				1 1	
Seat No.			Set	Ρ	
I	B.C.	A. (Semester – I) (New) (CBCS) Examination: March/April- ENGLISH (COMPULSORY) Literary Voyage (BCA1101)	2023		
		e: Tuesday, 18-07-2023 Max 00 AM To 11:00 AM	. Marks	: 40	
Instru	uctio	<ul><li>ns: 1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>			
Q.1	Mult 1)	t <b>iple choice questions:</b> Gandhiji met his missionary friend in a) Vellore b) Ahmedabad c) Panji d) Orissa		08	
	2)	The grandmother used to fetch the author's a) notebooks b) slate c) books d) uniform			
	3)	<ul> <li>"Let Me Not Pray to be sheltered from" is a prayer to God for</li> <li>a) saving from danger</li> <li>b) giving ample comfort in life</li> <li>c) fight on his own</li> <li>d) feeling god's mercy</li> </ul>	)		
	4)	How is lotus described in the poema) Lovely rose diedb) Lily whitec) Blowing flowerd) Queenliest of all flowers			
	5)	How does the father discover the son in the room a) sleeping b) weeping c) sulking d) reading			
	6)	Entering into someone else's house without permission is (leg Use suitable prefix of given word in bracket) a) illegal b) illogical c) illowmen d) None of the above	al).		
	7)	She gifted herself a new camera. (identify the underlined word)a)Personal pronounb)Reflexive pronounc)Nound)Demonstrative pronoun			
	8)	<ul> <li>What did the grandmother do in the room all day</li> <li>a) Spun on her spinning wheel b) Cooked and washed</li> <li>c) Read religious books d) Rested on her wooden been been been been been been been b</li></ul>	b		
Q.2	Ans a) b) c) d) e) f)	wer any four of the following. How is untouchability related to the essay 'The Birth of Khadi'? What is the significance of the sparrow in the story? What are the various qualities that Tagore discusses as important in the Why did the poetess focus on the lotus flower in the poem? What religious lesson is there in the poem "The Toys"? What is the importance of khadi in the context of the freedom struggle?	·	<b>12</b> ?	

Q.3	a)	Write a note of the model of communication process.	10
		OR	
	b)	What are the probable reasons of communication breakdown?	
Q.4	Wha	at is intrapersonal communication? How to improve to it?	10

				SLR-QH-2
Seat No.	t			Set P
	B.C.	A. (Semester - I) (New) (CBCS) Fundamentals of Compute		
		te: Wednesday, 19-07-2023 00 AM To 11:00 AM		Max. Marks: 40
Instr	uctio	<ul><li><b>ns:</b> 1) All questions are compulsory.</li><li>2) Figures to the right indicate full</li></ul>	mark	۲S.
Q.1	Cho 1)	oose correct alternative for the follow Computers that are portable and con a) Super computers c) Mini computers	-	Laptop
	2)	CD-ROM is a a) Semiconductor memory c) Magnetic memory		Memory register None of the these
	3)	The Second Generation of computer a) IC-Chip c) Microprocessor chip	b)	ed Vacuum tubes none of these
	4)	Network components are connected a) Star c) Bus	to th b) d)	e same cable in the topology. Mesh none of these
	5)	'WWW' stands for a) World Word Web c) World Wide Web	b) d)	World Work Web World With Web
	6)	is an input device. a) Printer c) MICR	b) d)	Plotter none of these
	7)	The language that the computer can a) Machine language b) System program	unde b) d)	erstand and execute is called high level None of the above
	8)	is not hardware. a) Magnetic tape c) VDU terminal	b) d)	Printer Assembler
Q.2	Ans a) b) c) d) e)	wer Any Four the following MSI & VLSI stands for What is inkjet printer? What is application software? How to create a new E-mail? What is assembler?		08

Q.3	Writ a) b) c)	<b>e notes on any two of the following.</b> Bar code reader Internet Laser printer	08
Q.4	Ans a) b) c)	<b>wer any Two of the following.</b> Explain types of scanner. Short note on light pen. What is search engine? Explain popular search engines.	08
Q.5	Ans a) b)	wer any one of the following. What is semiconductor memory? Explain different types of semiconductor memories. Explain different types of computers.	08
	~)		

Seat	
No.	

B.C.A. (Semester – I) (New) (CBCS) Examination: March/April-2023 Office Automation (Paper – II) (BCA1103)

Day & Date: Thursday, 20-07-2023 Time: 09:00 AM To 11:00 AM

**Instructions:** 1) All questions are compulsory.

2) Figures to the right indicate full marks.

#### Q.1 Multiple choice questions:

- 1) Why headers and footers used in MS Word \_\_\_\_\_
  - a) to enhance the overall appearance of the document
  - b) to mark the starting of a page
  - c) to make large document more readable
  - d) to allow page headers and footers to appear on document when it is

.

- 2) Which of the following line spacing is invalid?
  - a) Multiple b) Double
    - c) Triple d) Signal
- 3) How can you apply exactly the same formatting you did to another text?
  - a) copy the text and click on paste special tool on new place
  - b) select the text then click on format painter and select the new text
  - c) Copy the text and paste in new location. then type the new text again
  - d) all of above

#### 4) What is the extension of Word files?

- a) .dot b) .txt c) .fil d) .doc
- 5) The Software which contains rows and columns is called \_\_\_\_\_.
  - a) database b) drawing
  - c) spreadsheet d) word processing
- 6) The slide that is used to introduce a topic and set the tone for the presentation is called the \_\_\_\_\_.
  - a) Title slide b) Bullet slide
  - c) Table slide d) Graph slide
- 7) Where can you set the shedding color for a range of cells in Excel?
  - a) choose required color form patterns tab of format cells dialog box
  - b) choose required color on fill color tool in formatting toolbar
  - c) choose required color on fill color tool in drawing toolbar
  - d) all of above
- 8) Objects on the slide that hold text are called \_
  - a) Placeholdersc) Auto layout
- b) Object holdersd) Text holders

Max. Marks: 40

80

Set

Q.2	Ans	wer any four of the following.	08
	a)	What are the basic functions of MS Word?	
	b)	What are Desktop icons and their functions?	
	C)	How you can create a custom watermark?	
	d)	Define Hardware & Software.	
	e)	What the keyboard combination is for cut and paste operation?	
	f)	What is the use of PowerPoint presentation?	
Q.3	Writ	e short notes on any two of the following	08
	a)	MS Access	
	b)	Formatting Document in MS Word	
	c)	Mail Merge	
Q.4	Ans	wer any Two of the following.	08
	a)	How to create a Macro in word.	
	b)	What are the Features of MS Excel?	
	c)	How you can embed a chart from Excel to PowerPoint?	
Q.5	Ans	wer any one of the following.	08
	a)	Explain Characteristics of Computer.	
	b)	How we can Formatting a Presentation on different ways.	
	··· /		

