based on -
 - (a) full functional dependency
 - (b) functional dependency
 - (c) multivalued dependency
 - (d) all the above

9.

- _____ command can be used to modify the sequence.
 - (a) MODIFY SEQUENCE
 - (b) ALTER SEQUENCE
 - (c) UPDATE SEQUENCE
 - (d) All the above
- 10. A function is
 - (a) Return a value
 - (b) No return value
 - (c) May or may not return value
 - (d) None

Page 3 Code No. : 40592 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain data abstraction in detail.

Or

- (b) Write in detail about data manipulation languages.
- 12. (a) What are the components (parts) of SQL?

Or

- (b) What are basic data types in SQL?
- 13. (a) What is the use of where clause? Explain.

Or

- (b) Write short note on Natural join.
- 14. (a) What is specialization? Give example.

\mathbf{Or}

(b) Explain the concept of Inheritance.

Page 4 Code No. : 40592 E [P.T.O] 15. (a) What is the purpose of using DESCRIBE command?

Or

(b) Explain PL/SQL block structure.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What are the disadvantages of database system?

\mathbf{Or}

- (b) Explain:
 - (i) Data storage
 - (ii) DBA.
- 17. (a) Explain the concept of schema. Give example.

\mathbf{Or}

(b) Explain relational operations with example.

18. (a) Explain set operation. Give example.

Or

(b) What are nested subqueries? Give example.

Page 5 Code No. : 40592 E

- 19. (a) Explain :
 - (i) 2NF
 - (ii) 3NF.

Or

- (b) Explain functional dependency with example.
- 20. (a) Explain how to modify table. Give example.

Or

(b) What are stored procedures? Give example.

(6 pages)	Reg. No. :	3.	-	can be o	verloade	d.
Code No. : 413	91 E Sub. Code : SMCS 31		(a)	methods		
Code 140. , 415.	JIL Sub. Code : SMCS 31		(b)	constructors		
B.Sc. (CBCS) DEGE	REE EXAMINATION, APRIL 2019.		(c)	arthmetic ope	rators	
	Third Semester		(d)	all the above		
Comp	uter Science — Main	4.	The		—, m	ast be used to inherit a
JAV.	A PROGRAMMING		(a)	super	(b)	this
(For those who	joined in July 2017 onwards)		(c)	extent		extends
Time : Three hours	Maximum : 75 marks	5.	- 300	is not a j	part of ex	cception handling.
PARTA	$-(10 \times 1 = 10 \text{ marks})$		(a)	try		finally
	wer ALL questions.		(c)	thrown	(d)	catch
Choose the corr		6.	Thre	ead priority in J	ava is —	
1. The method ha	ving same name as that of it's class		(a)	integer		float
(a) class (c) finalized	(b) object		(c)	double	(d)	long
	(d) constructor	7.	Eve	nt class is define	d in —	
2. which method program is?	can be defined only once in a		(a)	java.io	(b)	java.lang
(a) static met (c) main metl	an a		(c)	java.net	(d)	java.util

- 8. Which of these methods will respond when you click any button by mouse?
 - (a) Mouse Clicked ()
 - (b) Mouse Entered ()
 - (c) mouse pressed ()
 - (d) All the above
- 9. AWT expand
 - (a) Applet Windowing Toolkit
 - (b) Abstract Windowing Toolkit
 - (c) Absolute Windowing Toolkit
 - (d) Abstract Window Tool
- 10. Which object can be constructed to show any member of choices in the visible window?
 - (a) Labels
 - (b) Choice
 - (c) List
 - (d) Checkbox

Page 3 Code No. : 41391 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

11. (a) Describe the type conversion and casting features in Java.

Or

- (b) What are Data types? Explain the primary types with examples.
- 12. (a) What do you understand about static and final explain.

Or

- (b) Discuss about check box in AWT.
- (a) What are packages? Explain access protection with examples.

Or

- . (b) What are interfaces? Explain.
- 14. (a) Illustrate passing parameters to applet.

Or

(b) Write about event listener interfaces.

Page 4 Code No. : 41391 E [P.T.O] 15. (a) Describe the use of flow layout.

Or

(b) Illustrate the Graphic features.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

16. (a) Explain the class fundamentals with examples.

Or

- (b) Describe constructors with an example program.
- 17. (a) Write a java program to demonstrate argument passing and returning objects.

Or

- (b) Write a java program for multilevel hierarchy and discuss.
- 18. (a) Explain the features of exception handling.

Or

(b) How to create a thread and multiple threads? Explain.

Page 5 Code No. : 41391 E

- 19. (a) Explain :
 - (i) Applet display method
 - (ii) HTML APPLET tag.

Or

- (b) Describe event classes. Give examples.
- 20. (a) Explain the features of AWT controls.

Or

(b) Describe AWT classes and the features of frame windows, color and fonts.

Page 6 Code No. : 41391 E

(6 p	oages)	Reg. No. :	2.	User defined data type structure can arrays.
Co	de No. : 41394 E	Sub. Code : SMCS 41		(a) Static
				(b) Dynamic
		REE EXAMINATION, L 2019.		(c) Both (a) and (b)
				(d) Control
	Fourth	Semester	3	shortcut key is used to
	Computer S	cience – Main		menu.
	VISUA	L BASIC		(a) Ctrl + E
	(For those who joined	in July 2017 onwards)		(b) $Alt + E$
TTY				(c) Ctrl + M
Tim	e : Three hours	Maximum : 75 marks		(d) $Alt + M$
	PART $\Lambda = (10$	$\times 1 = 10$ marks)	4.	MDI forms can't contain object other than
1	Answer AL	L'questions.		(a) Child forms
	Choose the correct an	SMOT.		(b) Project form
				(c) Module form
1.	The property of the tiruntime is the:	ext box that is displayed at		(d) None of the above
	(a) Text		ŏ.	What will pass the jet query processes?
	(b) Caption			(a) DBSqLpass
	(c) Label			(b) ADO
	(d) Value			(c) RDO

(d) None of the above

Page 2 Code No. : 41394 E

include

create

- Which below is specified by the Data member property?
 - (a) Connection object

6.

- (b) Data Adopter object
- (c) Database field
- (d) Database table
- 7. ADO is the high-level interface to -----
 - (a) OLEDB (b) RDO
 - (c) ODBC (d) MDI
- is the combination of data and characteristics in single package.
 - (a) Encapsulation (b) Inheritance
 - (c) Polymorphsim (d) Object
- 9. A ______ is also called as container.
 - (a) ActiveX control (b) ADO control
 - (c) OLE control (d) Form control
- 10. _____ control display current directory with any sub directories and allow the user to change directory.
 - (a) File list box (b) Drive list box
 - (c) Directory list (d) All of the above
 - Page 3 Code No. : 41394 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALI. questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

 (a) Explain different types of arrays in visual basic with one example.

Or

- (b) What is OOP? Explain object, event and properties with example.
- (a) Explain the advantages and disadvantages of using graphic methods.

Or

- (b) What is Menu? How to create menu in VB?
- 13. (a) Define data, information and database.

Or

- (b) Explain ADO data bound control and ADO control event.
- 14. (a) How to automate object using OLE?

Or

- (b) Discuss the features of OLE.
 - Page 4 Code No. : 41394 E [P.T.O.]

15. (a) What is difference between list and tree view.

Or

(b) Explain OLEDB provider.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Differentiate Msgbox () function and statement.

Or

- (b) Write in detail about control flow statement.
- 17. (a) Differentiate between datagrid and flex grid.

Or

- (b) How to create menus in VB? Explain with eg.
- 18. (a) How to access data using RDO? Explain.

Or

(b) Discuss about advantages of ODBC.

Page 5 Code No. : 41394 E

19. (a) Describe in detail, using OLE Automation objects.

Or

(b) Explain :

- (i) OLE Drag and drop.
- (ii) OLE Automation.
- 20. (a) Discuss the following with examples.
 - (i) Accessing files in VB.
 - (ii) Interface with windows.

Or

(b) Explain file system controls in VB.

Page 6 Code No. : 41394 E

(6 pages)

Reg. No. :

Code No.: 40584 E Sub. Code : SMCS 11/ SMSE 11

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

First Semester

Computer Science/Software Engineering — Main

PROGRAMMING IN C

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. The Alphabets of the C Programming is referred as ______.

- (a) Tokens (b) Character Sets
- (c) Keywords (d) Identifiers

2. What is the ASCII value of 'B'?

(a)	98	(b)	97
(c)	65	(d)	66

executing the statement of the loop.

(a) while and do while

(b) while and for

3.

4.

5.

6.

(c) for and do... while

(d) do ... while alone

from the loop or the block of statement.

(a)	Go to	(b)	Continue	
(c)	Break	(b)	Stop	

_____ is the collection of similar data types.

(a)	Group	(b)	Structure
-----	-------	-----	-----------

(c) Union (d) Array

is a function used to compare two given strings.

(a)	Strlength()	(b)	Strcompare()	
(~)	Nor to the bill ()		Ducompare	Į

(c) Strcmp() (d) Strcpm()

Page 2 Code No. : 40584 E

is	also	known	as	function	prototype.
----	------	-------	----	----------	------------

(a) function call

7.

8.

10.

- (b) function declaration
- (c) function return
- (d) function definition

variables that are defined with in a body of function or block.

(a)	Global	(b)	Static
	Dynamic	(d)	Local

9. Heterogenous data types are grouped together is refferred as _____.

(a) Union(b) Pointer(c) Structure(d) Array

— is a function used to open a file.

- (a) file open() (b) f open()
- (c) open() (d) open file().

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Mention the rules for the identifier.

Or

(b) Discuss about the Bitwise Operator.

Page 3 Code No. : 40584 E

12. (a) Write short notes on ?: Operator with suitable examples.

Or

- (b) State the difference between while and do... while loop.
- 13. (a) Discuss about character Arrays.

Or

- (b) Write a program to add 10 Integers using Arrays.
- 14. (a) Explain Recursive functions.

Or

- (b) Discuss about Union.
- 15. (a) Explain how to access the Address of a variable?

Or

(b) Write short notes on sequential files.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write detail notes on C – Operators.

Or

(b) Describe the basic Input and Output operation with suitable examples.

Page 4 Code No. : 40584 E [P.T.O.] 17. (a) Explain the various types of Decision making and Branching in C Program.

Or

* * *

* * * * *

(i)

(ii) *

* *

*

(b) Write a program to display below mentioned patterns using for loop.

* * * *
18. (a) Write a program to perform matrix addition between two 2 × 2 matrices.

Or

- (b) Mention the various string handling functions.
- 19. (a) Discuss about user defined function.

Or

(b) Write detail notes on structures.

Page 5 Code No. : 40584 E
20. (a) Explain – how to pass pointers as function Arguments?

Or

(b) Discuss about I/O operations on files.

Page 6 Code No.: 40584 E

(6 pages)

Reg. No. :

Code No.: 40590 E Sub. Code : SMCS 41

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Fourth Semester

Computer Science — Main

VISUAL BASIC

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions

Choose the correct answer :

(a)	Local	(b)	Block
(c)	Global	(d)	Functional

information. control is used to display

(a) Text box

2.

- (b) Command button
- (c) Label
- (d) Picture box
- 3. MDI Stands for -
 - (a) Multimedia Document Interface
 - (b) Multiple Document Interface
 - (c) Multiuser Document Interface
 - (d) None
- 4. Which occupies less space on the screen.
 - (a) List box
 - (b) Combo box
 - (c) Directory box
 - (d) None of the above
- 5. Accessing database from Visual basic
 - (a) ODBC
 - (b) Record
 - (c) File
 - (d) None of the above

Page 2 Code No. : 40590 E

- 6. Visual basic is a
 - (a) Db tool
 - (b) Backend Tool
 - (c) Server Tool
 - (d) Frontend tool
- 7. Using OLE we can link.
 - (a) Word
 - (b) Excel
 - (c) Powerpoint
 - (d) Any software
- 8.

is to used to create report.

- (a) Database
- (b) Data Environment
- (c) OLE

The .

- (d) None
- 9. Which event occurs only once in the entire lifecycle of an Activex Control?
 - (a) Initialize
 - (b) Terminate
 - (c) Reuse
 - (d) Write properties

Page 3 Code No. : 40590 E

10.	The	Activex	files	are	stored	in the	extension	of
	(a)	.axX			(b)	.Ocx		
	(c)	.prj			(d)	.frm		
		PART	ГВ —	- (5 ×	5 = 25	marks)		

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain for / each loop with example.

Or

- (b) What is flow control? Explain select ... case statement with example.
- 12. (a) Write about menus in Visual basic.

Or

- (b) Write short notes on MDI.
- 13. (a) Explain ODBC concept with example.

Or

(b) Explain about DAO control.