							Set	Ρ
rogr	amr	ning and F	Problem Solvi			g 'C' (Paper – I) (BC	A1104)	
						Ma	ax. Marks	: 40
ction	2) 3)	) Draw neat ( ) Figures to t ) Use of loga	diagrams and give he right indicate f rithmic table and	e equa full ma calcul	rks. atoi	is allowed.		
		process of c Performanc	Irawing a flowcha e	art for a	an a )			08
2)	Whi a) c)	as pseudo o	codes	b	)	ms can be represented: as svntax as flowcharts		
3)	int c	{ =2;	utput void main()	b	)	-2		
4)	a)	4 Bytes 8 Bytes Depends or	n the system/com	e?	)	Error		
5)	All k a) c)	Lower Case	eletters	b)	·	Upper case letters None of these		
6)	Whi a) c)	int number:	C C	b	)	ble name? float rate: int \$main;		
	rogr Date 09:00 ction	rogrammed composition of the second secon	rogramming and FDate: Friday, 21-07-2009:00 AM To 11:00 AMctions: 1) All question2) Draw neat of3) Figures to t4) Use of loga(At. Wts.:H=Choose the correct a1) The process of ofa) Performancec) Algorithmic2) Which of the follogaa) as pseudo ofc) as program3) Determine the of $\{$ int c=2;printf("c=%d",c); $\}$ a) 1c) 24) What is the sizea) 4 Bytesb) 8 Bytesc) Depends ord) Cannot be of5) All keywords in Oa) Lower Casec) Which of the follogaa) int number:	<ul> <li>rogramming and Problem Solvi Date: Friday, 21-07-2023 09:00 AM To 11:00 AM</li> <li>ctions: 1) All questions are compulsory 2) Draw neat diagrams and giv 3) Figures to the right indicate f 4) Use of logarithmic table and (At. Wts.:H=1, C=12, O=16,</li> <li>Choose the correct alternatives from 1) The process of drawing a flowchat a) Performance c) Algorithmic Representation</li> <li>2) Which of the following is incorrect a) as pseudo codes c) as programs</li> <li>3) Determine the output void main() { int c=2; printf("c=%d",c); } a) 1 c) 2</li> <li>4) What is the size of an int data typ a) 4 Bytes b) 8 Bytes c) Depends on the system/com d) Cannot be determined.</li> <li>5) All keywords in C language are in a) Lower Case letters c) Camel Case letters</li> <li>6) Which of the following is not a val a) int number:</li> </ul>	rogramming and Problem Solving us         Date: Friday, 21-07-2023         09:00 AM To 11:00 AM         ctions: 1) All questions are compulsory.         2) Draw neat diagrams and give equal         3) Figures to the right indicate full madeling         4) Use of logarithmic table and calculated (At. Wts.:H=1, C=12, O=16, N=14,         Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the oracle (At. Wts.:H=1, C=12, O=16, N=14, Choose the correct alternatives from the output void main()	<ul> <li>rogramming and Problem Solving using Date: Friday, 21-07-2023</li> <li>09:00 AM To 11:00 AM</li> <li>ctions: 1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give equatior</li> <li>3) Figures to the right indicate full marks.</li> <li>4) Use of logarithmic table and calculator (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Which of the following is incorrect? Algorith (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>B) The process of drawing a flowchart for an at the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Choose the correct alternatives from the optic of (At. Wts.:H=1, C=12, O=16, N=14, Nate)</li> <li>Determine the output void main()         <ul> <li>a) as pseudo codes</li> <li>b) as programs</li> <li>b) c) 2</li> <li>d) What is the size of an int data type?</li> <li>a) 4 Bytes</li> <li>b) 8 Bytes</li> <li>c) Depends on the system/compiler</li> <li>d) Cannot be determined.</li> </ul> </li> <li>5) All keywords in C language are in</li></ul>	<ul> <li>rogramming and Problem Solving using 'C' (Paper – I) (BC Date: Friday, 21-07-2023 Matter Solving using 'C' (Paper – I) (BC Date: Friday, 21-07-2023 Matter Solving Using 'C' (Paper – I) (BC Date: Friday, 21-07-2023 Matter Solving Using 'C' (Paper – I) (BC Date: Friday, 21-07-2023 Matter Solving Using 'C' (Paper – I) (BC Date: Friday, 21-07-2023 Matter Solving Using 'C' (Paper – I) (BC Date: Friday, 21-07-2023 Matter Solving Using 'C' (Paper – I) (BC Date: Friday, 21-07-2023 Matter Solving Using (Paper A) (Paper A</li></ul>	<ul> <li>3.C.A (Semester - I) (New) (CBCS) Examination: March/April-2023 rogramming and Problem Solving using 'C' (Paper – I) (BCA1104)</li> <li>Date: Friday, 21-07-2023 Max. Marks 09:00 AM To 11:00 AM</li> <li>ctions: 1) All questions are compulsory. <ol> <li>2) Draw neat diagrams and give equations wherever necessary.</li> <li>3) Figures to the right indicate full marks.</li> <li>4) Use of logarithmic table and calculator is allowed. (At. Wts.:H=1, C=12, O=16, N=14, Na=23, CI=35.5).</li> </ol> </li> <li>Choose the correct alternatives from the options. <ol> <li>The process of drawing a flowchart for an algorithm is called</li> <li>a) Performance b) Evaluation</li> <li>a) Performance b) Evaluation</li> <li>c) Algorithmic Representation d) Flowcharting</li> </ol> </li> <li>2) Which of the following is incorrect? Algorithms can be represented: <ol> <li>a) as pseudo codes b) as svntax</li> <li>c) as programs d) as flowcharts</li> </ol> </li> <li>3) Determine the output void main() <ol> <li>{     int c=2;     printf("c=%d",c);     }     a) 1 b) -2     c) 2 d) Error</li> </ol> </li> <li>4) What is the size of an int data type? <ol> <li>A Bytes</li> <li>B Bytes</li> <li>Depends on the system/compiler</li> <li>Cannot be determined.</li> </ol> </li> <li>5) All keywords in C language are in <ol> <li>Lower Case letters d) None of these</li> <li>Which of the following is not a valid C variable name? <ol> <li>a) int number:</li> <li>b) float rate:</li> </ol> </li> </ol></li></ul>

- If block always need to be associated with a else block? 7) a) True b) False
- 8) An array elements are always stored in \_\_\_\_ \_ memory location.
  - a) Sequential b) Random C)
    - Sequential and Random d) None of the above

Seat No.

Day & Dat Time: 09:0

Instructio

#### Q.1 Cho

Q.2	a) b) c) d)	wer any four of the following. What is flowchart? Two characteristics of algorithm? What is logic? Syntax of do- while loop? What is multidimensional array? use of stdio.h header file?	08
Q.3	a)	<b>te short notes on any two of the following.</b> conditional operator. typed and enum. goto statement.	80
Q.4	Ans a) b) c)	wer any Two of the following. Write C program to find the average of n numbers using arrays. Difference between while and do-while loop. Write C program to print following structure. 1 2 3 2 3 4 5 4 3 4 5 6 7 6 5 4	80
Q.5	Ans	swer any one of the following.	08

- Q.5 Answer any one of the following.
  a) What is nested if-else? Explain nested if-else with example.
  b) What is operator? Explain different operators used in c with example.

Sea No.	t			Set	Ρ
	B.C.	A. (Semester – I) (New) (CBCS Web Programming - I (			
		e: Saturday, 22-07-2023 00 AM To 11:00 AM		Max. Marks:	40
Instr	uctio	<ul> <li>ns: 1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give of 3) Figures to the right indicate full</li> </ul>			
Q.1	Mul 1)	t <b>iple choice questions:</b> HTML is type of the languag a) Scripting Language c) Programming Language	ge. b) d)	Markup Language Network Protocol	08
	2)	The BODY tag is usually used after a) HTML tag c) HEAD tag	b) d)	_ tag. TABLE tag TITLE tag	
	3)	<a> and </a> are the tags used for a) Adding image c) Audio-voiced text	b) d)	 Aligning text Adding links to your page	
	4)	Which of the following is a compone a) Selector c) Value	ent of C b) d)	CSS style rule? Property All of the above	
	5)	The default character encoding in H a) UTF-16 c) UTF-8	ITML5 b) d)	is UTF-32 ISO-8859-1	
	6)	Which of the following property is us a) font-family c) font-variant	sed to b) d)	change the face of a font? font-style font-weight	
	7)	a) svg a) Video	HTML5 b) d)	? graphics none of these	
	8)	Which attribute can be used with B0 a) Background c) Vlink	ODY ta b) d)	g to set background image? Bgcolor None of Above	
Q.2	Ans a) b) c) d) e) f)	wer any four of the following. Define the term Web technology? What is mean by Internet? Explain DOCTYPE element in HTMI Explain the Uses of CSS? Explain Get and Post method. What is mean by User Interface	5		08

Q.3	<ul> <li>Write short notes on any two of the following.</li> <li>a) Animations in CSS</li> <li>b) Graphics in HTML5</li> <li>c) Image tag in HTML</li> </ul>	08
Q.4	<ul> <li>Answer any Two of the following.</li> <li>a) What is mean by tag? Explain types of tag with example</li> <li>b) Explain box model with example in CSS.</li> <li>c) List out Input tag in HTML5? Explain Auto focus and placeholder with example</li> </ul>	08
Q.5	Answer any one of the following.	08

- a) What is mean by CSS? Explain types of CSS with Example.b) What is Table? Explain <TABLE> tag with Example in HTML.

Sea No.	t	Set P
	B.C	.A. (Semester - I) (New) (CBCS) Examination: March/April-2023 Basics of Mathematics (Paper – I) (BCA1106)
		te: Sunday, 23-07-2023 Max. Marks: 40 00 AM To 11:00 AM
Instr	ucti	<ul> <li>a) All questions are compulsory.</li> <li>2) Figures to the right indicate full marks.</li> <li>3) Use of scientific calculator is allowed.</li> </ul>
Q.1	Ch 1)	bose the correct alternative from the following options. 08 If $aRb \& bRa \Rightarrow a = b$ then the relation R is called
		<ul> <li>a) Reflexive relation</li> <li>b) Symmetric relation</li> <li>c) Antisymmetric relation</li> <li>d) A Symmetric relation</li> </ul>
	2)	The cardinality of an empty set is
		a) φ b) 1 c) 0 d) 10
	3)	Warshall's algorithm is used to find
	3)	a) Transitive closure b) Closure
		c) Inverse d) None of these
	4)	The conditional statement $\sim p \rightarrow \sim q$ is called as conditional statement $p \rightarrow q$
		a) Inverse b) Converse
		c) Implication d) Contrapositive
	5)	If $A = [aij]_{m \times n} \& B = [bij)_{n \times p}$ be the two matrices then order of result of product matrix $A$ $B$ is
		product matrix A. B is a) $m \times n$ b) $n \times p$
		c) $p \times m$ d) $m \times p$
	6)	The order of row matrix is
		a) $m \times 1$ b) $1 \times n$ c) $m \times n$ d) $n \times n$
	7)	In logic $\sim (p \cap q) \equiv \sim pv \sim q$ is law.
	,	a) Distributive b) De – Morgan's
	•	c) Commutative d) None of these
	8)	Let $A = \{1, 2, 3, 4\}$ & $B = \{3, 4, 5, 6\}$ then $A \cup B = \_$ . a) $\{1, 2, 3, 4, 5\}$ b) $\{1, 2, 3, 4, 5, 6\}$ c) $\{1, 3\}$ d) $\{3, 4\}$
Q.2	An	swer any four of the following questions. 08
	a)	Define Equivalence relation.
	b) c)	State De -Morgan's law in logic. Let $A = \{1, 2, 3\}$ then write $P(A)$
	d)	Let $A = \{a, b, c, d\} \& B = \{p, q, r\}$ then find the Cartesian product

**d)** Let  $A = \{a, b, c, d\} \& B = \{p, q, r\}$  then find the Cartesian product  $A \times B \& B \times A$ 

- e) Let  $A = \{a, b, c, d\}$ . let 'R' be the relation defined on the set A given by  $R = \{(a, a) (a, b) (a, c) (a, d) (b, a) (c, b) (c, c) (d, d)$ . Draw diagraph of relation R.
- f) Let  $A = \begin{bmatrix} -1 & 3 \\ 4 & 5 \end{bmatrix}_{2 \times 2} \& B = \begin{bmatrix} 3 & -2 \\ 0 & 1 \end{bmatrix}_{2 \times 2}$  then find matrix A + B & A B

#### Q.3 Answer any two of the following questions.

- a) Define conditional statement. Also define types of conditional statement.
- **b)** Let  $U = \{a, b, c, d, e, f, g, h, i, j, k\}$  be the universal set. Let  $A = \{b, c, e, g, h, i\} \& B = \{a, b, c, d, i, j, k\}$  be the subsets of U then write the following sets.
  - i)  $A \cup B$
  - ii)  $A \cap B$
  - iii) A B
  - iv) *B'*
- c) Define the following term with suitable example:
  - i) Square matrix
  - ii) Upper triangular matrix

#### Q.4 Answer any two of the following questions.

- a) Check whether the following statement is a tautology or contradiction or neither.
  - $[(\sim \to r) \land (q \lor r)] \to \sim r$
- **b)** Let  $A = \{a, b, c, d\}$  let 'R' be the relation defined on the set A given by  $R = \{(a, a) (a, b) (b, a) (b, b) (c, a) (c, d) (d, a) (d, b) (d, d)\}$ . Write matrix of R. Also draw diagraph of R. Also write in-degree & outdegree of each element in A.
- c) How many integers between 1 & 567 are divisible by either 3 or 5.