Page 4 Code No. : 40590 E

14. (a) Write about object linking and Embedding?

Or

- (b) Write down the steps to create OLE container control.
- 15. (a) Explain the uses of OLE container control.

Or

(b) What are class modules? How classes are constructed with them?

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

(a) Explain Do-While loop with suitable example.

Or

(b) Develop VB project to do various arithmetic operation

Page 5 Code No. : 40590 E

17. (a) Explain how control arrays are created at Design and run time.

Or

- (b) Discuss the following.
 - (i) General and Event Procedure.
 - (ii) Scope of procedure.
- (a) Develop a VB project to add, delete records using RDO.

Or

- (b) How to connect VB with Oracle.
- 19. (a) Give an overview of OLE Fundamentals.

Or

- (b) Differentiate classes, methods and objects.
- 20. (a) Discuss any four built in Activex data object?

Or

(b) What is an Activex data object? Explain ADO object model in detail.

Page 6 Code No. : 40590 E

7 pages) Reg. No. :	2. A relation is if no two distinct points in the digraph have an edge going between them in both direction.
Code No.: 41403 E Sub. Code : SACS 11/ SASE 11	(a) Transitive (b) Selective
B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.	 (c) Antisymmetric (d) Symmetric 3 function is also called as one to one correspondence
First Semester	(a) Into (b) Onto
Computer Science / Software Engineering – Allied DISCRETE MATHEMATICS	(c) Bijective (d) Objective
(For those who joined in July 2017 Onwards)	4 function is very useful coding theory.
Fime : Three hours Maximum : 75 marks PART A — (10 × 1 = 10 marks)	(a) Big-Omega(b) Hamming distance(c) Omega(d) Distance
Answer ALL questions. Choose the correct answer :	5. A proposition consisting of only a single propositional variable is called proposition.
I, R in a set A is said to be identity relation, generally denoted by I_A if $I_A = \{(x, x) : (x \in A)$	(a) Composite(b) Molecular(c) Atomic(d) Compound
(a) Inverse Relation(b) Identity Relation	6. A is a declartive sentence that is either true or false.
(c) Reflexive Relation	(a) Sentence (b) Value
(d) Irreflexive Relation	(c) Domain (d) Propositon Page 2 Code No. : 41403 E
	Tage 2 Coucilion Altroom

3 . A.

4

- A matrix of any order whose all elements are zero 7. is called Unit Scalar (a) (b) Row (d) Null (c) In a matrix if aij = 0 for all $i \neq j$ is called 8. as Diagonal Zero (b) (a) Scalar (d) Unit (c) Any pair of nodes that is connected by an edge in a 9. graph is called nodes. Incident Adjacent (b) (a)
 - (c) Isolated (d) Order
- An _____ graph consists of set of vertices and a set of edges such that each edge is associated with an unordered pair of vertices.
 - (a) Directed (b) Undirected
 - (c) Unidirected (d) Bidirected
 - Page 3 Code No. : 41403 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

- 11. (a) Draw the directed graph that represents the relation
 - $R = \{(1,1), (2,2), (1,2), (2,3), (3,2), (3,1), (3,3)\}$
 - $X = \{1, 2, 3\}$

Or

- (b) Let $R = \{(1, 1), (2, 1)(3, 2)\}$. Compute R^2 .
- 12. (a) Define functions and its terms.

Or

- (b) Show that the mapping f : R → R be define by f(x) = ax + b, where a, b, x ∈ R, a ≠ 0 is invertible. Define its inverse.
- (a) Construct a truth table for each compound propositions.
 - (i) $p \land (\sim q \lor q)$
 - (ii) $\sim (p \lor q) \lor (\sim p \land \sim q)$

Or

Page 4 Code No. : 41403 E [P.T.O.]

- (b) Prove that the following propositions are tautology
 - (i) $p \lor \sim p$
 - (ii) $p \Rightarrow (p \lor q)$.

14. (a) List out the properties of matrix addition.

(b) Find the value of $\begin{vmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \\ 3 & 4 & 5 \end{vmatrix}$

15. (a) Differentiate undirected graph with directed graph.

Or

(b) Define cycles and wheels.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Consider a relation R defined in $A = \{1, 2, 3\}$ whose matrix representation is given below. Determine its inverse R^{-1} and compute the complement R^{1}

Or

Page 5 Code No. : 41403 E

- (b) Let $R = \{(1, 2), (2, 3)(3,1)\}$ and $A = \{1, 2, 3\}$ find the reflexive, symmetric and transitive closure of R_1 using
 - (i) Composition of relation R
 - (ii) Composition of matrix relation R
 - (iii) Graphical representation of R.
- 17. (a) Prove the Associative law of function composition.

Or

- (b) Discuss about Inverse of a function.
- 18. (a) Discuss about Drived connectives.

Or

- (b) Obtain the conjunctive normal form of the following
 - (i) $p \land (p \Rightarrow q)$
 - (ii) $[q \lor (p \land q)] \land \sim [(p \lor r) \land q].$
- 19. (a) Solve with help of matrices. x + 2y + 3z = 4 x + 4y + 9z = 6 x + y + z = 3.

Or

(b) Explain the properties of Inverse of matrix.

Page 6 Code No. : 41403 E

20. (a) Draw all the non isomorphic graphs of order four.

\mathbf{Or}

(b) Write detail notes on types of graphs.

Page 7 Code No. : 41403 E

6 pages)	Reg. No. :	2.	Whic cost o	h one of the following is used to eliminate the of calls to smaller functions.
Code 1	No. : 41195 E Sub. Code : JMCS 21/		(a)	Inline function
	JMSE 21		(b)	Friend function
			(c)	Virtual function
E	B.Sc. (CBCS) DEGREE EXAMINATION,		(d)	Function prototype
	APRIL 2019. Second Semester	3.		h operator is used to allocate an object mically of a class in C++?
Com	puter Science/Software Engineering— Main		(a)	A scope resolution operator
			(b)	Conditional operator
OBJ	ECT ORIENTED PROGRAMMING IN C++		(c)	New operator
((For those who joined in July 2016 only)		(d)	Membership operator
l'ime : T	hree hours Maximum : 75 marks	4.	A co	py constructor may be called when ———.
	PART A (10 × 1 = 10 marks)		(a)	An object of the class is returned by value
	Answer ALL questions.		(b)	An object of the class is passed by value as an argument in functions
Ch	oose the correct answer :		(c)	An object is constructed based on another
l. Th	e reusability idea is provided by the concept of			object of the same class
	· · · · · · · · · · · · · · · · · · ·		(d)	All of the above
(a)	Encapsulation	5.		ch of the following operator cannot be
(b)	Inheritance			loaded?
(c)	Polymorphism		(a)	+ (b) -
(d)	Dynamic binding		(c)	* (d) ?:

6.

coat.

----- operator can be overloaded for object

(a) >> (b) << (c) + (d) ::

- 7. If a class contains pure virtual function, then it is termed as ______.
 - (a) Virtual class
 - (b) Sealed class
 - (c) Pure local class
 - (d) Abstract class
- 8. Run time polymorphism can be achieved with
 - (a) Virtual Base Class
 - (b) Containes Class
 - (c) Virtual function
 - (d) Both (a) and (c)
- 9. To create an output stream, we must declare the stream to be of class ————.
 - (a) of stream
 - (b) if stream
 - (c) io stream
 - (d) None

Page 3 Code No. : 41195 E

- 10. Which keyword can be used is template?
 - (a) Class
 - (b) Typename
 - (c) Both (a) and (b)
 - (d) Function

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

 (a) What do you understands about classes and objects? Explain and give examples.

Or

- (b) Describe static member function.
- 12. (a) What is parameterized constructors? Discuss.

Or

- (b) What is the use of const objects? Give an example.
- 13. (a) What are the rules for overloading operators?

Or

(b) Write a program to find the total marks for given five subjects and print the result using single inheritance.

Page 4 Code No. : 41195 E [P.T.O.] 14. (a) Write a C++ program to implement virtual function concept.

Or

- (b) Discuss about C++ Stream classes.
- 15. (a) Describe the classes for File Stream Operations.

Or

(b) How do you detect and of file? Discuss.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the oops concepts with suitable examples.

Or

- (b) Explain Nesting of member function and friendly functions with examples.
- 17. (a) Briefly discuss about constructor and destructor member functions.

Or

(b) Write a C++ program to implement consructors with default arguments.

 (a) Write a C++ program to add two given numbers using overloading binary operators using friends.

Or

- (b) What is inheritance? Explain any two types with examples.
- 19. (a) Discuss about pointers to derived classes with examples.

Or

- (b) Explain, how do you manage the output by using manipulators? Give examples.
- 20. (a) Discuss in detail about the file opening and closing methods in C++.

Or

(b) Explain function templates in detail.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words. (a) Explain computer registers in detail.

Or '

- (b) Describe instruction cycle.
- 17. (a) Explain stack organisation in detail.
 - Or
 - (b) What is addressing modes? Explain with all its types.
- 18. (a) Explain Booth multiplication algorithm with an example.
 - Or
 - (b) Describe the basic considerations of floating point arithmetic.
- 19. (a) Explain input-output interface with neat block diagram.

\mathbf{Or}

- (b) Explain about cache memory.
- 20. (a) Write short notes on :
 - (i) Parallel processing
 - (ii) Pipe lining.

Or

- (b) Discuss the principles of
 - (i) Vector processing
 - (ii) Inter connections structures.

Reg. No. :

Code No.: 41217 E Sub. Code : JACS 31/ JASE 31

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Third Semester Computer Science/Software Engineering – Allied COMPUTER ARCHITECTURE

(For those who joined in July 2016 only)

Time : Three hours

2.

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL the questions.

Choose the correct answer :

1.				system to perform a
	spec	cific operations is ki	nown	as ———
	(a)	Instruction code	(b)	Micro-operation
			100 At 1	N.223 10 //

- (c) Accumulator (d) Register
- _____ holds the address of next instruction
- (a) Stack pointer (b) Program counter
- (c) Input register (d)
 - (d) Accumulator
- 3. In which mode the operand is specified in the instruction itself?
 - (a) Register (b) Implied
 - (c) Immediate

(d) Direct address

16.

4.	In instruction format, an address field that designate a	10. Pipelinining organizations is applicable to
1	 (a) Memory address (b) Processor register (c) Effective address (d) (a) or (b) 	 (a) Arithmetic (b) Instruction (c) Both (a) and (b) (d) None
5.	Which of the following is an data transfer instructions?	PART B — ($5 \times 5 = 25$ marks)
	(a) Load (b) Add (c) AND (d) Clear	Answer ALL questions, choosing either (a) or (b).
14		Each answer should not exceed 250 words.
6.	The sequence counter used in the multiplication algorithm denotes number of bits in the	 (a) What is control memory? Explain its purposes.
·		Or
	(a) Multiplicand(b) Partial product	(b) What you mean by address sequencing? Discuss.
	(c) Multiplier(d) Double length multiplier	12. (a) Explain data transfer instructions. Give examples.
7.	In virtual memory, an address used by the	Or
	programmer is called a	(b) Describe instructions formats.
	(a) Physical address (b) Virtual address	13. (a) Describe the hardware implementation of
	(c) Address space (d) Virtual space	addition and subtraction algorithm.
8.		Or
0,	The memory unit that communicate directly with the CPU is called —	(b) Describe the register configurations of
	(a) Auxiliary memory (b) Main memory	floating point arithmetic.
0	(c) Secondary storage (d) Virtual memory	14. (a) What do you understands about strobe control and hand shacking? Explain.
9,	The unit receiving the data item responds with	Or
	another control signal to acknowledge the receipt	(b) What are the modes of transfer? Discuss.
	of data is	15. (a) Describe array processor.
	(a) Strobe control (b) Interfacing	Or
	(c) Handshaking (d) Interrupt	(b) Explain about multi processors.
	D O O I DI TRAFFI	

Page 3 Code No. : 41217 E

Page 2 Code No. : 41217 E (6 pages)

Reg. No. :

Code No.: 41401 E Sub. Code: SNCS4 A

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Fourth Semester

Computer Science

Non Major Elective — HTML

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions. Choose the correct answer :

- 1. To create HTML page, you need
 - (a) Web browser
 - (b) Text editor
 - (c) Both (a) and (b)
 - (d) None

- 2. $\langle a \rangle$ and $\langle a \rangle$ are the tags used for
 - (a) Adding image
 - (b) Aligning text
 - (c) Audio-voiced text
 - (d) Adding links to your page
- 3. Which of the following tag is used to mark a begining of paragraph?
 - (a) $\langle TD \rangle$ (b) $\langle br \rangle$
 - (c) $\langle P \rangle$ (d) $\langle T R \rangle$
- 4. The syntax for aligning is
 - (a) $\langle h1 align = "center" \rangle$
 - (b) $\langle h1 \text{ align} \rangle$
 - (c) $\langle hl center \rangle$
 - (d) (hlalign"center")

Page 2 Code No. : 41401 E

- 5. Unordered list comprises of ——
 - (a) Numbers (b) Alphabets
 - (c) Bullets (d) None of these
- 6. The column tags are specified between the ______ tags
 - (a) $\langle tr \rangle$ and $\langle /tr \rangle$ (b) $\langle th \rangle$ and $\langle /th \rangle$
 - (c) $\langle td \rangle$ and $\langle /td \rangle$ (d) None of these
- 7. Frames divide the single into different rectangular areas
 - (a) Web page (b) Table
 - (c) Window (d) $\langle body \rangle$
- 8. Which attribute is not used on new forms?
 - (a) Size (b) Text
 - (c) Name (d) Max length
- 9. DHTML stands for -----
 - (a) Document HTML (b) Dynamic HTML
 - (c) Digital HTML (d) Data HTML
 - Page 3 Code No. : 41401 E

- 10. ———— HTML tag is used to define an internal style sheet in web page
 - (a) $\langle CSS \rangle$ (b) $\langle Script \rangle$
 - (c) $\langle Style \rangle$ (d) none
 - PART B $(5 \times 5 = 25 \text{ marks})$
 - Answer ALL questions, choosing either (a) or (b).
 - Answer should not exceed 250 words.
- 11. (a) Explain about HTML generations.

Or

- (b) Write a short note on anchor tag.
- 12. (a) Discuss, how to design a colorful web page.

Or

- (b) Write a short note on heading tags.
- 13. (a) Explain with an example the difference between ordered and unordered list.

Or

- (b) Explain how to create a table and which tags are necessary to create a table?
 - Page 4 Code No. : 41401 E [P.T.O.]

 (a) Write and explain the syntax to create three rows and two columns in the first and third row. Distribute the rows and columns even frames.

Or

- (b) Explain Drop down list with example.
- 15. (a) Explain the advantages of DHTML.

Or

- (b) Explain about inline styles.
 - PART C $(5 \times 8 = 40 \text{ marks})$
- Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 600 words.

16. (a) Explain about HTML history and HTML documents.

Or

- (b) Write the syntax for hyper links and explain with examples.
- 17. (a) Explain horizontal rule, paragraph and tab setting with examples.

Or

(b) Explain the features of including images and pictures in web pages. Give example.

18. (a) Design a web page that has ordered, unorded and nested lists.

Or

- (b) Design a page for your subject time table.
- 19. (a) Design a web page to illustrate frames.

Or

- (b) Explain the features in forms.
- 20. (a) How to link a style sheet to an HTML document? Explain with example.

Or

(b) Explain internal, external and multiple sheets with example.

(6 pages)

Reg. No. :

Code No.: 40603 E Sub. Code : SACS 21/ SASE 21

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Second Semester

Computer Science/Software Engineering - Allied

DIGITAL DESIGN

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

- Operands used for calculations may be expressed in ______ system.
 - (a) binary
 - (b) decimal
 - (c) octal
 - (d) hexadecimal

2.	Whe	en a binary numb	er has 4	bits it is called
	(a)	byte	(b)	decimal
	(c)	nibble	(d)	all the above
3.	Bub	bled AND gate is	equival	ent to
	(a)	OR	(b)	NOR
	(c)	NAND	(d)	NOT
4.	The	IC for NOT gate	is	
	(a)	7402	(b)	7404
	(c)	7408	(d)	7432
5.	Boo	lean equation car	ı be sim	plified by
	(a)	SOP	(b)	POS .
, ,	(c)	Both the above	(d)	none of the above
6.	A	+ AB is		
	(a)	A	(b)	Ā
	(c)	B	(d)	A + B
7.	Dat	a selector is		
	(a)	multiplexor	(b)	demultiplexor
	(c)	encoder	(d)	decoder
		Р	age 2	Code No. : 40603 E

8.	The	ere is data input in		
	(a)	multiplexor	(b)	demultiplexor
	(c)	encoder	(d)	decoder
9.	-	is called a	latel	n
	(a)	Encoder	(b)	Decoder
	(c)	Flipflop	(d)	Register
10.	-	is a group	of Fl	lipflop.
	(a)	Encoder	(b)	Decoder
	(c)	Register	(d)	Multiplexor
		PART B — $(5 \times $	5 = 2	5 marks)
An	swe	r ALL the questions,	choo	sing either (a) or (b

Answer ALL the questions, choosing either (a) or (b). Each answer should not exceed 250 words.

11. (a) Write short note on Gray code.

Or

- (b) Convert FCA.3 into decimal.
- 12. (a) State and prove Demorgan's theorem.

Or

(b) Distinguish between positive and negative logic.

Page 3 Code No. : 40603 E

13. (a) Using POS simplify $\pi M(1, 2, 6)$.

Or

(b) How will you convert SOP to POS?

14. (a) Define demultiplexor. Explain 1-8 demultiplexor.

Or

- (b) With suitable diagram explain BCD to decimal decoder.
- 15. (a) Explain the function of master slave flipflop.

Or

(b) Describe universal register.

PART C — $(5 \times 8 = 40 \text{ marks})$

- Answer ALL the questions, choosing either (a) or (b) Each answer should not exceed 600 words.
- 16. (a) What are hexadecimal numbers. Give its application convert the following into hexadecimal numbers.
 - (i) 3648
 - (ii) 4823

Or

- (b) (i) Explain ASCII code with example.
 - (ii) What is Excess-3 code? Give its importance.

Page 4 Code No. : 40603 E [P.T.O.] 17. (a) Explain all the basic gates with suitable diagram.

Or

- (b) What are universal gates? Explain its function.
- 18. (a) Draw the truth table and logic equation and hence logic circuit of $\sum (3, 5, 6, 7)$.

Or

(b) Define K-map. Give its significance using K-map simplify

 $F(A, B, C, D) = \sum (1, 3, 13, 11, 15, 9).$

(a) Explain the function of encoders with suitable diagram.

Or

(b) Using 2's complement find

(i) -97 + 37 (ii) - 43 - 27

Page 5 Code No. : 40603 E

20. (a) With suitable diagram explain the JK flipflop.

Or

(b) Explain the working function of serial in parallel out register.

Page 6 Code No. : 40603 E

(6 pages)

Reg. No. :

Code No. : 40592 E Sub. Code : SMCS 43

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Fourth Semester

Computer Science - Main

RELATIONAL DATABASE MANAGEMENT SYSTEM

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

The overall design of a database is -1.

> Physical schema (b) Logical schema (a)

(d) None of the above (c) Schema

2. A relational database is based on -----

(a) Network model (b) Hierarchical model

Relational model (d) All the above (c)

3.		command ion from the SQL.	is ı	used to remove the
	(a)	DROP TABLE	(b)	DELETE TABLE
	(c)	REMOVE	(d)	All the above
4.		value sign:	ifies,	that the value is
				D
	(a)	Null value	(b)	Domain value
	(c)	Atomic value	(d)	None of the above
5.			e us	ed in the select clause
	to de	note all attribute.		
	(a) .	;	(b)	*
	(c)	1	(d)	all the above
6.		clause causes ery to appear in a sc		tuples in the result of order.
	(a)	group by	(b)	order by
	(c)	asc or desc	(d)	none of the above
7.	A su	b class with more	tha	n one super class is
-	(a)	derived classes	(b)	sub classes
	(c)	shared classes	(d)	all the above
		Page	2	Code No. : 40592 E

- 8. 2NF is based on -
 - (a) full functional dependency
 - (b) functional dependency
 - (c) multivalued dependency
 - (d) all the above
- 9. _____ command can be used to modify the sequence.
 - (a) MODIFY SEQUENCE
 - (b) ALTER SEQUENCE
 - (c) UPDATE SEQUENCE
 - (d) All the above
- 10. A function is _____
 - (a) Return a value
 - (b) No return value
 - (c) May or may not return value
 - (d) None

Page 3 Code No. : 40592 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain data abstraction in detail.

Or

- (b) Write in detail about data manipulation languages.
- 12. (a) What are the components (parts) of SQL?

Or

- (b) What are basic data types in SQL?
- 13. (a) What is the use of where clause? Explain.

Or

- (b) Write short note on Natural join.
- 14. (a) What is specialization? Give example.

Or

(b) Explain the concept of Inheritance.

Page 4 Code No. : 40592 E [P.T.O] 15. (a) What is the purpose of using DESCRIBE command?

Or

(b) Explain PL/SQL block structure.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What are the disadvantages of database system?

Or

- (b) Explain:
 - (i) Data storage
 - (ii) DBA.
- 17. (a) Explain the concept of schema. Give example.

Or

- (b) Explain relational operations with example.
- 18. (a) Explain set operation. Give example.

Or

(b) What are nested subqueries? Give example.

Page 5 Code No. : 40592 E

- 19. (a) Explain:
 - (i) 2NF
 - (ii) 3NF.

Or

- (b) Explain functional dependency with example.
- 20. (a) Explain how to modify table. Give example.

Or

(b) What are stored procedures? Give example.

PART C — $(5 \times 8 = 40 \text{ marks})$ Answer ALL questions, choosing either (a) or (b).

16. (a) Explain about Excess-3 and Gray codes.

Or

- (b) Explain how the Boolean expression Y = AB + CD can be drawn using.
 - (i) AND-OR circuit
 - (ii) NAND-NAND circuit
 - (iii) AND-OR-INVERT circuit.
- 17. (a) Simplify the following expression using Boolean algebra.
 - (i) AB + A(CD + CD')
 - (ii) (BC' + A'D)(AB' + CD').

Or

- (b) Simplify $Y = \overline{A} B \overline{C} D + \overline{A} B C \overline{D} + A \overline{B} C \overline{D}$.
- 18. (a) Explain the following :
 - (i) Half adder
 - (ii) Controlled inverter.

Or

- (b) Discuss Both algorithm.
- 19. (a) Discuss about the RS flip flop and JK flipflop. Or
 - (b) Explain Master-Slave flip flop.
- 20. (a) Briefly describe the functions of computer register.

Or

(b) Discuss about parallel in serial out.

Page 4 Code No.: 41404 E

Reg. No. :

Code No. : 41404 E Sub. Code : SACS 21/ SASE 21

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Second Semester

Computer Science/Software Engineering - Allied

DIGITAL DESIGN

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. What is the decimal value of binary 1011.11? (a) 11.0 (b) 11.75 (c) 11.25 (d) 11.01

A toggle operation cannot be performed using a single <u>gate</u>.
 (a) NOR
 (b) AND

(c)	NAND	(d)	XOR

3. What is A * A, if * is a Boolean operation defined by A * B = AB + A'B'?
(a) A
(b) B
(c) Δ
(d) 1

1.	x + x			-
	(a) 3	y .	(b)	
	(c) (0	(d)	x
5.	The	2's complement of	f 10110	00 is
	(a)	0100111	(b)	0010100
		1001001	(d)	1010010
6.	The	binary subtractio	on of tw	o number to produces
		ilt as ———	-,-	
	(a)	10	10.11	11
	(c)		. (d)	0
7.	Find	d the odd one out		
	1-1	RS flipflop	(b)	JP flipflop
	(a)	Vo mbuob	1. A. V.	· · · ·
	(c)	D flipflop	(d)	Master slave flipflop
8.	(c) A g	D flipflop roup of flip-flops	(d) sensiti	Master slave flipflop
8.	(c) $A g$ (a)	D flipflop roup of flip-flops Resister	(d) sensiti (b)	Master slave flipflop ive to pulse is called a Gate
8.	(c) $A g$ (a)	D flipflop roup of flip-flops	(d) sensiti (b)	Master slave flipflop ive to pulse is called a
8.	$\begin{array}{c} (c) \\ A g \\ \hline \\ (a) \\ (c) \\ MR \end{array}$	D flipflop roup of flip-flops Resister Catch	(d) sensiti (b) (d)	Master slave flipflop ive to pulse is called a Gate Decoder –.
	(c) A g (a) (c) MR (a)	D flipflop roup of flip-flops Resister Catch I stands for —— Memory Referen	(d) sensiti (b) (d) ace Inst	Master slave flipflop ive to pulse is called a Gate Decoder ruction
	(c) A g (a) (c) MR (a)	D flipflop roup of flip-flops Resister Catch I stands for —— Memory Referen Memory Registe	(d) sensiti (b) (d) ace Inst r Instru	Master slave flipflop ive to pulse is called a Gate Decoder ruction uction
	(c) $A g$ (a) (c) MR (a) (b) (c)	D flipflop roup of flip-flops Resister Catch I stands for — Memory Referen Memory Registe Memory Referen	(d) sensiti (b) (d) ace Inst r Instruce Inte	Master slave flipflop ive to pulse is called a Gate Decoder ruction action egration
	(c) $A g$ (a) (c) MR (a) (b) (c)	D flipflop roup of flip-flops Resister Catch I stands for —— Memory Referen Memory Registe	(d) sensiti (b) (d) ace Inst r Instruce Inte	Master slave flipflop ive to pulse is called a Gate Decoder ruction action egration
	(c) A g (a) (c) (a) (c) MR (a) (b) (c) (d)	D flipflop roup of flip-flops Resister Catch I stands for — Memory Referen Memory Registe Memory Referen	(d) sensiti (b) (d) ace Inst r Instruce Inte r Instru	Master slave flipflop ive to pulse is called a Gate Decoder ruction uction gration uction
9.	(c) $A g$ (a) (c) MR (a) (b) (c) (d) Rig	D flipflop roup of flip-flops Resister Catch I stands for — Memory Referen Memory Registe Memory Referen Memory Referen Memory Registe	(d) sensiti (b) (d) ace Inst r Instruce Inte r Instruce r Instruce (b)	Master slave flipflop ive to pulse is called a Gate Decoder ruction uction gration uction counter.) Asynchronous
9.	(c) $A g$ (a) (c) MR (a) (b) (c) (d) Rip (a)	D flipflop roup of flip-flops Resister Catch I stands for — Memory Referen Memory Registe Memory Referen Memory Referen Memory Registe	(d) sensiti (b) (d) ace Inst r Instruce Inte r Instruce r Instruce (b)	Master slave flipflop ive to pulse is called a Gate Decoder ruction uction gration uction