#### Q.5 Answer any one of the following questions.

- a) State & prove both the distributive law in logic.
- **b)** Define transitive closure of relation. Let  $A = \{1, 2, 3, 4\} \& 'R'$  be the relation defined on the set A given by  $R = \{(1,1) (1,2) (2,3) (3,4) (3,3) (4,1)\}$ . Find transitive closure of relation *R* by using Warshall's algorithm. Also draw diagraph of  $R^*$

08

08

# B.C.A (Semester - I) (New) (CBCS) Examination: March/April-2023 **Descriptive Statistics (Paper-II) (BCA1107)**

Day & Date: Monday, 24-07-2023 Time: 09:00 AM To 11:00 AM

Seat

No.

Instructions: 1) All questions are compulsory.
--

- 2) Figures to the right indicate full marks.
- 3) Draw neat diagrams and give equations whenever necessary.
- 4) Non-programmable calculators are allowed.

#### **Multiple Choice questions.** Q.1

- Correlation measures the extent of 1)
  - Parabolic relation between two variables. a)
  - Linear relation between two variables. b)
  - Logarithmic relation between two variables. C)
  - Exponential relation between two variables. d)
- 2) The two regression lines intersect at \_
  - a) (0,0)b)  $(\sigma_x, \sigma_y)$
  - d) None of the above C)  $(\overline{X}, \overline{Y})$
- 3) Karl-Pearson's coefficient of correlation lies between \_\_\_\_\_.
  - a) 0 to 1 b) -1 to 1
  - d)  $-\infty to \infty$ c)  $0 to \infty$
- Mean of first n natural number is \_\_\_\_ 4)
  - b) n(n+1)/2a) (n+1)/2
  - d) None of these c) (n+1)2/2
- 5) Which one of the following is not a measure of central tendency?
  - Mean deviation b) Mean a)
    - c) Median d) Mode
- is a classic example of primary data. 6)
  - Population census a)
  - b) Central statistical organization report
  - c) Reserve Bank of India bulletin
  - National sample survey report d)
- The coefficient of variation is \_\_\_\_\_. 7)

C)

- (*S*.*D*/*Mean*)\*100 b)  $(Mean/S.D)^*100$ a)
- Mean/S.D d) None of these C)
- If a constant value 10 is subtracted from each observation of a set the 8) variance is \_\_\_\_\_.
  - a) increased by 100
- b) decreased by 10 d) not changed
- decreased by 100

Max. Marks: 40

08

# SLR-QH-7

Set

Q.2	Ans	wer any four of the following.	08
	a) b) c) d)	Define measures of central tendency with example. Define Range with example. Define correlation with example. Define variance and standard deviation.	
	e) f)	Define Regression with example. Define sample with example	
Q.3	a) b)	e Short notes on any two of the following. Define A. M. Write its merits and demerits. Write short notes on Stratified sampling with example.	08
	c)	Write difference between absolute and relative measures of dispersion.	
Q.4		wer any two of the following.	08
	a) b) c)	Discuss the effect of change of origin and scale on regression coefficients. Explain the construction of Histogram with equal and unequal width. Define Median. Write its merits and demerits.	
Q.5	Ans	wer any one of the following.	08
	a)	Define correlation. Using scatter diagram explain various types of correlation with Examples	

correlation with Examples. Define Regression. Drive the expressions for regression line of X on Y. b)

80

#### B.C.A (Semester - I) (New) (CBCS) Examination: March/April-2023 Fundamentals of Electronics (Paper - I) (BCA1108) Day & Date: Tuesday, 25-07-2023 Time: 09:00 AM To 11:00 AM Instructions: 1) All questions are compulsory. 2) Draw neat diagrams and give equations wherever necessary. 3) Figures to the right indicate full marks. 4) Use of logarithmic table and calculator is allowed. (At.Wts.:H=1,C=12,O=16,N=14,Na=23,Cl=35.5) Multiple choice questions. technique is used to etch away all the unrequired Aluminum. oxidation b) Polishing d)

I FD

fluorescent tube

#### 2) \_\_\_ consumes less power.

Photoresist

Diffusion

Seat

No.

Q.1

1)

a)

C)

- incandescent lamp b) a)
- LCD d) c)
- 3) The inter connections are made during \_\_\_\_\_ \_ process.
  - emitter diffusion b) photolithography a)
    - epitaxial growth metallization d) c)
- 4) The number of pixel stored in the frame buffer of a display system is known as
  - a) depth b) resolution
  - none of above c) resaultion d)
- 5) The LED emits light \_\_\_\_\_
  - only in red color a)
  - only in green color b)
  - only in yellow color c)
  - d) in red, green yellow and amber color
- 6) Selective etching is done using \_\_\_\_\_ process.
  - photolithography metallization a) b)
  - diffusion c) d) masking
- 7) The components placed on the PCB are soldered on \_\_\_\_\_.
  - Traces planes a) b)
  - c) metal pads d) Regions
  - protects the wafer from contamination due to impurities. b) masks

d)

diffusion

a) SiO<sub>2</sub> layer

8)

photo resist layer C)

#### Q.2 Answer any four of the following.

- Define linear and digital ICs. a)
- What is PCB design? b)
- c) What are advantages of ICs?
- Why aluminum is preferred for metallization? d)
- What is LED? e)
- What do you mean by monolithic ICs? **f**)

SLR-QH-8

Set

Ρ

Max. Marks: 40

## Q.3 Write short notes on any two of the following.

- a) Write a note on LED display. (construction, working)
- **b)** Write a note on SMD and SMT.
- **c)** Write a note on metallization.

### Q.4 Answer any Two of the following.

- a) Explain with neat diagram isolation and diffusion process in IC fabrication.
- **b)** Explain single layer and multi-layer PCB technology.
- c) State applications of LCD display.

### Q.5 Answer any one of the following.

- a) What are steps of IC fabrication process? Explain epitaxial growth and photolithographic process with neat diagrams.
- **b)** What are types of 7 segment display? Draw neat diagrams and explain their working.

#### 80

**08** 

Sea No.	t		Set	Ρ
	B.C.	A (Semester - I) (New) (CBCS) Examination: March/A. Linear Electronics-II (BCA1109)	April-2023	
		te: Wednesday, 26-07-2023 00 AM To 11:00 AM	Max. Marks	: 40
Instr	uctio	<ul> <li>ans: 1) All questions are compulsory.</li> <li>2) Figures to the right indicate full marks.</li> <li>3) Draw necessary diagrams whenever necessary.</li> <li>4) Non-Programmable calculators are allowed.</li> </ul>		
Q.1	Cho 1)	oose the correct alternatives from the options.Carbon composition resistor uses carbon anda) Silicab) Siliconc) Silverd) gold		08
	2)	Plastic capacitor isa) Polarizedb) non polarizedc) Insulatord) Conductor		
	3)	In insulator VB and CB are separated by eV. a) 1 b) 2 c) 4 d) 5		
	4)	foils are used as plate in paper capacitors. a) Aluminum b) Plastic c) Insulating d) Silicon		
	5)	In N type semiconductor are minority carriers. a) Protons b) Electrons c) Holes d) Charge		
	6)	Diode becomes reverse biased when anode is connected to a) Positive b) Negative c) Supply d) Battery		
	7)	Efficiency of half wave rectifier is % a) 40 b) 41 c) 81 d) 80		
	8)	layer is deposited on gate side in MOSFET. a) A12O3 b) SiO3 c) SiO2 d) SiO		
Q.2	Ans a) b) c) d) e) f)	wer any four of the following. Define capacitor. Define conductor. Draw diagram of n-p-n transistor. Define resistance and write unit. Write a function of BJT. Define inductor.		08

Q.3	Ans <sup>r</sup> a) b) c)	wer any two of the following. Explain construction and Working of N-P-N transistor. Explain full wave rectifier. Explain mica and ceramic resistor.	08
Q.4	Ans <sup>a</sup> a) b) c)	wer any two of the following. Explain the construction variable resistor. Explain Materials on the basis of energy band diagram. Define inductance and explain its types.	08
Q.5	Ansv a) b)	wer any one of the following. Define regulated power supply. Explain SMPS. Define semiconductor. Explain p and n-type semiconductor.	08

Set

Seat	
No.	

#### B.C.A. (Semester – I) (Old) (CBCS) Examination: March/April-2023 **ENGLISH (COMPULSORY)** Literary Voyage (19409101 / 20409101)

Day & Date: Tuesday, 18-07-2023 Time: 09:00 AM To 12:00 PM

c)

Instructions: 1) All questions are compulsory.

2) Figure to right indicate full marks.