1		PART B — (5 × 5 = 25 marks)
	А	nswer ALL questions, choosing either (a) or (b).
	11.	 (a) Do the following : (i) Convert (0.6875)₁₀ to binary (ii) Convert (0.513)₁₀ to octal.
		Or 11 in actor?
		(b) Which gates are called a universal logic gates? Why?
	12.	(a) What is a constructor? Write down the characteristics of constructor function. Or
		(b) Write short notes on : Encoders.
	13.	(a) Explain the features of Member functions. Or
		(b) Discuss in detail 2's complement arithmetic with examples.
	14.	(a) Discuss the principle of clocked RS flipflops. Or
		(b) What is D flip-flop? Explain.
	15.	(a) Write about serial in-parallel out shift register. Or
		(b) What are the types of registers? Explain.
	4	(b) What are the types of registerer 2017 Page 3 Code No. : 41404 E

	2. The protocol, which provides communicable global
(6 pages) Reg. No. : Code No. : 41196 E Sub. Code : JMCS 31/ JMSE 31	2. The protocol, which produces is addresses of/to the computers is
	3. Which of the following is a meta information?
B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.	 (a) Keywords (b) expiry date
Third Semester Computer Science/Software Engineering — Main	(c) Pate generation software used(d) All the above
WEB TECHNOLOGY	4 specifies the background color of the web pages
(For those who joined in July 2016 only) Maximum : 75 marks	(a) Bgcolor (b) Link (c) Vlink (d) Text
*Time : Three hours $PART \Lambda \longrightarrow (10 \times 1 = 10 \text{ marks})$	5 are the document object properties
Answer ALL questions. Choose the correct answer :	 (a) Be color and fgcolor (b) Link color - and alink color
1	(c) Title and forms(d) All the above
(a) Telnet	6. Submit() is a method for (a) Forms object (b) Document object
(b) FTP (c) Gopher	(c) Text box (d) Date object
CTN CCH	Page 2 Code No. : 41196

.

E

- XML documents are made up of -
 - (a) Tag (b) Elements
 - (c) Attributes (d) (a), (b) and (c)
- 8. XML was designed to -----
 - (a) Describe data
 - (b) Focus on what data is
 - (c) Display data
 - (d) (a) and (b)
- 9. _____ is an interface that declares the life , cycle methods for a servlet
 - (a) Servlet request
 - (b) Generic servlet
 - (c) Servlet
 - (d) Servlet context
- 10. Java server pages are saved with ----
 - (a) .jsp (b) .java
 - (c) .txt (d) .asp
 - Page 3 Code No. : 41196 E

- PART B $(5 \times 5 = 25 \text{ marks})$
- Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

 (a) What is internet? Explain the uses of internet.

Or

- (b) What is WWW? Explain the concepts.
- 12. (a) Describe the outline of an HTML documents.

Or

- (b) List the advantages and disadvantages of dynamic HTML.
- 13. (a) What is the purpose of XML DTD? Explain.

Or

- (b) Describe XML attributes with its disadvantages.
- 14. (a) Describe the language elements of Java Script.

Or

(b) Explain the looping constructs of VB script with examples.

> Page 4 Code No. : 41196 E [P.T.O.]

15.

(a) Write about HTTP get and post requests.

Or

(b) Explain about servlet APT.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What is protocol? Explain TCP and UDP in detail.

Or

(b) Explain internet applications and application protocols in detail.

 (a) Describe the various tags which are used in HTML body section and to design forms.

Or

- (b) Explain about CSS and DHTML event handling.
- 18. (a) Explain (i) the building blocks of XML documents (ii) XSL.

Or

(b) Describe the features of common gateway interface.

- 19. (a) Explain the purpose of properties and methods of
 - (i) Text boxes and text-areas
 - (ii) Buttons, radio-butons and check boxes.

Or

- (b) Explain (i) How to embedded VB Script code in an HTML document (ii) Conditional statements in VB script.
- (a) Explain the advantages and features of ASP.

20.

Or

(b) Describe the features and advantages of JSP.

Page 6 Code No. : 41196 I
(6 pag	ges) Reg. No. :	2.	Link	ed pages are calle	ed as —	
0.1	e No. : 41224 E Sub. Code : JNCS 4 B/		(a)	hypertext	(b)	webpages
Code No. : 4122	JNSE 4 B		(c)	links	(d)	hyperpages
U.G.	(CBCS) DEGREE EXAMINATION, APRIL 2019.	3.	Whi	c <mark>h</mark> one is a search	i engine'	2
	Fourth Semester		(a) .	Hotmail	(b)	G-mail
	Computer Science/Software Engineering —		(c)	Google	(d)	E-mail
	Non-Major Elective	- 4.	Wha	at is defined as th	e collect	ion of WebPages?
	FUNDAMENTALS OF INTERNET		(a)	Collection	(b)	Website
	(For those who joined in July 2016 onwards)		(c)	View	(d)	Program
Time	: Three hours Maximum : 75 marks					
	PART A — $(10 \times 1 = 10 \text{ marks})$.	Who	o allocates websit	e addres	sses?
	Answer ALL questions.	1.00	· (a)	Intel	(b)	DEC
	Choose the correct answer:		(c)	InterNIC	(d)	NIC
1.	The Interconnected network is known as	6.	Wh	ich software is us	ed devel	lop websites?
			(a)	Adobe Dreamw	caver	
	(a) Internet			Paint		
	(b) Network		(b)			
	(c) Connection		(c)	Word		
	(d) Subnet		(d)	Excel		

Page 2 Code No. : 41224 E

- 7. M-Commerce means
 - (a) Multiple Commerce
 - (b) Media Commerce
 - (c) Mobile Commerce
 - (d) Mobility Commerce
- 8. Which trade is between customer and seller?
 - (a) B2C (b) B2B (c) C2C (d) C2B
 - - (a) Hacking (b) Update
 - (c) Threats (d) Delete
- The ——— finds data in memory and alter them.

(d)

- (a) Bug (b) Exception
- (c) Virus
 - Page 3 Code No.: 41224 E

Worm

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write notes on Internet services.

Or

- (b) Explain current network technologies.
- 12. (a) Discuss URL and its selection.

Or

- (b) Bring out the types of web sites. Explain.
- 13. (a) Discuss the structure of the Website with an example.

Or

- (b) Write down the features of Adobe Dreamweaver.
- 14. (a) Explain the types of Internet based trading.

 \mathbf{Or}

- (b) Discuss the Shopping in Virtual store.
- 15. (a) Explain Internet Threats and its types.

Or

- (b) Write notes on Firewall.
 - Page 4 Code No. : 41224 E [P.T.O.]

9.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain Internet architecture in detail.

Or

- (b) What is Internet? Explain hardware and software in the Internet.
- 17. (a) Explain the types of Internet accounts.

Or

- (b) What is a search engine? Explain with examples.
- (a) Explain website development and its hosting in detail.

Or

- (b) Explain the features of Microsoft FrontPage.
- 19. (a) Explain the business relationship of E-commerce.

Or

(b) Discuss M-commerce and its issues.

Page 5 Code No. : 41224 E

20. (a) Define Blog. How will you build a Blog site?

Or

(b) Compare Virus and Worm.

(6 pages) Reg. No. :

Code No.: 40383 E Sub. Code : JMCS 61/ JMSE 61

> B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

> > Sixth Semester

Computer Science/Software Engineering - Main

OPERATING SYSTEMS

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

— allows many systems to attach to a pool of storage

(a) DLM

1.

- (b) SAN
- (c) WAN
- (d) WORM

2.	Messages can be exchanged between the process either directly or indirectly through ———			
	(a)	packets	(b)	host name
	(c)	mail box	(d)	resources
3.				process state when a ned to the processor?
	(a)	new	(b)	running
•	(c)	waiting	(d)	ready
4.	proc	is a modul ess selected by the s		t gives control to the term scheduler
	(a)	Context switch	(b)	CPU burst
	(c)	Dispatcher	(d)	Scheduler
5.	Co-c	operating process sh	are —	
	(a)	data	(b)	code
	(c)	data and code	(d)	no sharing
6.	Whi tool		wing	is a synchronization
	(a)	mutex	(b)	locks
	(c)	semaphores	(d)	all the above
		Page	2 (Code No. : 40383 E

7.	For	handling address	space	s larger than 32 bits
		page table	is use	d
	(a)	hierarchical	(b)	hashed
	(c)	inverted	(d)	all the above
8.		address s	space	refers to the logical
	view	of process in mem	ory	and a support
	(a)	segmentation	(b)	paging
	(c)	virtual	(d)	all the above
9.	File	is a collection of	relate	d information on the
	(a)	primary	(b)	secondary
	(c)	tertiary	(d)	auxiliary
10.		is a solid s	tate di	rive
	(a)	CD	(b)	DVD
	(c)	Blu-ray disc	(d)	All the above

Page 3 Code No. : 40383 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 250 words.

11. (a) Define operating system and explain user view and system view of the same.

Or

- (b) Explain various categories of system programs.
- 12. (a) Give an account of PCB with suitable diagram.

Or

- (b) State and explain the criteria behind CPU scheduling.
- 13. (a) Explain critical section problem with its solution.

Or

- (b) What is safe state? Explain with example.
- 14. (a) Explain dynamic linking and loading.

Or

(b) Discuss the performance of demand paging.

Page 4 Code No. : 40383 E [P.T.O.] 15. (a) Discuss about file access methods.

Or

(b) Explain SCAN scheduling used in the disk.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Answer should not exceed 600 words.

16. (a) Describe the architecture of operating system with suitable diagram.

Or

- (b) Give an account of operating system services.
- 17. (a) Explain in detail IPC with reference to message passing systems.

Or

- (b) Explain in detail various scheduling algorithms with suitable examples.
- 18. (a) Define synchronization and explain how it works in consumer producer problem.

Or

(b) Explain in detail the deadlock prevention.

Page 5 Code No. : 40383 E

19. (a) Describe the paging model of logical and physical memory with suitable diagram.

Or

- (b) Discuss about thrashing in page allocation.
- 20. (a) Explain various operations on files with reference to file structure.

Or

(b) Give an account of mass storage structure.

Page 6 Code No. : 40383 E

(6 pages)

Reg. No. :

Code No. : 40585 E Sub. Code : SMCS 21/ SMSE 21

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Second Semester

Computer Science/Software Engineering - Main

OBJECT ORIENTED PROGRAMMING IN C++

(For those who joined in July 2017 onwards)

Time : Three hours

1.

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer.

is the process by which objects of one class acquire the properties of objects of another class.