#### Choose the correct alternatives from the given options. Q.1 A)

- What percentage of the population in India was poverty stricken at the 1) time of the essay?
  - one third a) one - tenth
- one fourth b) d) one - sixth

#### 2) What is the name of the river island where Payeng began his work?

- Mishing a) Miling b) c) Malang
  - None of these d)
- 3) The school was attached to \_\_\_\_\_
  - a) a hospital and the nurses taught them
  - a public library and the librarian taught them b)
  - a bigger school and the teachers there taught them C)
  - a temple and the priest of the temple taught them d)
- 4) The poet is in state of mind when he wrote this poem "Let Me Not pray to be sheltered from Dangers" b) a horrid
  - a) a doubtful
    - a dangerous c)
- d) a confident
- 5) The conflict for the honour of \_\_\_\_\_ between rose and lily. a)
  - as the king of flowers b) the queen of nature
  - the stateliest flower c) the queen of flowers d)

6) The boy in the poem "The Toys" is

- the speaker of the poem a)
- c) on adamant child
- a motherless child b) d) a naughty little fellow
- The last component of any successful communication is . 7)
  - a) Receiving c) Acknowledging

a)

- Decoding b) Feedback d)
- 8) Which of the following is a communication channel?
  - Mobile technology Zoom conferencing b)
  - All the above Courier service C) d)
- Please wait me the bus stop. 9) (Use appropriate preposition to complete the sentence) a) for, at
  - for, in b)
  - for, with C) d) at, for

10

Max. Marks: 80

		<ul> <li>10) Green team ways (numbered) by Blue team [use suitable prefixes with the words]</li> <li>a) unnumbered</li> <li>b) out numbered</li> <li>c) disnumbered</li> <li>d) none of the Above</li> </ul>	
	В)	<ul> <li>Answer the following questions in one sentence.</li> <li>1) What is the relation between economics and religion in the essay 'The Birth of Khadi'?</li> <li>2) In which year, Jadav Payeng got the country's highest civilian award 'Padma shri'?</li> <li>3) What did the grandmother desire to do on her deathbed?</li> <li>4) In which year Tagore's ground breaking work 'Gitanjali' was published?</li> <li>5) Who sung praises for the flowers in the poem 'The Lotus'?</li> <li>6) What kind of coins did the father discover?</li> </ul>	06
Q.2	Answ 1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 11) 12)	<ul> <li>What is the importance of khadi in the context of the freedom struggle?</li> <li>How is environmental conservation crucial for the future?</li> <li>Draw, a character sketch of 'grandmother' in the essay 'The portrait of a Lady'?</li> <li>Discuss the poet's state of mind in the poem. 'Let Me Not pray to be sheltered from Dangers'?</li> <li>Write down the summary of poem "The Lotus".</li> <li>What is the significance of the toys in the poem?</li> <li>Explain Gandhi's talk on religion.</li> <li>Draw a character sketch of Jadav Payeng and his grand work.</li> <li>What is the significance of sparrows in the story "The Portrait of a Lady"?</li> <li>Write a note on the principles of effective communication.</li> <li>What is communication? Explain.</li> <li>Explain the soft skill 'Intrapersonal skill'</li> </ul>	16
Q.3	A)	<ul> <li>Write down the answer of any two of the following.</li> <li>1) How is untouchability related to the essay "The Birth of Khadi"?</li> <li>2) What were some of the problems faced by Jadav?</li> <li>3) What is the significance of the sparrows?</li> </ul>	10
	B)	Write short notes (Write down the summary 'The Toys'.	06
Q.4	A)	<ul> <li>Write down the answers of any two of the following.</li> <li>1) What is the receiver's role in the process of communication.</li> <li>2) What are the barriers of communication breakdown?</li> <li>3) Explain the concept of 'Intrapersonal skills'.</li> </ul>	80
	B)	Prepare a narrative essay on your first day experience of college.	80
Q.5	Write a) b)	down the answers of any two of the following. Prepare a descriptive essay on a Local Park. How would you improve your communication and make it effective?	16

c) What is 'message' in a communication process?

				••
Sea No.	t		Set	Ρ
	B.C	C.A. (Semester - I) (Old) (CBCS) Examination: M Fundamentals of Computer (Paper - I) (194		
		ate: Wednesday, 19-07-2023 :00 AM To 11:00 AM	Max. Marks	: 40
Instr	uctio	<ul><li>ons: 1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>		
Q.1	<b>Cho</b> 1)	oose correct alternative from the following device is used in first generation.a) ICb) VLSI		80
	2)	<ul> <li>c) ALSI</li> <li>d) Vacuum tube</li> <li>Which of the following is a scanning technology?</li> <li>a) OCR</li> <li>b) OMR</li> <li>c) BCR</li> <li>d) All of these</li> </ul>		
	3)	a) LCD b) Monitor c) Printer device designed to get hard copy output b) Monitor d) CRT	t.	
	4)	RAM is a memory. a) External b) Auxiliary c) Main d) None of these	e	
	5)	In MICR commonly used font is a) F13D b) E13D c) E13B d) F13B		
	6)	A computer is a malicious code which self-replica itself to other programs. a) Program b) Virus c) Application d) Worm	ates by copying	
	7)	<ul> <li>Example of a good password is</li> <li>a) name of a partner or spouse</li> <li>b) name of a child or pet</li> <li>c) words contains multiple random digits</li> <li>d) None of these</li> </ul>		
	8)	Backup of the source data can be created a) On the same device b) On another d c) At some other locate d) All of these	evice	
Q.2	<b>Ans</b> 1) 2) 3) 4) 5) 6)	swer any four of the following. Define serial port and parallel port. Define protocol. List any two protocols. What is Firmware? What is modem? What is a volatile and non-volatile memory? Define serial port and parallel port.		08

Q.3	Writ 1) 2) 3)	<b>te short notes on any two of the following.</b> Internet RAM Magnetic tape	08
Q.4	<b>Ans</b> 1) 2) 3)	wer any Two of the following. What is software? Explain different types of system software. Explain types of network. What is pointing Device? Explain the types of mouse.	08
Q.5	<b>Ans</b> 1) 2)	wer any one of the following. What is computer? Explain block diagram of computer. Define the term network topology? Explain different types of network topology.	08

	SLR-QH-12
Seat No.	Set P
<b>Lo</b> Day & Da	C.A. (Semester – I) (Old) (CBCS) Examination: March/April-2023 ogic Development With 'C' Programming (Paper – II) (19409103) ate: Thursday, 20-07-2023 Max. Marks: 40 :00 AM To 11:00 AM
	<ul> <li>ons:1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give equations wherever necessary.</li> <li>3) Figures to the right indicate full marks.</li> </ul>
<b>Q.1 M</b> u 1)	Iltiple choice questions:       08         Which is an incorrect variable name?       0         a)       Id_No       b)       ID_NO         c)       IdNo       d)       Id No
2)	A 'C' program is a combination of a) function b) variables c) statements d) all of these
3)	is a symbol used connects two symbols of flowchart. a) Circle b) Rectangle c) Diamond d) Arrow
4)	'C' language is type of Programming Language? a) Object Oriented b) Procedural c) Bit Level Language d) Functinal
5)	Choose Correct Conditional Operator from the list.a) ? :b) : <
6)	<ul> <li>Choose a right 'C' Statement.</li> <li>a) Loops executes a group of statements repeatedly</li> <li>b) Loop is usually executed as long as a condition is met</li> <li>c) Loop usually take advantage of loop counter</li> <li>d) All of these</li> </ul>
7)	An array elements are always stored in memory locations. a) Sequential b) Random c) Both a & b d) None of these
8)	Which among the following is a unconditional control structure? a) do-while b) if –else c) goto d) for
Q.2 An a) b) c) d) e) f)	swer any four of the following.08State the syntax of while statement.State any four Data Types in C language.Define algorithm.What are the purposes of goto statement?What is One-dimensional array?What is the difference between pre-increment and post-increment?

f) What is the difference between pre-increment and post-increment?

**08** 

80

#### Q.3 Write short notes on any two of the following Pseudo code a) do-while loop b) Two dimensional array C) Q.4 Answer any Two of the following. Write a program to display number is even or odd. a) Write a program that checks entered number is palindrome or not using. b) Explain structure of "C" program. C) Q.5 Answer any one of the following. What is Flow Chart? Explain all flow chart symbols. a) Write an algorithm and draw flowchart to check entered number is b) Armstrong or not.

Sea No.	t				Set P
	B.C.	A. (Semester - I) (Old) (CBCS Basics of Web Programmir			
		e: Friday, 21-07-2023 00 AM To 11:00 AM			Max. Marks: 40
Instr	uctio	<ul><li>ns: 1) All questions are compulsory.</li><li>2) Figures to the right indicate full</li></ul>		5.	
Q.1	Cho 1)	ose the correct alternative from the Who is inventor of HTML? a) Tim Burners Lee	b)	Sir Thomas	08
	2)	<ul> <li>c) Charles Babbage</li> <li>HTML stands for</li> <li>a) High Text Machine Language</li> <li>b) Hyper and links Markup Langu</li> <li>c) Hyper Text Markup Language</li> <li>d) None of these</li> </ul>	d) Iage	none of these	
	3)	WWW stands for a) Wide Web World c) World Write Web	b) d)	World Wide Web West Web Wide	
	4)	All HTML tags are enclosed in a) # and # c) ? and?	 b) d)	<and> {and}</and>	
	5)	Choose the correct HTML tag for th a) h6 c) h5	he smal b) d)	lest heading. h1 h2	
	6)	<ul> <li> is the root of internet.</li> <li>a) ARPANET</li> <li>c) ARPNET</li> </ul>	b) d)	APRANET None of these	
	7)	Which of the following is a singular a) <b> c) <i></i></b>	<sup>·</sup> tag? b) d)	<u></u>	
	8)	Which of the following CSS proper a) font-size c) Text	ty sets t b) d)	he font size of text? text-size Size	
Q.2	Ans a) b) c) d) e) f)	wer any four of the following. What is singular tag? What is paired tag? What is opacity? List the different styles of border in What is class and id selector? What is floating?	CSS.		08

Q.3	Wr a) b) c)	<b>ite short notes on any two of the following.</b> Internet Image map Structure of HTML	08
Q.4	An a)	swer any Two of the following. What are the uses of CSS?	08
	a) b)	Explain background properties with example.	
	c)	What are the needs of HTML 5?	
Q.5	An	swer any one of the following.	08
	a)	Explain table tag with example in HTML.	

a) b) What are different lists in HTML? Explain with example using HTML and CSS.