- (a) Encapsulation
- (b) Inheritance
- (c) Abstraction
- (d) Late Binding

2.	The deferencing operator is
	(a) .*> (b) *->
	(c) ->* (d) *
3.	is special because its name is the same as the class name.
	(a) function (b) constructor
	(c) object (d) inheritance
4.	Which of the following operator cannot be overloaded?
	(a) :: (b) ++
	(c) * (d) %
5.	A class can inherit properties from more than one class which is known as ———————————————————————————————————
	(a) single inheritance
	(b) multiple inheritance
	(c) multilevel inheritance .
	(d) hierarchical inheritance
6.	An class is designed only to act as a base class.
	(a) derived (b) member
	(c) virtual base (d) abstract
	Dame Q. C. J. N
	Page 2 Code No. : 40585 E

7. Virtual functions -

- (a) must be members of some class
- (b) cannot be static members
- (c) can be a friend of another class
- (d) all the above
- 8. If we create a file by 'If stream' then the default mode of the file is _____.
 - (a) ios::out
 - (b) ios : : in
 - (c) ios::app
 - (d) ios : : binary

9. Function templates can accept

- (a) any type of parameters
- (b) only one parameter
- (c) only parameters of the basic type
- (d) only parameters of the derived class
- 10. The functions _____ writes a single character to the associated stream.
 - (a) put()
 - (b) write ()
 - (c) fout
 - (d) ios::out

Page 3 Code No. : 40585 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain arrays of objects with an example.

Or

- (b) Discuss the characteristics of friend function with examples.
- 12. (a) Define constructors. Describe its special characteristics.

Or

- (b) What do you understand about Destructors? Discuss with suitable program.
- 13. (a) Write a program to implement overloading unary operators.

Or

- (b) Write a program to multiply two given numbers USE single inheritance.
- 14. (a) Explain "this" pointer with suitable example.

Or

(b) Describe virtual functions.

Page 4 Code No. : 40585 E [P.T.O.] 15. (a) Explain File stream classes in detail.

Or

(b) Discuss briefly about class templates.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the basic concepts of OOPs.

Or

- (b) How will you create classes and objects in C++? Explain.
- (a) Describe Copy constructors with an example programs.

Or

- (b) Illustrate Dynamic constructors.
- (a) Illustrate overloading Binary operators using Friends.

Or

(b) Explain Multilevel and Multiple Inheritance.

Page 5 Code No. : 40585 E

19. (a) What is Pointers? Explain Pointers to Derived classes with an example.

Or

- (b) Explain :
 - (i) C++ stream classes
 - (ii) Unformatted I/O operations.
- 20. (a) Explain end-of-file detection and File modes.

Or

(b) Describe function templates.

Page 6 Code No. : 40585 E

(7 pages) Reg. No. :	2. Which of the following logical operation is represented by the $+\sin n$ in Boolean algebra?
Code No. : 41216 E Sub. Code : JACS 21/ JASE 21	(a) AND (b) OR
JASE 21	(c) NOT (d) Inversion
B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.	3. Which of the examples below expresses the commutative Law of Multiplication?
Second Semester	(a) $A + B = B + A$ (b) $A \cdot B = B + A$
Computer Science/Software Engineering – Allied	(c) $A \cdot B = B \cdot A$ (d) $A + B = B \cdot A$
DIGITAL DESIGN	4. The distributive Law, $A(B+C) =$.
(For those who joined in July 2016 only)	(a) $(A+B)+C$ (b) $AB+AC$
Time : Three hours Maximum : 75 marks	(c) $A + (B + C)$ (d) $AB \cdot AC$
PART A — (10 × 1 = 10 marks)	5 are useful for decimal displays.
Answer ALL questions.	(a) Encoders
Choose the correct answer :	(b) Seven - Segment decoders
Choose the correct answer .	(c) Multiplexers
1. $(171)_{10}$ is equivalent to	(d) None
(a) $(FD)_{16}$ (b) $(AA)_{16}$	6. A multiplexer with 4-bit data, selects input as a
(c) $(AB)_{16}$ (d) $(AC)_{16}$	(a) 4:1 (b) 2:1
	(c) 16:1 (d) 8:1
	Page 2 Code No. : 41216 E

.

- 7. The 2's complement representation of -10 is
 - (a)00001010(b)00000110(c)1111 0110(d)1111 1010
- 8. The functional difference between RS and JK flip is that
 - (a) JK flip-flop is faster than RS flip-flop
 - (b) JK flip-flop has a feedback path
 - (c) JK flip-flop accepts both inputs 1
 - (d) None of then
- .9. Ripple counters are also called as
 - (a) Asynchronous conunter
 - (b) Synchronous counter
 - (c) SSI counter
 - (d) VLSI counter
- 10. An asynchronous 4-bit binary down counter changes from count 2 to count 3. How many transitional state are required?
 - (a) Six (b) Two
 - (c) Four (d)

) Fifteen

Page 3 Code No. : 41216 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

11. (a) Describe the logic gates with Truth tables.

Or

- (b) What do you mean by positive and Negative Logic? Explain.
- 12. (a) Describe the Boolan Laws.

Or

- (b) Discuss about Don't Care Conditions.
- (a) Convert the following decimal numbers to an 8-bit sign-magnitude number.
 - (i) +5
 - (ii) -15
 - (iii) -23
 - (iv) -45
 - (v) 75

Also convert the answer to hexadecimal from.

Or

- (b) The following hexadecimal numbers represent sign – magnitude numbers. Convert each to its decimal equivalent.
 - (i) (FF)₁₆
 - (ii) $(8F)_{16}$.

Page 4 Code No. : 41216 E [P.T.O.] 14. (a) Describe RS Flip Flops.

Or

- (b) Discuss about Universal Shift Register.
- 15. (a) What is Decoding Gates? Explain.

Or

- (b) Define :
 - (i) Asynchronous counter
 - (ii) Synchronous counter.
 - PART C $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

16. (a) Convert the following :

- (i) $(110111011)_2$ to Decimal
- (ii) (155)₁₀ to Binary
- (iii) (4574)₁₀ to Octal
- (iv) $(1235)_{10}$ to Hexa decimal.

Or

- (b) Convert the following :
 - (i) (FFA)₁₆ to Binary
 - (ii) $(324)_8$ to Decimal
 - (iii) (256)₁₀ to Binary
 - (iv) $(111000101010)_2$ to Hexa decimal.
 - Page 5 Code No. : 41216 E

17. (a) Explain Karnaugh Maps with Two, Three and Four variable map examples.

Or

- (b) Explain Pairs, Quads and Octets with Algebraic Proof.
- 18. (a) Explain about Multiplexers and De-Multiplexers.

Or

- (b) Explain Seven Segment Decoders with diagram.
- 19. (a) Explain JK Flip Flops.

Or

- (b) Explain the Types of Registers in detail.
- 20. (a) Explain Ripple counter with block diagram.

Or

(b) Describe Synchronous Counter.

Page 6 Code No. : 41216 E

15. (a) Explain about main memory.

Or (b) Describe the purpose of Cache memory.

PART C - (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

16. (a) What are the phases of instruction cycle? Explain in detail.

Or

- (b) Explain about computer instructions.
- 17. (a) Explain stack organizations. Or
 - (b) What is addressing modes? Explain its various types.
- 18. (a) Explain multiplication algorithm and give example.
 - Or (b) Explain division algorithm and five example.
- 19. (a) Describe asynchronous data transfer.

Or

- (b) What is the purpose of DMA? Explain with block diagram.
- 20. (a) Explain about associative memory.

(b) Describe virtual memory.

Page 4 Code No. : 41392 E

	Re	g, No. :
Cod	e No. : 41392 E	Sub. Code : SMCS 32
B.Sc	(CBCS) DEGREE EX.	AMINATION, APRIL 2019.
	Third Se	
	Computer Sci	ence — Main
	COMPUTER AI	CHITECTURE
	(For those who joined	in July 2017 onwards)
Time	. Three hours	Maximum : 75 marks
P dealers	PART A - (10	\times 1 = 10 marks)
	Answer AL	L questions.
	Choose the correct ans	swer:
1.	perform a specifi	t instruct the computer to c operations is called (b) status word
	 (a) operation code (c) instruction code 	(d) op-code.
2.	The address of the	next instruction is hold by
1.2	(a) stack pointer	(b) program counter
	(c) input register	(d) accumulator.
3.	The prefix notation of $x * y - p * q + A * B$	
. 3.1	(a) $-+*xy*pq A*$	D
	(b) $+-xy*pq*AB$	
	(c) $-+*xy*pq*A$	ß
3	(d) $xy * pq * AB * +$	

Or

the second se	10. An address in main memory is called a
In which mode, the effective address is equal to the address part of instruction? the address part of (b) register mode	(a) location (b) physical address (c) virtual address (d) (a) or (b).
(a) immediate float (d) indirect mode. (c) direct mode (d) indirect mode. When $A = B$, the subtract magnitude for the basis	PART B — $(5 \times 5 = 25 \text{ marks})$ Answer ALL questions choosing either (a) or (b).
When $A = B$, $C(A = B)$ operation $(+A) - (+B)$ is (a) $+(A - B)$ (b) $-(A - B)$ (c) $+(A + B)$ (d) $-(A + B)$. d in the multiplication	11. (a) Explain about stored program organization and indirect address with neat block
The sequence counter used in the algorithms denotes the number of bits in the	 diagrams. Or (b) Describe the functions of computer registers and how the registers and memory are and how the registers and memory are
 (a) multiplier (b) multiplicand (c) partial product (d) double length of multiplier. 	Connected to the connection formats.
7. Which command is issued to do peripheral and to inform it what to do	Or Describe the data manipulation instruction.
 (b) Control command (c) Status command. (d) Data output command. 	 (b) Decord (c) Draw the flow chart for add and subtract 13. (a) Draw the flow chart for add and subtract Or
into and out of the memory	(b) Explain the addition and subtraction algorithms for floating - point numbers.
 (a) Programmed 1/0 (b) Interrupt-initiated 1/0 (c) Direct-memory access 	 (a) Explain isolated and memory-mapped I/O. (b) What do you understands about priority.
 (d) None. 9. Cache memory is in between	interrupt? Explain ban,
 (b) main memory and CPU (c) main memory and output processor. (d) main memory and output processor. Page 2 Code No.: 41392 E 	Page 3 Code No. : 41392

4.

5.

6.

(6 pages)

Reg. No. :

Code No. : 40375 E Sub. Code : JMCS 11/ JMSE 11

B.Sc.(CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

First Semester

Computer Science/Software Engineering - Main

PROBLEM SOLVING TECHNIQUES AND PROGRAMMING IN 'C'

(For those who joined in July 2016 only)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. An ______ is an effective step-by-step procedure is perform calculation or for the solution of a problem.

(a) Algorithm

(b) Flow chart

(c) Programming Language

(d) None

Which of the following is not an Input device?

(a)	Printer	(b)	Scanner
(c)	Keyboard	(d)	Mouse

3. Which of the following is not an assignment operator?

(a)	= 100	(b)	+=
(c)	>=	(d)	*>

4. What are the respective minimum sizes (in bytes) of the following three data – types : short, int and long?

(a)	1,2,2	(b)	1,2,4
(c)	1,2,8	(d)	2,2,4

5. Which of the following is an unconditional control structure?

(a)	if	(b)	do-while
(c)	switch-case	(d)	goto

6. n=5:

2.

(n<10)? s=0 : s=1;

The above expression gives

(a)	s=0	(b) s=1	
level	N V		

(c) n=5 (d) n=10

Page 2 Code No. : 40375 E

7.	The default return data ty definition is	vpe in a "C" function
	(a) float (b)	void
	(c) int (d)	char
8.	Which one of the following declare a pointer?	is the correct way to
	(a) *int ptr; (b)	int ptr *;
	(c) int *ptr; (d)	int ptr *
9.	The function used to determine	ect the end of file is
	(a) ferror() (b)	Feof()
	(c) fget() (d)	
10.		e function declaration
		function
		formal
	PART B — $(5 \times 5 =$	25 marks)
	Answer ALL questions, choos	ing either (a) or (b).
	Answer should not exce	
11.	. (a) Explain the classific language.	ation of programmin
	Or	abl balance of good
	(b) Define Algorithm and it will support for prob	flowchart. Describe hov lem solving.
	Page 3	Code No. : 40375]

12. (a) Define constants and variables. State the rules with examples.

Or

- (b) What is data types? Describe with examples.
- (a) Write a C program to print the numbers which are divisible by 5 between 1 to 100.

Or

- (b) Write a C program to accept N numbers from the keyboard and calculate the sum of odd numbers and sum of even numbers in the list.
- 14. (a) Write a C program to accept several numbers and print the maximum of the using functions.

Or

- (b) Write a C program to count and print the number of vowels present is a given string.
- 15. (a) Describe pointer expressions with examples.

Or

(b) Write a C program to create a data file for student data.

> Page 4 Code No. : 40375 E [P.T.O.]

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b) Answer should not exceed 600 words.

16. (a) Explain the generations and features of good programming languages.

Or

- (b) Explain the types of input devices and classifications of output devices.
- 17. (a) Explain the use of operators in C with examples.