SLR-QH-13

Seat	
No.	

B.C.A. (Semester - I) (Old) (CBCS) Examination: March/April-2023 Software Engineering - I (Paper – II) (19409105)

Day & Date: Saturday, 22-07-2023 Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.

- 2) Draw neat diagrams and give equations wherever necessary.
- 3) Figures to the right indicate full marks.

#### Q.1 Multiple choice questions.

- 1) Spiral model originally proposed by \_\_\_\_\_.
  - a) Boehm b) Winston
  - c) Royce d) Dexter
- 2) The \_\_\_\_\_ model stipulates that the requirements be completely specified before the rest of the development can processed.
  - a) Waterfall
  - b) Rapid Application Development (RAD)
  - c) v-model
  - d) Incremental Development
- 3) \_\_\_\_\_ classes are used to create the interface that the user sees and interacts with as the software is used.
  - a) Controller b) Entity
  - c) Boundary d) Business
- 4) Which one of the following fact-finding techniques is most useful in collecting quantitative data?
  - a) Interviews b) Record reviews
  - c) Questionnaires d) Observations
- 5) The importance of software design can be summarized in a single word which is:
  - a) Efficiency b) Accuracy
  - c) Quality d) Complexity
- 6) What are the characteristics of software?
  - a) Software is developed or engineered; it is not manufactured in the classical sense
  - b) Software doesn't "wear out"
  - c) Software can be custom built or custom build
  - d) All mentioned above
- 7) What are attributes of good software?
  - a) Software maintainability b) Softw
  - c) Software development d) a and b
- 8) Which of the following is/are considered stakeholder in the software process?
  - a) Customers b) End-users
  - c) Project managers d) All of the above

Max. Marks: 40

08

Software functionality

Q.2	Ans a) b) c) d) e) f)	wer any four of the following. What is System? Define software engineering? What are the elements of System? What is System Analysis? Why do you need fact finding technique? State any 2 differences between interview and questionnaire.	80
Q.3	a)	<b>te short notes on any two of the following.</b> Spiral model Qualities of software. Role of System Analyst.	08
Q.4	Ans a) b) c)	<b>swer any Two of the following.</b> Explain RAD model in detail. Explain the various types of system in detail. Explain Prototyping model in detail.	08
Q.5	Ans a) b)	wer any one of the following. Explain different phases of System Development Life Cycle. Explain the different fact finding techniques.	08

Sea <sup>-</sup> No.	t			Set	Ρ
	B.C	A. (Semester - I) (Old) (CBCS) E. Basics of Mathematics - I (		-	
		te: Sunday, 23-07-2023 00 AM To 11:00 AM		Max. Marks:	40
Instr	uctio	<ul> <li>ans: 1) All questions are compulsory.</li> <li>2) Figures to the right indicate full n</li> <li>3) Use of scientific calculator is allogous</li> </ul>			
Q.1	Cho 1)	<ul> <li>bose the correct alternative from the f</li> <li>The conditional statement ~P → ~q is</li> <li>statement.</li> <li>a) Inverse</li> <li>c) Implication</li> </ul>			08
	2)	Cordiality of an empty set is a) φ c) 0	b) d)	1 10	
	3)	If aRb & bRa $\Rightarrow$ a = b then the relation a) Reflexive c) Asymmetric	b)	called Symmetric Antisymmetric	
	4)	The transpose of matrix i.e. $(A^T)^T = -$ a) $A^T$ c) $A^2$	b) d)	<i>A</i> None of these	
	5)	If A & B are the subsets of universal s a) $A' \cup B'$ c) $A' \cap B'$	et ∪ b) d)	then $(A \cup B)' = $ $A \cap B$ $A \cup B$	
	6)	If all the entries of given statement pa a) Contradiction c) Contrapositive	ttern b) d)	are 'T' then it is called as Tautology Contingency	
	7)	In a skew-symmetric matrix diagonal ( a) 1 c) 2	elem b) d)	ent are always 0 None of these	
	8)	If every element of set A is related to is called as a) Identity relation c) Universal relation	ever <u>y</u> b) d)	y element of set B then relation Inverse relation Transitive relation	
Q.2	Ans a) b) c) d)	Swer any four of the following question State De Morgan's law in logic. Define Equivalence relation. Let $A = \{1,2,3\}$ then write power set of Define row matrix. Give one example.		set A.	08

- e)
- Define cartesian product. Define complement of set *A*. f)

**08** 

**08** 

**08** 

## Q.3 Answer any two of the following questions.

- a) Define conditional statement. Also define types of conditional statement.
- **b)** Let  $A = \{1, 2, 3, 4\}$ . Let *R* be the relation defined on set *A* by *aRb* iff  $a \le b$  for all  $a, b, \in A$ . Then write relation *R*, write M(R) also draw digraph of *R*.
- c) Define the following term with suitable example:
  - i) Square matrix
  - ii) Upper triangular matrix

## Q.4 Answer any two of the following questions.

a) Check whether the following statement is a tautology or contradiction or neither.

 $[(\sim \to r) \land (q \lor r)] \to \sim r$ 

- **b)** Let  $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$  Let  $A = \{1, 4, 5, 6, 10\}$   $B = \{1, 2, 4, 3, 9\}$  be the subsets of *U* then write the following sets.
  - i)  $A \cup B$
  - ii)  $A \cap B$
  - iii) A'
  - iv) *A B*

**c)** Let 
$$A = \begin{bmatrix} 10 & 6 \\ -4 & -9 \end{bmatrix}_{2 \times 2}$$
  $B = \begin{bmatrix} -3 & 10 \\ 12 & -7 \end{bmatrix}$  then find  $A + B \& A - B$ 

## Q.5 Answer any one of the following questions.

- a) State & prove both the distributive law in logic.
- **b)** Define transitive closure. Hence by using Warshall's algorithm find transitive closure of relation

 $R = \{(a, a), (a, b), (b, a), (b, c), (c, d), (d, a), (d, b)\} \text{ defined on set } A = \{a, b, c, d\}$ 

Sea No.	t		Set	Ρ
	B.C	A. (Semester - I) (Old) (CBCS) Examination: March Statistical Methods-I (Paper – II) (19409107	-	
		te: Monday, 24-07-2023 00 AM To 11:00 AM	Max. Marks	: 40
Instr	uctio	<ul> <li>ons: 1) All questions are compulsory.</li> <li>2) Each question carries equal marks.</li> <li>3) Figures to the right indicate full marks.</li> <li>4) Soundless calculator is allowed.</li> <li>5) Graph paper will be supplied on request.</li> </ul>		
Q.1	Mul	Itiple choice questions.		08
	1)	A finite sub-group of population under study is called		•••
		a) Sample b) SRS		
		c) SRSWOR d) None of these		
	2)	A variable that takes finite values is called variable.		
		a) Discrete b) Continuous		
		c) Constant d) None of these		
	3)	If A.M.=40, variance= 25, then C.V.= a) $(25/40) \times 100$ b) $(40/25) \times 100$		
		a) $(25/40) \times 100$ b) $(40/25) \times 100$		
	~	c) (5/40)×100 d) (40/5)×100		
	4)	Measures of central tendency that based on all observations a) A.M. b) Median	IS	
		c) Mode d) all of these		
	5)	The range of Karl Pearson's correlation coefficient is		
	0)	a) 0 to 1 b) - 1 to 1		
		c) - 1 to 0 d) none of these		
	6)	Ogives are used to determined		
		a) A.M. b) Median		
		c) Mode d) None of these		
	7)	If a scatter diagram shows a straight line, then there is between the variables.	_ correlation	
		a) Perfect b) Perfect +ve		
		c) Perfect - ve d) none of these		
	8)	Line of regression Y on X is used to estimate		
		a) Y for known x b) x for known y		
		c) (a) and (b) both d) none of these		
Q.2	-	swer any four of the following.		08
	a) b)	Define - median. Define - standard deviation.		
	c)	Define - classification.		
	d)	Given- $\overline{X} = 30$ and the equation of line of regression y on x is	;	
		$3Y + 4X = 240$ Find $\overline{Y}$ .		
	e)	Given: $n = 10$ , $\Sigma X = 45$ , $\Sigma X^2 = 415$ . Find variance		
	f)	Given: $A.M. = 14$ , Mode = 20 Find Median.		

## Q.3 Write short notes on any two of the following.

- a) Types of correlation.
- **b)** Construction of ogives.
- c) Properties of regression coefficient.

## Q.4 Answer any Two of the following.

a) Find A.M. of the data given below.

el allo data gl		0			
Class	7-14	14-21	21-28	28-35	35-42
frequency	5	11	14	9	4

**b)** Find correlation coefficient between X and Y from the following data.

Х	12	14	18	10	20
Y	9	11	12	13	10

**c)** Given:  $r_{xy} = 0.5$ ,  $\sigma_x^2 = 16$ ,  $\sigma_y^2 = 49$ ,  $\overline{X} = 30$ ,  $\overline{Y} = 25$ Find equation of line of regression y on x.