Or

- (b) Explain the input/output statements with examples.
- (a) Write a C program to accept five marks and calculate average if each marks >=35. Also print the grade using

Average marks	Grade
Below 50	E
50-59	D
60–69	С
70-79	В
80 and above	Α

Or

Page 5 Code No. : 40375 E

- (b) Write a C program to read a set of 'n' integers in an array and print the numbers of
 - (i) Positive numbers
 - (ii) Negative numbers
 - (iii) Zeros
 - (iv) Odd numbers
 - (v) Even numbers.
- 19. (a) Explain the categories of functions with examples.

Or

- (b) Explain structures and unions.
- 20. (a) Explain the term pointer variable. Give example and write a program to find the factorial of a given number using pointers.

Or

- (b) Explain
 - (i) File opening
 - (ii) Input/output operations on files.

Page 6 Code No. : 40375 E

(6 pages)

Reg. No. :

Code No.: 40604 E Sub. Code : SACS 31/ SASE 31

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Third Semester

Computer Science/Software Engineering - Allied

WEB TECHNOLOGY

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. Standard for local area networks (LANs).

- (a) Ethernet
- (b) TCP/IP
- (c) HTTP
- (d) FTP

2.	IP address space is allocated to downstream providers and customers by					
	(a) L	ANA	(b)	RIR		
	(c) I	SP	(d)	Router		
3.	Title b	HTML Ta		used to	display the	
	(a) <	TITLE>	(b)	<head< td=""><td>)></td></head<>)>	
	(c) <	TITLE BAR>	(d)	<body< td=""><td>> ·</td></body<>	> ·	
4.		of the following ing of paragraph?		is used	to mark a	
	(a) <	<td></td> <td>(b)</td> <td><p></p></td> <td></td>		(b)	<p></p>	
	(c) <	br>	(d)	<tr></tr>		
5.	Javasc	ript is	— lar	iguage.		
	(a) P	rogramming				
	(b) A	pplication				
	(c) S	cripting				
	(d) B	rowser	*			
6.	Write a conditional statement for executing the code if "i" is NOT equal to 5?					
	(a) if	(i! =5)	(b)	if (i <> {	5)	
	(c) if	i=! 5 then	(d)	if i <> 5		

Page 2 Code No. : 40604 E

is the method used to display a dialog box in the document window

- confirm() (b) (a) show()
- display() (d) prompt() (c)

8. How do you find the number with the highest value of x and v in Javascript?

- (a) ceil(x,v)
- (b) top(x,y)
- Math.max(x,y)(c)
- (d) Math.ceil(x,v)
- DHTML is the combination of
 - (a) XML and XHTML
 - HTML and JavaScript (b)
 - XHTML and HTML (c)
 - (d) HTML and CSS
- The important component of DHTML is 10.
 - Forms (a)
 - Style Sheets (b)
 - Hyperlinks (c)
 - (d) Frames

Page 3 Code No. : 40604 E

9.

7

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Discuss the uses of internet.

Or

- (b) Describe host names.
- 12. (a) Explain the various attributes in <BODY> Tag.

Or

- (b) With suitable example explain TABLE tag with all its features.
- 13. (a) Discuss the need of a scripting language.

Or

- (b) Explain functions in JavaScript.
- 14. (a) Explain Select object in JavaScript.

Or

(b) Write a JavaScript that finds the square root of an integer.

Page 4 Code No. : 40604 E [P.T.O.] 15. (a) Describe contextual selectors.

Or

(b) Explain event bubbling.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What are the uses of internet? Describe any three application protocols.

Or

- (b) Compare and contrast IMAP and POPs.
- 17. (a) Explain Lists in HTML in detail with example.

Or

- (b) Explain HTML forms in detail with an example.
- 18. (a) Discuss the various operators in JavaSript.

Or

(b) Explain in detail the looping statements in JavaScript.

Page 5 Code No. : 40604 E

19. (a) Discuss Date object and String object in JavaScript.

Or

- (b) Describe Buttons, Radio buttons and Checkboxes of the Form Object.
- 20. (a) Explain Properties of tags, their values and style properties.

Or

(b) Describe DHTML document object model and collections.

Page 6 Code No.: 40604 E

(6 pages)

Reg. No. :

Code No. : 40605 E

Sub. Code : SACS 41

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Fourth Semester

Computer Science — Allied

E - COMMERCE

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. _____ model, business Website is a place where all transactions take place between a business organization and consumer directly.

(a)	B2B	(b)	B2C
(c)	C2B	(d)	C2C

(6 pages)	Reg. No. :		2.	The	unit of speed	used fo	r super conductor is
Code No. : 41221 E	Sub. Code : JNCS 3 A/ JNSE 3 A			(a) (c)	KFLOPS GFLOPS	(b) (d)	MFLOPS None of these
U.G. (CBCS) DEGREE EXAMINATION, APRIL 2019.			3,	device.			
Third :	Semester			(a)	Keyboard	(b)	Mouse
Computer Science/Software Engineering				(c)	Joystick	(d)	Scanner
Non-Major Elective — INTRODUCTION TO COMPUTER			4.	LCD stands for			
				(a)	Liquid Colour	Display	
(For those who joined in July 2016 only)				(b)	Light Colour Display		
				(c)	Lithium Colour Display		
Time : Three hours	Maximum : 75 marks			(d)	Liquid Crystal	Display	
PART A — (10 × 1 = 10 marks) Answer ALL questions. Choose the correct answer.		5	5.	The operating system that is self-contained in the device and resident in ROM is			
				(a)	Batch processi	ng systen	n
				(b)) Real-time operating system		
1. UNIVAC is an examp	ole of			(c)	Embedded ope	rating sy.	stem
(a) First-generation				(d)	Multiprocessor	operatin	g system
(b) Second-generat	ion computer		6.	Whi	ch of the followi	ng is OS?	
(c) Third-generation	on computer			(a)	Windows	(b)	С
(d) Fourth-generat	ion computer			(c)	C++	(d)	None of these
					P	age 2 (Code No. : 41221 E

- The spelling option is in menu of MS Word.
 - (a) Edit (b) Format
 - (c) View (d) None of these
- To cut any highlighted text in MS Word document, press — keys.
 - (a)Ctrl+C(b)Ctrl+S(c)Ctrl+X(d)Ctrl+V
- A computer network, which spans over a large geographical area such as cities, states, countries or even the whole world is ——.
 - (a)MAN(b)WAN(c)LAN(d)VAN
- 10. Which of the following cables supports the highest bandwidth and fastest transmission rate?
 - (a) Twisted pair cable
 - (b) Coaxial cable
 - (c) Open wire cable
 - (d) Fibre optic cable

Page 3 Code No. : 41221 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

11. (a) Discuss the characteristics of computers.

Or

- (b) Write a note on Computer Architecture.
- 12. (a) What is a joystick? How is it different from a trackball?

Or

- (b) List some advantages and disadvantages of dot matrix printers.
- (a) What is an operating system? Explain its functions.

Or

- (b) Explain Windows Explorer.
- 14. (a) Explain the uses of Ruler in MS Word with example.

Or

(b) Explain the important parts of MS Word Window.

> Page 4 Code No. : 41221 E [P.T.O.]

15. (a) Discuss the various transmissions mode of data.

Or

(b) Discuss about Network topology.

PART C $-(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

 16. (a) Draw a block diagram to illustrate the basic organization of a computer system and explain the functions of various units of a computer system.

Or

- (b) Discuss various computer generations.
- 17. (a) Explain the following :
 - (i) Hard disk
 - (ii) Zip disk
 - (iii) Floppy disk
 - (iv) Memory stick.

Or

(b) Write in detail about input devices.

18. (a) Explain different types of Operating Systems.

Or

- (b) Discuss about Windows Accessories.
- 19. (a) Write down the steps for copying and moving a section of tent in MS Word.

Or

- (b) Enumerate the 'Spelling and Grammar' concepts in word document with example.
- 20. (a) Write a short notes on the following :
 - (i) LAN
 - (ii) MAN
 - (iii) WAN.

Or

(b) Explain Client Server Architecture.

Page 6 Code No. : 41221 E
(6 pages)

Reg. No. :

Code No. : 40397 E Sub. Code : JACS 21/ JASE 21

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Second Semester

Computer Science/Software Engineering - Allied

DIGITAL DESIGN

(For those who joined in July 2016 only)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. $(214)_8 = ?$

- (a) $(140)_{10}$ (b) $(141)_{10}$
- (c) $(142)_{10}$ (d) $(130)_{10}$

2.	Output will be a Low f move inputs are zero is -	or any case when one or
	(a) OR gate	(b) AND gate
	(c) NOT gate	(d) NOR gate
3.	The Boolean expression equivalent to	on $Y = AB$ is logically gate.
	(a) NAND	(b) NOR
	(c) AND	(d) OR
4.	The Associative Law is	A + (B + C) =
	(a) $AB + AC$	(b) $(A+B)+C$
	(c) $A + B + C$	(d) $A(B+C)$
5.	$Y = \overline{AB} + A\overline{B}$ is a boole Gate.	an equation for
	(a) AND	(b) OR
	(c) XOR	(d) NOR
6.	The 2's complement	representation for -15 is
	(a) 00001111	(b) 11110000
	(c) 11110001	(d) 00000001
	Pag	e 2 Code No. : 40397 E

In JK master – slave flip – flop, while the clock is ______, the master is ______ and the slave is inactive.

(a) Low, inactive

7.

9.

(b) High, active

(c) Low, active

(d) High, inactive

8. A simple flip - flop is -

(a) 2 bit memory

(b) 1 bit memory

(c) a four state device

(d) Nothing to do memory

In digital logic, a counter is a device which

(a) Counts the number of outputs

(b) Stores the number of time a particular eve

or process has occured

(c) Counts the number of times a clock pluse ri and falls.

(d) Counts the number of bits in memory.

10. What is the clock frequency if the period of wave form at ripple of counter is $24 \mu s$?

(a)	61	(b)	62
	63	(d)	64

Page 3 Code No.: 403

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b). Each answer should not exceed 250 words.

- 11. (a) Convert the following
 - (i) $(11101)_2$ to decimal
 - (ii) $(32)_{10}$ to Binary
 - (iii) $(43)_{10}$ to octal
 - (iv) (16)10 to Hexadecimal
 - (v) $(24)_{10}$ to Hexadecimal

Or

(b) Draw the logic circuit for the following boolean equation.

$$y = AB\overline{C} + \overline{ABC} + \overline{ABC} + \overline{ABC}$$

12. (a) Explain sum of products method with examples.

Or

(b) Explain products of sum method with examples.

Page 4 Code No. : 40397 E [P.T.O.] (a) Draw exclusive - OR gates diagram and Explain with truth table.

Or

- (b) Explain sign magnitude numbers with 2's complement arithmetic. Give examples.
- 14. (a) What is flip flop? Explain its uses.

Or

- (b) Describe it Types of Registers.
- 15. (a) What is decoding Gates? Explain.

Or

(b) How many flip – flops are required to construct ⇒ a mod -128 and a mod -32 counter. Discuss.

PART C — $(5 \times 8 = 40 \text{ marks})$

- Answer ALL questions, choosing either (a) or (b) Each answer should not exceed 600 words.
- 16. (a) Describe the basic and Universal Logic Gates with truth tables.

Or

(b) What are Binary, Octal and Hexadecimal numbers? Explain and Give examples.

Page 5 Code No. : 40397 E

17. (a) Write the boolean Laws and prove the theorems.

Or

- (b) Describe how to construct a Karnaugh map? Give examples for Two, Three and Four variable maps.
- 18. (a) Explain seven - segment decoders with diagram.

Or

(b) Convert each of the following decimal numbers to an 8 - bit sign - magnitude number.

(i)	+36	(ii)	-97
(iii)	-55	(iv)	+74

also convert the sing - magnitude numbers in to hexadecimal form

19. (a) Explain about JK master slave Flip Flops.

Or

- (b) Explain (i) RS Flip Flops
 - (ii) Edge Triggered D flip flops.
- 20. (a) What is Asynchronous counter? Explain.

Or

(b) Explain about Decade and Presetable counters.

Page 6 Code No. : 40397 E

(6 pages)

Reg. No. :

Code No. : 40605 E

Sub. Code : SACS 41

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Fourth Semester

Computer Science — Allied

E - COMMERCE

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. _____ model, business Website is a place where all transactions take place between a business organization and consumer directly.

(a)	B2B	(b) B2		
(c)	C2B	(d)	C2C	

- A ______is a device that includes an embedded integrated circuit chip [ICC] that can be either a micro controller or equivalent intelligence with internal memory or a memory chip alone.
 - (a) Smart Cards (b) E-Cheques
 - (c) E-Cash (d) Cheque
- 3. SET means

2.

- (a) Standard Electronic Technology
- (b) Standard Electronic Transfer
- (c) Secure Electronic Transaction
- (d) State Education Tools
- - (a) WWW (b) B2B
 - (c) B2C (d) C2C
- 5. A Provides a way to associate the message with the sender and is the equivalent of ordinary signature
 - (a) Cyber Signature
 - (b) Digital Signature
 - (c) SSL
 - (d) Cryptography

Page 2. Code No.: 40605 E

Which one of the following is not a principle of e-commerce?

(a) Privacy

(b) Integrity

(c) authentication

(d) robustness

What are plastic cards the size of a credit card that contains an embedded chip on which digital information can be stored?

- (a) Customer relationship management system cards
- (b) E-government identify cards
- (c) FEDI cards
- (d) Smart cards
- 8. E Commerce is not suitable for_
 - (a) Sale / Purchase of expensive jewellery and antique
 - (b) Sale / Purchase of mobile phones
 - (c) Sale / Purchase of branded clothes
 - (d) Online job searching

Page 3 Code No. : 40605 E

6.

7.

Which of the following is a method of transaction money from one person's account to another person's account?

- (a) Electronic Cheque
- (b) Credit Card
- (c) E transfer
- (d) Debit Card
- 10. The concept of Electronic cash is to execute payment by _____
 - (a) Credit Card
 - (b) ATM Card
 - (c) Using computers over network
 - (d) Cheque

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the E-Commerce opportunities for industries ?

Or

(b) Explain Emergence of the Internet.

Page 4 Code No. : 40605 E [P.T.O.]

12

9.

12. (a) Write note on advantages of B2B.

Or

- (b) Write note on Telnet and FTP.
- 13. (a) Explain about achieving web presence goals.

Or

- (b) Write note on E-Advertising.
- 14. (a) Write note on benefits of an Internet firewall.

Or

- (b) Explain the E-business risk management issues.
- 15. (a) Explain the features of Credit cards.

Or

(b) Mention the characteristics of E-Cash.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the classification on E-Commerce.

Or

(b) Write note on Advantages and Disadvantages of E-Commerce.

Page 5 Code No. : 40605 E

17. (a) Explain E-Business models based on the relationship of transaction parties.

Or

- (b) Describe the Business Model.
- 18. (a) Explain the features of E-Branding.

Or

- (b) Explain the browsing behaviour model.
- 19. (a) Discuss the Information System Security.

Or

- (b) Explain about Firewall Components.
- 20. (a) Explain the online Financial services in India.

Or

(b) Mention the advantages of Electronic payment system.

Page 6 Code No. : 40605 E

The diamond - shape symbol in the flowchart 2. signifies.

- Processing (a)
- Connectors (b)
- Decision (c)
- None of these (d)
- Logical error occurs due to 3.
 - Incorrect syntax (a)
 - Incorrect logic (b)
 - Wrong inputs (c)
 - None of these (d)
- White box testing is also known as 4
 - Glass box testing (a)
 - Functional testing (b)
 - Clear box testing (c)
 - Both (a) and (c) (d)
- COBOL and BASIC are the example of 5. generation languages.

\$7.....

4.2. 4.4252

Clauder Diler

- First (a)
- Second (b)
- Third (c)
- Fourth (d)

Reg. No. :

Sub. Code : SNCS 3 B Code No. : 41400 E

(6 pages)

U.G. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Third Semester

Computer Science - Non Major Elective BASIC PROGRAMMING DESIGN (For those who joined in July 2017 onwards) Maximum : 75 marks Time : Three hours

PART A $--(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

Flow lines in a flowchart are used to connect 1.

- Two terminals (a)
- Two connectors (b)
- Two input/output (c)
- (A) All of these

- 6. The language that truly implements all the object-oriented features is
 - (a) C(b) PROLOG(c) PASCAL(d) JAVA
- 7. The assembly language program is translated into machine code by a separate program called
 - (a) Assembler
 - (b) Interpreter
 - (c) Compiler
 - (d) Dissembler
- - (a) Shareware
 - (b) Freeware
 - (c) Commercial
 - (d) Proprietary
- 9. What would you use for immediate, real time communication with a friend?
 - (a) E-mail
 - (b) IRC
 - (c) Usenet
 - (d) A mailing list

Page 3 Code No. : 41400 E

- 10. Which of the following is a search engine?
 - (a) Macromedia flash
 - (b) Google
 - (c) Netscape
 - (d) Librarians' index to the internet

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

 (a) Define an algorithm. List the properties of a good algorithm.

Or

- (b) What benefits do decision tables offer over flowcharts?
- (a) Discus briefly the two types of errors. Explain the various approaches, which should be followed to correct these errors.

Or

- (b) Define procedural programming.
- 13. (a) Write a short note on the following.
 - (i) Loader
 - (ii) Linker

Or

(b) Briefly describe the classification of programming languages.

Page 4 Code No. : 41400 E [P.T.O.] 14. (a) What do you understand by the term 'software'?

Or

- (b) Write short notes on the following :
 - (i) Freeware
 - (ii) Shareware
- 15. (a) Give the full forms of the following :
 - (i) HTTP
 - (ii) TCP/IP
 - (iii) VOIP
 - (iv) SMTP
 - (v) POP

Or

- (b) What is telnet? How does it work?
 - PART C --- (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

16. (a) Discuss the structure of a flowchart? What guideliness should be followed while making a flowchart?

Or

(b) Explain program development cycle with the help of a block diagram.

17. (a) Explain the characteristics of a good program.

Or

- (b) Discuss the various aspects of objectoriented programming paradigm.
- 18. (a) Explain in detail any six popular high-level language.

Or

- (b) Explain the features of a good programming languages.
- 19. (a) What is a firmware? What is its importance in a computer system?

Or

- (b) Explain the working of a linker and a loader in the execution of a software program.
- 20. (a) What is e-mail? Explain its working with the help of an example.

Or

(b) What are search engines? How do they help the users in using information on the Internet?

Page 6 Code No. : 41400 E

(6 pages)

Reg. No. :

Code No. : 40399 E Sub. Code : JACS 41/ JASE 41

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Fourth Semester

Computer Science/Software Engineering - Allied

E-COMMERCE

(For those who joined in July 2016 only)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

1. Internet channels connecting two intranets and secured through cryptography and firewall techniques are termed as ______

- (a) Protocol
- (b) VPN
- (c) Firmware
- (d) Client/Server

2.		h of the followir nmerce?	ig is	not a catagory of
	(a)	B2B	(b)	B2C
	(c)	B2R	(d)	B2A
3.	The large	collection of hyper	a con text d	tinuously expanding ocuments
	(a)	E-mail	(b)	VRL
	(c)	HTML	(d)	WWW
4.	EDI	stands for		-
	(a)	Electronic Data In	terch	ange
	(b)	Electronic Data Ir	forma	ation
	(c)	Enterprise Data I	nterch	nange
	(d)	Electronic Display	7 Infor	rmation
5.	of .			ards that are capable value onto their
	(a)	Electronic purse	(b)	Electronic cash
	(c)	Electronic checks	(d)	All of the above
6.		cally between the		e element that sits device and the origin
	(a)	Web browser	(b)	SSL
	(c)	WAP gateway	(d)	WTLS
		Pag	e 2 .	Code No. : 40399 E

7.	DES	stands for		-		
	(a) Data Encryption Standard					
	(b)	Data Encoding S	Standard			
	(c)	Digital Encrypti	on Stand	dard		
	(d)	Digital Éncodin	g Standa	ard		
8.	Any neces	party involved i ssarily maint	n an e-ca ain a	ash transaction n account	with	
	(a)	Customer	(b)	Merchant		
	(c)	E-mint	(d)	All the above		
9.	also a digital token based system					
	(a)	E-cheque	(b)	E-cash		
	(c)	E-banking	(d)	Online banki	ng	
10.	GPF	RS stands for —				
	(a)	General Packe	t Radio S	Switching		
	(b)	General Protoc	col Radio	Switching		
	(c)	Geographical Packet Radio Switching				
	(d)	General Proto	col Ratio			
			Page 3	Code No.: 4	0399 E	

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What are the entities in B2B E-commerce?

Or

- (b) What are the benefits of carrying out business transactions over the intranets and extranets?
- 12. (a) Explain E-advertising.

Or

- (b) Explain software agents.
- 13. (a) Define online marketing.

Or

- (b) What is the meaning of E-branding?
- 14. (a) What is the firewall? Write down the characteristics and limitations of firewall.

Or

(b) What are the benefits of electronic cheques? Explain.

Page 4 Code No. : 40399 E. [P.T.O.]

15. (a) Explain digital token.

Or

(b) What are the factors that need to be addressed in the design of any new e-payment system? Explain.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the advantages and disadvantages of E-commerce.

Or

- (b) Write about social networking.
- 17. (a) Discuss about ISP.

Or

- (b) Explain
 - (i) Javascript
 - (ii) XML.
- 18. (a) Discuss about internet marketing.

Or

(b) Write in details about any one search engine.

Page 5 Code No. : 40399 E

19. (a) What are e-business risk management issues? Explain.

Or

- (b) Discuss in details on security services.
- 20. (a) Explain the electronic cash system.

Or

(b) What are the type of e-payment? Explain.

Page 6 Code No. : 40399 E

(6 pages)

Reg. No. :

Code No.: 40384 E Sub. Code : JMCS 62/ JMSE 62

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Sixth Semester

Computer Science/Software Engineering - Main

RELATIONAL DATABASE MANAGEMENT SYSTEM

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum: 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

- High level Query language used in relational data base is considered as ______.
 - (a) SQT (b) SQL
 - (c) SQR (d) ODBC

Which of the following commands is used to get all the column in a table?

(a) # (b) * (c) % (d) @

3.

2.

are communicating with the database through an already written program.

- (a) Application programmer
- (b) Native user
- (c) Sophisticated user
- (d) Specialized user.

4. The person who has the central control over a database system is called ———.

- (a) Database user (b) DMA
- (c) DBA (d) DAB
- 5. _____ is one of the valid record based data models.
 - (a) Object Oriented model
 - (b) Relational model
 - (c) E R model
 - (d) Network model

Page 2 Code No. : 40384 E

6. The type of constraint ——— specifies data values that are acceptable in a column.

- (a) Default (b) Check
- (c) Primary (d) Not null

of SQC with the data processing power of procedural languages.

(a) PL/SQL (b) SQL

7.

(c) Advanced SQL (d) PQL

8. _____ is one of the DOL command.

- (a) Insert (b) Create
- (c) Update (d) Select

9. ______ is otherwise called as virtual table.

- (a) Cursor (b) Assertion
- (c) View (d) Subtable

Page 3 Code No. : 40384 E

- 10. The set of permitted values of each attribute is called ———.
 - (a) Set (b) Attribute
 - (c) Group (d) Domain

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b). Each answer should not exceed 250 words.

11. (a) Write short notes on Database users.

Or

- (b) Discuss about Intelligent Database System.
- 12. (a) Discuss about Database schema diagram.

Or

- (b) Mention the basic structure of SQL Queries.
- 13. (a) Write short notes on views.

Or

(b) Discuss about Integrity constraints.

Page 4 Code No. : 40384 E [P.T.O.] 14. (a) Mention the various symbols used in E - R model.

Or

- (b) Discuss about Nested sub Queries.
- 15. (a) Write short notes on stored procedures.

Or

(b) Discuss about PL/SQL triggers.

PART C — $(5 \times 8 = 40 \text{ marks})$

- Answer ALL questions, choosing either (a) or (b) Each answer should not exceed 600 words.
- 16. (a) Explain the purpose of Database System.

Or

- (b) Write detail notes on Database Architecture.
- 17. (a) Discuss about the various types of keys.

Or

- (b) Explain about the Relational Operations.
- 18. (a) Write detail notes on set operations.

Or

(b) Discuss about SQL Data types.

Page 5 Code No. : 40384 E

19. (a) Describe the Entity relationship modeling.

Or

- (b) Write detail notes on Data Normalization.
- 20. (a) Discuss about the uses of cursors.

Or

(b) Write detail notes on modifying table in SQL.

Page 6 Code No. : 40384 E

PART C — $(5 \times 8 = 40 \text{ marks})$ Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words

16. (a) Discuss conditional statements with example.

Or

- (b) Explain the following with example
 - (i) Nested condition

(ii) Break and continue statement.

17. (a) Discuss user defined Functions with example.

Or

- (b) Explain different types of arrays with example.
- 18. (a) Discuss fgets() and fgetc() function with example.

Or

- (b) Explain copying and deleting files.
- 19. (a) Discuss insertion, updation and deletion of rows in tables.

Or

- (b) Explain joining tables and Set operators.
- 20. (a) Discuss PHP MySQL database connection process.

Or

(b) Write a PHP program to demonstrate error handling process.