### Q.5 Answer any one of the following.

a) Draw less than and greater than ogives to represent the following data and hence obtain median.

Class	10-20	20-30	30-40	40-50	50-60	60-70
frequency	9	14	17	12	10	4

**b)** Find c.v. for the following data

5					
Х	10	11	12	14	16
f	5	7	11	8	4

08

**08** 

	B.C	A (Semester - I) (Old) (CBCS) Examination: March/April-2023. Digital Electronics (Paper - I) (19409108)				
		e: Tuesday, 25-07-2023 Max. Marks: 4 00 AM To 11:00 AM	0			
Instr	uctio	<ul> <li>ns: 1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give equations wherever necessary.</li> <li>3) Figures to the right indicate full marks.</li> </ul>				
Q.1	Mult 1)	tiple choice questions. 0 is 2's complement of 101011011.	8			
		a) 101011010 b) 010111011 c) 010100100 d) 010100101				
	2)	Ex-OR gate has a high output when it has number of high inputs. a) Even b) Odd c) only one d) Two				
	3)	In negative logic, corresponds to more positive of two voltage levels. a) 0 b) 1				
	4)	<ul> <li>c) positive sign</li> <li>d) negative sign</li> <li>The output of combination of AND gate and NOT gate for the inputs A and</li> </ul>				
	,	B is a) A + B b) A . B c) A. B d) None of these				
	5)	If A=1, B = 0 then in terms of Boolean algebra, A + B = a) B b) B c) Both of the above d) None of these				
	6)	Double dabble method is used for to conversion.a) binary, decimalb) decimal, binaryc) binary, hexadecimald) hexadecimal, decimal				
	7)	When both inputs of NAND gate are connected together to High (logic 1),output of resultant circuit isa) Low ( logic 0 )b) High ( Logic 1)c) low or highd) none of these				
	8)	<ul> <li>c) low or high</li> <li>d) none of these</li> <li>The circuit used to store 1 bit of data is known as</li> <li>a) Register</li> <li>b) Encoder</li> <li>c) flip-flop</li> <li>d) Decoder</li> </ul>				
Q.2	a) b) c) d) e)	wer any FOUR of the following.08Define binary number system with example.What do you mean by multiplexer? Draw block diagram of N: 1 MUX.State applications of demultiplexer.What is BCD code? How it is different from binary numbers? Explain with example.Explain Half Adder with logic diagram and truth table.Eind doesing a convert 52DC to binary.	3			
	f)	Find decimal equivalent of 1101101 binary. Convert F3DC to binary				

Seat

equivalent.

B.C.A (Semester - I) (Old) (CBCS) Examination: March/April-2023

Page 1 of 2

SLR-QH-17

Set

Ρ

Q.3	Writ a) b) c)	e short notes on any TWO of the following. Decimal to BCD Encoder. 3 bit random sequence generator. BCD to 7 segment Decoder	08
Q.4	Ans a) b) c)	wer any TWO of the following. Explain binary subtraction using 1's and 2's complement with suitable example. Explain binary to gray and gray to binary conversion with example. Explain with neat logic diagram and truth table working of 4:1 MUX.	08
Q.5	Ans a) b)	wer any ONE of the following. Explain with symbol, truth table and Boolean equation logic gates. State any two IC numbers. Explain working of 3 bit up counter with logic diagram, truth table and timing diagram.	08

## B.C.A. (Semester - I) (Old) (CBCS) Examination: March/April-2023 **Development of Human Skills Paper-II (19409109)** Day & Date: Wednesday, 26-07-2023 Time: 09:00 AM To 11:00 AM **Instructions** :1) All questions are compulsory.

2) Figures to the right indicate full marks.

#### Choose the correct alternative from the following options. Q.1 When is the worst time to break into a discussion? 1) a) When everyone is silent b) When one person is talking c) When two or three people are talking simultaneously d) When there is less time left 2) Which of these is not a step in the preparation of an interview? a) Analyzing yourself Identifying your skills b) c) Being negative d) Revising your subject Which of these should be avoided for an effective speech? 3) a) Planning of speech Preparation of speech b) c) Fong sentences d) Organisation is the complex of mental characteristics that makes each of us 4) unique from other people. a) heredity emotional tone b) c) Personality d) Attitude 5) What is the front page of a blog called? a) Header Index page b) c) Theme d) Title 6) What is the part of a blog that appears at the top and usually includes the blog title? It can also include an image and is used to brand the blog by giving it a specific look and feel. a) Footer b) Index c) Header d) Sidebar 7) \_\_\_\_ acts according to the pleasure principle. a) Ego b) ld c) Super ego d) None of these refers to the process of identifying and attracting job seekers so as 8) to build a pool of qualified job applicants. a) Selection Training b) c) Recruitments d) Induction Write in brief about gesture and posture. a) Write any two types of Interviews? b) What is mean by Personality? c)

SLR-QH-18

Max. Marks: 40

08

## Q.2 Answer any four of the following

- What is mean by Blog? d)
- Explain SWOT in brief. f)
- Write in brief about any one of the IT industry. g)

## Q.3 Write short notes on any two of the following

- a) Explain Attitude and their types
- **b)** Explain do's and don'ts of Interviews
- c) Write in brief about selection of company recruitment

#### Q.4 Answer any two of the following

- a) What is mean by Personality? Explain freud's stages of personality traits
- b) What is Blog? Explain in brief about Travel and personal blog
- c) Write a group discussion on "Impact of Covid 19 on human life". (Group size 8 candidates.)

### Q.5 Answer any one of the following

- a) Draft an application letter for the post of "Trainee Software Engineer" in Tata Consultancy Services, Pune in response to their advertisement that appeared in The Times of India. Prepare a resume to be enclosed. You are Nitin/Aparna.
- **b)** Explain the Presentation Skill concept in details.

08

**08** 

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2023 ENGLISH (Comp.) Communication Skill (BCA1201)								
		e: Monday, 19-06-2023 Max. Marks: 40 0 PM To 02:00 PM						
Instr	uctio	<ul><li>1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>						
Q.1	Cho 1)	Ose the correct alternative from the given options.08Who according to the author has only one year of schooling?a)a)John Rockefellerb)b)Jay Gouldc)B. Russelld)Sir Henry						
	2)	Rabindranath Tagore won the Nobel Prize for Literature for his bookGitanjali ina) 1911b) 1912c) 1913d) 1914						
	<ul> <li>a) The People</li> <li>b) The Ministers</li> <li>c) The Countries</li> </ul>							
	4)	Who has lynched the lakes?a) The poetb) Factoriesc) Vehiclesd) Humans						
	<ul> <li>5) How old is Pope believed to be when he wrote 'Ode on Solituc a) 11</li> <li>b) 13</li> <li>c) 12</li> <li>d) 14</li> </ul>							
	What does the poet wish to hear from the lover in the poem – 'Remember'?a) Marriage plansb) His workc) His familyd) Future plans							
	7)	Choose the correct synonyms for the word - Dark. a) Dirty b) Light c) Gloomy d) Thought						
	<ul> <li>c) Gloomy</li> <li>d) Thought</li> <li>8) Use past tense form in the following sentence.</li> <li>We (go) to Mumbai last year.</li> <li>a) gone</li> <li>b) was go</li> </ul>							

a) c) went

# Seat No.

- yone
- b) was god) was going

Set P

### Q.2 Write the answers in short. (Any Four)

- a) What opinion does the author have of the education system of his time?
- b) What is the true sense of freedom?
- c) Discuss the theme of the poem 'Our Earth Will Not Die' in your words.
- d) Why is the poet giving so much emphasis on solitude in the poem and what does it mean to him?
- e) Discuss the tone of compassion used by the poet in the poem Remember?
- f) What kind of people can achieve the true essence of freedom?

### Q.3 Answer the following questions. (Any One)

- a) Write a letter to your father requesting him to send 5000/- as your class trip is going on to visit South India. Mention the details of four tour and places to visit.
- **b)** Write a formal letter to your college librarian as you lost your library card. Request him also to issue a duplicate library card to you. Mention all details of yourself like Name, Class, Roll No and how you lost the card.
- **Q.4** What is interpersonal intelligence? Write a detailed note on interpersonal intelligence and how to improve them.

12

10

Seat No.		Set I	Ρ			
B.C.A (Semester - II) (New) (CBCS) Examination: March/April-2023 Introduction to Python Programming (BCA1202)						
		: Tuesday, 20-06-2023 Max. Marks: 4 PM To 02:00 PM	łO			
Instru	iction	<ul><li>s: 1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>				
	Multi 1)	Which of the following is an assignment operator in Python? a) == b) ===	08			
	2)	c) >>>d) =What will be the output after the following statements?x = 'Python Pi Py'print(x.find('p'))a) -1b) 0c) 1d) 3				
	3)	Str= 'Hello' print(s[:3]) a) hello b) Hel c) Name Error d) ello				
	4)	The standard python compiler is written in language.a) Pythonb) 'C++'c) Javad) 'C'				
	5)	<ul> <li>Which of the following is used to enclose strings?</li> <li>a) Single quotes</li> <li>b) Double quotes</li> <li>c) Either single quotes or double quotes</li> <li>d) ! symbol</li> </ul>				
	6)	Which of the following is used to initialize multiple variables with a common value? a) $x = y$ : $y = 33$ b) $x = y = z = 33$ c) $x = z$ ; $y = z$ ; $x = 33$ ; d) $x \& y \& z = 33$				
	7)	What is used for multi-line strings in Python?a) Three braces {{{ }}}b) Three Colon ::: :::c) Three hashes ### ###d) Three Quotes '" '"				
	8)	What will be the output after the following statements? $x = [5, 4, 3, 2]$ x.remove(2)print(x).a) $[5, 3, 2]$ b) $[5, 4, 3]$ c) $[5, 4, 2]$ d) $[3, 2]$				

#### Answer any four of the following. Q.2 Give the various data types in Python. a) b) Define break statement. Write down syntax and example of importing array module. c) Define String. d) Write the syntax of if and if-else statements. e) Write down syntax and example of center () Method. **f**) Q.3 Write short notes on any two of the following. 80 Write a program to check given number is Armstrong or not. a) What is List? Explain any 6 methods of List with example. b) Explain Bit wise operators and Membership operators with example. c) Answer any Two of the following. 80 Q.4 Write a program to check given number is prime or not. a) What is Tuple? Explain any six methods of Tuple with example. b) What is Literals? Explain different types of Literals in python. c) Q.5 Answer any one of the following. 80

- What is dictionary? Explain various operations on dictionary with example. a)
  - b) Explain indexing and slicing on arrays. What are the types of arrays explain with example.

**08** 

# B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2023

**Operating System (BCA1203)** 

Day & Date: Wednesday, 21-06-2023 Time: 12:00 PM To 02:00 PM

Seat

No.

**Instructions:** 1) All questions are compulsory.

### Draw necessary diagrams whenever necessary.

- 3) Figures to the right indicate full marks.
- 4) Use of logarithmic table and calculator is allowed.
  - (At. Wts.:H=1, C=12, O=16, N=14, Na=23, CI=35.5)

#### Q.1 Choose the correct alternatives from the option.

- What is an operating system? 1)
  - interface between the hardware and application programs a)
  - collection of programs that manages hardware resources b)
  - system service provider to the application programs C)
  - all of the mentioned d)

#### 2) Which conditions must be satisfied to solve a critical section problem?

- Bounded waiting progress a) b)
- **Mutual Exclusion** All of these d) c)
- 3) Which of the following scheduling algorithm is non-preemptive scheduling?
  - Round-robin scheduling SJF Scheduling b) a)
  - c) SRTF Scheduling d) None of these
- 4) Which of the following component does not belong to PCB (Process Control Block)? **CPU** Scheduling information
  - **CPU** registers b) a)
  - Operating System Information Accounting Information d) C)
- 5) Which of the following operating system runs on the server?
  - Batch OS a)

c)

- Distributed OS b) Real-Time OS d) Network OS
- 6) What type of scheduling is round-robin scheduling? b) Non-linear data scheduling
  - Linear data scheduling a)
  - Preemptive scheduling Non-preemptive scheduling d) C)
- Which of the following is not an operating system? 7)
  - Windows a) b)
  - Oracle d) c)
- CPU scheduling is the basis of 8)
  - multiprogramming operating systems a)
  - larger memory sized systems b)
  - multiprocessor systems c)
  - d) none of the mentioned

Max. Marks: 40

**08** 

### SLR-QH-21 Ρ Set



- DOS

Q.2				
	a)	Define Operating System.		
	b)	How multiprogramming increases the utilization of CPU?		
	C)	What is a Semaphore?		
	d)	State services provided by the OS.		
	e)	What do you mean by system calls?		
	f)	Stands for FCFS and SJF.		
Q.3	a)	<b>e short notes on any two of the following.</b> Round Robin scheduling algorithm Types of Operating System Dinning philosopher problem	08	
Q.4	Ans a) b) c)	wer any Two of the following. Explain the structure of operating system with proper diagram. Define thread in OS with their types? What is the need of a thread? What is a process? Explain about various fields of Process Control Block.	08	
Q.5	Ans a)	wer any one of the following. What is a Critical Section problem? Give the conditions that a solution to	08	

the critical section problem must satisfy.b) Define thread in OS with their types. What is the need of a thread? What are the advantages of multithread?

# Seat No.

### B.C.A (Semester - II) (New) (CBCS) Examination: March/April-2023 Programming and Problem Solving Using 'C'- II (BCA1204)

Day & Date: Thursday, 22-06-2023 Time: 12:00 PM To 02:00 PM

**Instructions:** All questions are compulsory.

#### Q.1 Multiple choice questions.

Which of the following are correctly formed #define statements in C? 1) #define CUBE(x) (X\*X\*X)

b)

d)

- #define CUBE (X) (X\*X\*X); a)
- #define CUBE(X)(X\*X\*X) C)
- 2) What is the use of getchar()?
  - The next input character each time it is called a)
  - EOF when it encounters end of file b)
  - C) Both a and b
  - None of the mentioned d)
- 3) Number of bytes in memory taken by the below structure is? struct test
  - { int k:

char c;

};

a)

c)

- Multiple of integer size
- b) Integer size+character size

#define CUBE(X) {X\*X\*X}

- None of the mentioned d)
- 4) If there is any error while opening a file, fopen will return?
  - EOF b)
    - d) Depends on compiler
- 5) A structure member is generally accessed using the
  - address Operator a) C) comma operator

Nothing

NULL

ternary operator

- 6) C program \_\_\_\_\_.
  - Must contain at least one function a)
  - Needs input data b)
  - Need not contain any function c)
  - None of the above d)
- 7) The statement int \*\*a;
  - is illegal a)
  - is illegal but meaningless b)
  - is syntactically and semantically correct c)
  - none of these d)
- 8) For binary files, a \_\_\_\_\_ must be appended to the mode string.
  - Nothing b) "b" a) "binary" "01? c) d)

Set

Max. Marks: 40

**08** 

Ρ

- b) dot Operator
- d)
- a) Depends on the platform C)

Q.2	Ans a) b) c) d) e) f)	wer any four of the following Write down the syntax for opening File. What is function prototype? What is the purpose of register keyword? What is macro? Write down the syntax of Nested structure. What is pointer?	08
Q.3	Writ a) b) c)	<b>e Short Notes. (Any Two)</b> Explain pointer to structure in detail. Write a program in C to swap two numbers by using pointer. How to pass structure to the function? Explain with suitable example.	08
Q.4	Ans <sup>r</sup> a) b) c)	wer any two of the following. What are the differences between structure and union? What is Dynamic memory allocation? Explain malloc() and calloc() function with suitable example. Write a program in C to access student information (roll, name, address, percentage) and print as it is by using union.	08
Q.5	Ansv a)	wer any one of the following. What is Preprocessor? Why preprocessor directives are used? Explain	08

preprocessor directives with its type.b) Write a program that counts total characters, total words, total lines present in text file.

Seat	
No.	

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2023 Web Programming - II (BCA1205)

Day & Date: Friday, 23-06-2023 Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.

- 2) Draw neat diagrams and give equations wherever necessary.
- 3) Figures to the right indicates full marks.
- 4) Use of logarithmic table and calculator is allowed.

(At. Wts.: H=1, C=12, O=16, N=14, Na=23, Cl=35.5)

### Q.1 Choose the correct alternatives from the options.

### 1) What is a block of statement?

- a) Conditional block
  - b) block that combines a number of statements into a single compound statement
  - c) both conditional block and a single statement
  - d) block that contains a single statement

### 2) Which method of jQuery can be used to deal with the name conflicts?

a) The conflict() method

ThenoConflict() method

- b) ThenameConflict() methodd) None of the above
- **3)** Which of the following is the correct output for the following JavaScript code:

int x=8; if(x>9) { document. write(9); }

, else

C)

{

document.write(x);

- }
- a) 9 c) 8

- b) 0
- d) Undefined
- 4) jQuery is a \_\_\_\_\_.a) JavaScript method
- b) JavaScript library
- c) JSON library
- d) PHP method
- 5) The code \$("p").css("background-color","yellow") is equivalent to \_\_\_\_\_.
  - a) jQuery("p").css("background-color","yellow")
  - b) document("p").css("background-color","yellow")
  - c) jq("p").css("background-color","yellow")
  - d) None of the above
- 6) Which jQuery method is used to set one or more style properties to the selected element?
  - a) The html() methodc) Thecss() method
- b) The style() method
- d) All of the above

Max. Marks: 40

Set

	7)	7) Which of the following jQuery method is used to add/remove one or more classes from the selected elements?				
		a) toggleClass() method b) fadeToggle() method c) toggle() method d) slideToggle() method				
	8)	What does the syntax \$("p") will select? a) All paragraph elements b) Only first paragraph element c) Only last paragraph element d) None of the above				
Q.2	Ansv 1) 2) 3) 4) 5) 6)	wer any four of the following. What is event? What is jQuery? What is array? What is sliding? What is operator? What is variable?	08			
Q.3	Writ 1) 2) 3)	<b>te short note on any two of the following.</b> Describe document object model with example. Write a program of validation in JavaScript. Describe callback functions of jQuery.	08			
Q.4	Ans <sup>5</sup> 1) 2) 3)	wer any two of the following. Explain event handling in JavaScript. Write a program of jquerycss method. Describe jQuery animation with example.	08			
Q.5	Ans a) b)	w <b>er any ONE of the following.</b> Explain control statement in JavaScript. Write a program of hide and show method of jQuery.	08			

Time	: 12:0	0 PM	To 02:00 PM		
Instr	uctior	2) 3)	All questions are compulsory. Draw neat diagrams and give equ Figures to the right indicate full m Use of logarithmic table and calcu	arks	
Q.1			hoice questions.		
	1)	-	aph G in which there is exactly one lled	e pat	h between every pair of vertices
		a)	tree	b)	complete graph
		c)	regular graph	d)	null graph
	2)		mplete graph K8 is regula		
		a)	8		64
		c)	16	d)	7
	3)	The	order of adjacency matrix is	•	
		a)	m	b)	n  imes q
		c)	$n \times n$	d)	none of these
	4)	A gra a) c)	aph having only one component is disconnected void		ed graph. connected None of these

#### 5) If a connected graph G has a \_\_\_\_\_ then its edge connectivity is one.

parallel edge loop a) b) c) cut edge d) none of these

#### A graph having Hamiltonian path is called 6) \_graph. a) Eulerian Hamiltonian b)

none of these c) Disconnected d)

#### 7) The ring sum of a graph G with itself is \_ complete graph b) null graph a)

none of these tree d) c) By solving Chinese postman problem to find

#### 8) trail Eulerian circuit a) b) c) Hamiltonian path d) none of these

### Q.2 Answer the following questions (Any Four)

- Draw the graph K3,2 1)
- 2) Define compete graph.
- 3) Draw a graph K5.
- 4) Draw a graph which is neither Eulerian nor Hamiltonian.
- 5) Define Binary tree.
- Define spanning graph. 6)

Max. Marks: 40

Set

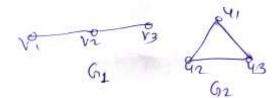
**08** 



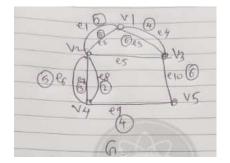
Day & Date: Saturday, 01-07-2023

### Q.3 Write short notes (Any Two)

- 1) Write note on trail and circuit.
- 2) Find G1 X G2 of the following graph.