Page 4 Code No. : 41397 E

Reg. No. :

Code No.: 41397 E Sub. Code : SSCS 3 A

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

Third Semester

Computer Science

Skill Based Subject –PROGRAMMING WITH PHP AND MYSQL

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

- 1. The output from PHP is _____.
 - (a) Statically generated
 - (b) Dynamically generated
 - (c) Not generated
 - (d) No output
- 2. The ______ statement will execute a block of code at least once.
 - (a) While
 (b) For
 (c) Switch
 (d) Do... while

3.	An array with strings as index is	υ.	If ther returns
	(a) Numeric Array	ALC: NO	(a) T
	(b) String Array		(c) 0
	(c) Associative Array		
	(d) None of the above	10.	How
	tort files stored on the client		requir
4.	computer and they are kept of use tracking		(a) 1
	purpose.		(c) 4
	(a) Cookies (b) Sessions		
	(c) Array (d) None of the above	1	Answer
	, frond() contains.		Eacl
5.	The second parameter of fread() contains.	11.	(a)
	(a) File mode	1. A. +	1
	(b) File name		(b)
	(c) Minimum number of bytes to read	10	(a)
	(d) Maximum number of bytes to read	12.	(a)
6.	If open is unable to open the file, it returns		4.5
1.4			(b)
	(a) -1 (b) 0	13.	(a)
	(c) False (d) None of the above		-
	Use keyword is used to select a		(b)
7.	(a) Column (b) Row	14.	(a)
1.4	(c) Table (d) Database		
	the following method is used to		
8.	the number of rows affected wy		(b)
	INSERT, UPDATE, or DELETE query?	15.	. (a)
	(h) Changed_rows()		
	(a) Affected rows() (d) None of the above		(b)
	Page 2 Code No. : 41397 E		

]	If the	ere is no eri	or, then	what will the error()
1	ceturi	ns?		False
((a)	True	(b)	Empty String
	(c)	0.	(d)	
	How	much stor	age sp	ace does DATETIME
	(a)	1 bytes	(b)	2 bytes
	(a) (c)	4 bytes	(d)	8 bytes
		PART B -	- (5 × 5 =	= 25 marks)
		ALL questi	ons, cho	osing either (a) or (b).
A	nswe	sh anower sh	ould not	exceed 250 words
		Explain var	iables in	PHP.
<u>75</u>	(a)	Explain var	Or	
		Emplain for		nt with example.
	(b)	Explain for	av? How	it is processed?
<u>.</u>	(a)	what is all	Or	
		Write a not		cies.
	(b)	Write a not	Darogra	im to create a file.
3.	(a)	Write a Ph	r progra	
	4. 1910			h example.
	(b)	Explain isc	am() wh	nd manipulating tables in
4.	(a)	Explain cr MYSQL.		id manipulating
			Or	1 functions
	(b)	Write a no	te on dat	a manipulation functions.
5.	(a)		ocessing	result sets of queries.
1000			0.	
	(b)	Explain th	te proced	ure to validate the input. 3 Code No. : 41397 E
			Page	9 0000 1.0

(6 pages)

Reg. No. :

Code No. : 40395 E Sub. Code : JMCS 6 C/ JMSE 6 C

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Sixth Semester

Computer Science/Software Engineering - Main

Major Elective — INTERNET OF THINGS

(For those who joined in July 2016 only)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer.

1. Which protocol is used to link all the devices in the IoT?

(a)	TCP/IP	(b)	Network
(c)	UDP	(d)	HTTP

2.	W	SN stands for
	(a)	
	(b)	
	(c)	
	' (d)	Wireless Service Network
3.	Wh	ich approach is used in IoT architecture?
-	(a)	Top down approach
	(b)	
	(c)	Top down and Bottom Up
	(d)	
1.	In S	OA, Service is termed as
	(a)	Software service
	(b)	Network service
	(c)	Business service
	(d)	Developer service
	The	analog signal is in
•	(a)	Continuous, frequency
	(b)	Continuous, time

- (c) Discrete, frequency
- (d) Discrete, time

5

Page 2 Code No. : 40395 E

6.

7.

laas stands for

(a) Infrastructure as a service

(b) infrastructure as a software

(c) Internet as a service

(d) Internet as a software

UML stands for _____

(a) User Modeling Language

(b) User Module Language

(c) Unified Modeling Language

(d) Unified Module Language

What is IIoT

(a) Information Internet of Thing

(b) Industrial Internet of Thing

(c) Innovative Internet of Thing

(d) None of the above

What is the role of communication protocol in IoT?

(a) Smart cities

(b) Cyber physical system

(c) Mac layer issue

(d) Managing energy

Page 3 Code No. : 40395 E

9.

8.

10.

- Only publisher to broker (a)
- (b) Only broker to publisher
- Publisher to broker and broker to publisher (c)
- (d) Server to client

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write short notes on components of M2M system solutions.

Or

- (b) What is IoT? Explain,
- 12. (a) Write short notes on Global value chain.

Or

- (b) What is reference architecture? Explain.
- 13. Explain the properties by which the devices (a)can be characterized.

Or

(b)-What is Bigdata? Explain with its characteristics.

> Page 4 Code No. : 40395 E [P.T.O.]

14. (a) Write short notes ETSI M2M service capability.

Or

- (b) What is resource descriptor in IoT information model? Explain.
- 15. (a) What is functional group? Explain IoT service functional group.

Or

(b) Write short notes on information handling.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What is game changer? Explain their relationship to IoT with example.

Or

- (b) Explain the comparisons of main characteristics of M2M and IoT.
- (a) Explain Information Driven value chain for IoT briefly.

Or

(b) Explain the design principle of IoT architecture.

Page 5 Code No. : 40395 E

Explain briefly how to manage M2M data. 18. (a)

Or

- (b) Explain knowledge reference architecture for M2M and IoT.
- 19: (a) Explain ETSI M2M high level architecture.

Or

- (b) Explain the IoT domain model briefly.
- (a) Explain virtual entity functional group of IoT functional model.

Or

(b) Explain the technical design constraints for developing and implementing M2M and IoT solution in the real world.

Page 6 Code No. : 40395 E

20.

(6 pages)

Reg. No. :

Code No.: 40386 E Sub. Code : JMCS 64/ JMSE 64

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2019.

Sixth Semester

Computer Science/Software Engineering - Main

DATA MINING

(For those who joined in July 2016 onwards)

Time : Three hours

1.

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

is useful when the classes in the data are not already known and the training data is not available

(a) Association rule mining

(b) Classification

(c) Cluster Analysis

(d) Web data mining

has data mining software called knowledge STUDIO

(a)	Angoss	(b)	Mineset
(c)	Mentas	(d)	Data Miner
Anot	ther name for associ	iation	rule mining is
(a)	Relationship mark	eting	
(b)	Customer profiling	s	
- (c)	Customer segment	tation	
(d)	Market basket and	alysis	
Cont	fidence of $X \to Y$ is		
(a)	$P(X \cup Y) / P(X)$	(b)	P(Y)/P(X)
(c)	$P(X \cap Y)/P(X)$	(d)	$P(X)/P(X \cap Y)$
The and	a test set	nod re	quires a training set

(a) Holdout

2.

3.

4.

5.

- (b) Random Sub-Sampling
- (c) Leave one out
- (d) Bootstrap

Page 2 Code No. : 40386 E

6.			ole Na	ive Bayes classifier	
	software.				
	(a)	SMILES	(b)	C4.5	
	(c)	CART5.0	(d)	NBC	
7.	In —	the cla	sses a	re not pre defined	
	(a)	Classification	(b)	Regression	
	(c)	Clustering	(d)	Association Rules	
8.	the	objects resulting in	obtain a tree	a nested partition of of clusters	
	(a)	Partitional	(b)	Hierarchical	
	(c)	Density-based	(d)	Grid-based	
9.	Cor	oying an entire web	site is	called	
	(a)	Replication	(b)	Mirroring	
	(c)	Sample	(d)	Pattern	
10.	A (paş	Cyber–Community ges that form a	may	be a collection of web	
	(a)	Complete graph	(b)	Connected graph	
	(c)	Bipartite graph	(d)	Cyclic graph	
		Pa	ge 3	Code No. : 40386 E	

PART B.— $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b). Each answer should not exceed 250 words.

11. (a) Explain the future of Data mining.

Or

- (b) Explain the following Data mining software
 - (i) Mineset
 - (ii) Miningmart
 - (iii) Oracle
- 12. (a) Write a note on Apriori–TID.

Or

- (b) Explain the performance Evaluation of Algorithms.
- 13. (a) Write about building a decision tree using the tree induction algorithm.

Or

(b) Write about improving accuracy of classification methods.

Page 4 Code No. : 40386 E [P.T.O.] 14. (a) Write about computing distance in Cluster Analysis.

Or

- (b) Explain the following cluster analysis software.
 - (i) Autoclass
 - (ii) Cluster 3.0
 - (iii) CViZ Cluster Visualization
- 15. (a) Define some of the web terminology based on the work of world wide wEB construction.

Or

(b) Write about Finger printing.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the Data mining process.

Or

(b) List and explain Data mining Applications.

Page 5 Code No. : 40386 E

17. (a) Write in detail about improving the efficiency of the Apriori Algorithm.

Or

- (b) Write a note on mining frequent patterns without candidate generation (FP-Growth).
- 18. (a) Write a note on estimating predictive accuracy of classification methods.

Or

- (b) Discuss in detail on other Evaluation Criteria for classification methods.
- 19. (a) List and explain the desired features of cluster Analysis.

Or

- (b) Write about dealing with large databases.
- 20. (a) Discuss about Locality and Hierarchy in the Web.

Or

(b) Write an elaborate note on web usage mining.

Page 6 Code No. : 40386 E

S pages) Reg. No. :	2. Standard ANSI C recognizes number of keywords?
Code No. : 41343 E Sub. Code : JMCA 11	(a) 30 (b) 32 (c) 24 (d) 36
B.C.A. (CBCS) DEGREE EXAMINATION, APRIL 2019. First Semester	 (c) 24 (d) 30 3. Which of the following is not logical operator? (a) & (b) && (c) (d)
Computer Application – Main PROGRAMMING IN C (For those who joined in July 2016 only) Time : Three hours Maximum : 75 marks	 4. In mathematics and computer programming, which is the correct order of mathematical operators? (a) Add, Sub, Mul, Div (b) Div, Mul, Add, Sub
PART A — $(10 \times 1 = 10 \text{ marks})$ Answer ALL questions.	(c) Mul, Add, Div, Subt(d) Add, Div, Mod, Sub
 Choose the correct answer : C programs are converted into machine language with the help of 	5. Output of following program: float x = 10.7; int i;
 (a) An Editor (b) A compiler (c) An operating system 	i = (int)x; print i; (a) null . (b) error (c) 10 (d) garbage value
(d) None of these	Page 2 Code No. : 41343 H

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- 6. Which one of the following is not a reserved keyword for C?
 - (a) auto (b) case
 - (c) main (d) default
- 7. Which operator in c can't be overloaded?
 - (a) % (b) + (c) :: (d) -
- 8. printf() belongs to which library of c
 - (a) stdlib.h (b) stdio.h
 - (c) stdout.h (d) stdoutput.h
- 9. What is true about fputs function
 - (a) wite to a file
 - (b) take two parameters
 - (c) requires a file pointer
 - (d) all of above
- 10. Smallest element of an array is called
 - (a) lower bound (b) range
 - (c) middle bound (d) upper bound
 - Page 3 Code No. : 41343 E

PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Role of flowcharts in graphical representation of a solution to a problem.

Or

- (b) Define (i) Keywords (ii) basic data types (iii) constants and literals.
- 12. (a) Explain switch case with real life example.

Or

- (b) Distinguish between while and do-while.
- 13. (a) Explain user defined functions and parameter passing.

Or

- (b) Define recursion with suitable examples.
- 14. (a) Distinguish between one dimensional and two dimensional arrays.

Or

(b) Define: (i) call by reference (ii) typecast and size of operators.

> Page 4 Code No. : 41343 E [P.T.O.]

15. (a) Distinguish between two dimensional arrays and multi-dimensional arrays.

Or

(b) Why do we return a pointer from a function?

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe: (i) Arithmetic expressions (ii) evaluating expressions (iii) type conversions.

Or

- (b) Compare : (i) arithmetic and logical operators (ii) increment-decrement and bitwise operators.
- 17. (a) Significance of looping and its types.

Or

- (b) Compare: (i) For and do-while (ii) while and For.
- 18. (a) Explain with illustrations the nested control structures.

Or

(b) Explain functions.

à

19. (a) Define Pointers.

Or

- (b) Explore Arrays.
- 20. (a) Give a detailed description of Structures in C.

Or

(b) Explain the basics of file and their access methods.