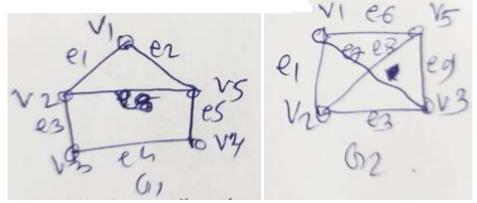


3) Solve the Chinese postman problem.

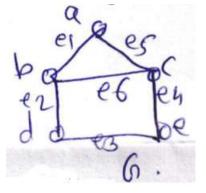


### Q.4 Answer the following questions (Any Two)

- 1) Write note on matrix representations of graph.
- 2) Find union and ring sum of the following two graphs.



3) Solve the following traveling salesman problem by starting to a.

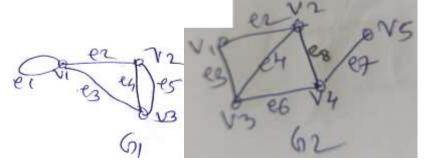


80

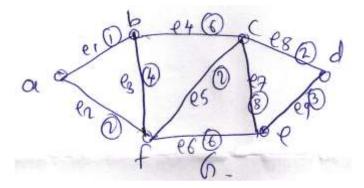
08

### Q.5

Answer any one of the following questions.1) Find union, intersection and ring sum of two graphs.



By using Kruskal's algorithm to find shortest spanning tree of the given graph G. 2)



B.C.A (Semester - II) (New) (CBCS) Examination: March/April-2023 Probability Theory (BCA1207)							
	Day & Date: Sunday,02-07-2023         Max. Marks: 40           Time: 12:00 PM To 02:00 PM         Max. Marks: 40						
Instr	<ul> <li>Instructions: 1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give equations whenever necessary.</li> <li>3) Figures to the right indicate full marks.</li> <li>4) Use of logarithmic table and calculator is allowed.</li> </ul>						
Q.1	Multi 1)	iple choice questions.         If the p.d.f. of continuous r.v. X is f (x) = ½; if 0 < X < 2; then E         a) -1       b) 0         c) 0.5       d) 1	<b>08</b> (X) =				
	2)	The normal probability curve isa) Bell-shapedb) Unimodalc) Symmetricd) All of these					
	3)	Let a continuous r.v. X has p.d.f. f (x) = c, if 1 < X < 3, then value a) 1 b) 0 c) ½ d) -1	ie of c is				
	4)	If $X \rightarrow U(4,16)$ then $V(X) = $ a) 20b) 12c) 10d) 16					
	5)	How many different words can be formed using any three letterwords HEXAGON?a) 420b) 35c) 210d) 5040	s of the				
	6)	If $B \subset A$ then $P(B/A)$ is equal toa) 0b) 1c) $P(A)/P(B)$ d) $P(B)/P(A)$					
	7)	For a discrete r.v. X if E(X) = 1.7, then E(X + 10) is a) 1.7 b) 8.3 c) 11.7 d) 17					
	8)	The probability of the intersection of two mutually exclusive even	ent is always				
		a) infinityb) zeroc) oned) none of these					

# Set P

Seat

No.

### Q.2 Answer any four of the following.

- **1)** Define the Poisson Distribution.
- 2) If a discrete r.v.  $X \rightarrow B$  (8, 0.5) find mean and standard deviation.
- **3)** Define a continuous r.v. X.
- 4) Define a classical definition of probability.
- 5) Define the Normal Distribution.
- 6) Given: P(A) = 0.3, P(B) = 0.4,  $P(A \cup B) = 0.5$ , find  $P(A \cap B)$ .

### Q.3 Write short notes on any two of the following.

- 1) Explain addition principle of counting with illustration.
- 2) Define Binomial Distribution. State additive property of binomial distribution.
- 3) Define Event and state any two types of event with example.

### Q.4 Answer any Two of the following.

1) The p.m.f. of a r.v. X is as follows,

Х	0	1	2	3	4	
P(x)	k	2k	5k	7k	9k	
Find k and honce obtain $V(\mathbf{X})$						

Find k and hence obtain V(X).

- 2) Show that P(A') = 1 P(A), where A' is complementary of A.
- Two coins are tossed at a time. Let A: getting head on first coin and B: getting head on second coin. Test independence of A and B.

### Q.5 Answer any one of the following.

1) The p.d.f. of continuous r.v. X is, f(x) = Cx; 0 < X < 1= 0; otherwise

Find i) C ii) E(X) iii) V(X)

2) Define Poisson distribution. State its mean, variance and additive property and also give the two Real life examples.

08

**08** 

08

Day Time	Max. Marks: 40					
Instr	<ul> <li>Instructions:1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give equations wherever necessary.</li> <li>3) Figures to the right indicate full marks.</li> <li>4) Use of logarithmic table and calculator is allowed. (At. Wts.: H=1, C=12, O=16, N=14, Na=23, Cl=35.5)</li> </ul>					
Q.1		tiple choice questions.	08			
	1)	sequential circuit. a) flip flip b) adder c) mux d) hexdecimal				
	2)	3 bit counter count total pulses. a) 8 b) 10 c) 16 d) 2				
	3)	Full adder consists of         a) 3i/p 2 o/p       b) 2i/p 2o/p         c) 3i/p 1o/p       d) 3i/p 3o/p				
	4)	Group of flip flip called as a) register				
	5)	is universal gate. a) and b) nand c) OR d) x-or				
	6)	called as data selector. a) mux b) dmux c) encoder d) decoder				
	7)	a) counter b) adder c) both a and b d) none				
	8)	lc 7432 is a a) mux b) dmux c) encoder d) OR gate				
Q.2	<b>Ans</b> 1) 2) 3) 4) 5) 6)	wer any four of the following. Define half adder Define shift register Define half subtractor Define counter Define multiplexer Define decoder	08			

Seat No.

> B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2023 Digital Fundamentals of Computer (BCA1208)

SLR-QH-26

Ρ

Set

Q.3	<ul> <li>Write short notes on any two of the following.</li> <li>1) Explain mod 10 using IC 7490.</li> <li>2) Explain clocked S R flip flop.</li> <li>3) Binary addition and subtraction rules.</li> </ul>	08
Q.4	<ul> <li>Answer any Two of the following.</li> <li>1) Explain 4:1 Mux.</li> <li>2) Explain 2 line to 4 line decoder.</li> <li>3) Explain SISO shift register.</li> </ul>	08
Q.5	<ul> <li>Answer any One of the following.</li> <li>1) Draw symbol and truth table of OR, AND, NOT, NAND gates.</li> <li>2) Explain master slave J-K flip flop.</li> </ul>	08

Seat No.	:			Set	Ρ
	B.C	A (Semester - II) (New) (CBCS) Introduction of Microprocesso			
		te: Tuesday, 04-07-2023 00 PM To 02:00 PM		Max. Marks:	40
Instru	uctic	<ul> <li>ons: 1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give eq</li> <li>3) Figures to the right indicate full</li> <li>4) Non programmable calculators and programm</li></ul>	marks	S	
Q.1	<b>Chc</b> 1)	bose correct alternative for the follow 8085 has data bus.	ving.		08
		a) 20 c) 8 bit	b) d)	16 32 bit	
	2)	Associative memory is also known as a) RAM c) DMA	s b) d)	 CAM Cache	
	3)	8085 contains no of dada line a) 2 c) 8	es. b) d)	4 16	
	4)	When data present in cache memory a) WRITE c) MISS	/ mea b) d)	ns READ HIT	
	5)	8085 is bit microprocessor. a) 2 c) 8	b) d)	6 None of these	
	6)	STA is type instruction. a) arithmetic c) logical	b) d)	data transfer Branch	
	7)	GND is connected to pin of 8 a) 20 c) 40	3085. b) d)	1 21	
	8)	In memory mapped I/O address I/O i a) I/O c) Both a and b	s stor b) d)	ed in Memory none of these	
Q.2	Ans 1) 2) 3) 4) 5) 6)	swer any four of the following. Explain direct and register indirect add Define instruction cycle? Explain concept of associative memory Write program for addition of two num Write function of cache memory. What is mean interfacing?	ry.		08

Page 1 of 2

Q.3	<ul> <li>Answer any two of the following.</li> <li>1) Explain pin function of 8085.</li> <li>2) Explain data transfer instructions.</li> <li>3) Explain interfacing of printer.</li> </ul>	08
Q.4	<ul> <li>Answer any two of the following.</li> <li>Write assembly language program for multiplication and division.</li> <li>Explain interrupt driven I/O.</li> <li>Explain DMA controller.</li> </ul>	08
Q.5	<ol> <li>Answer any One of the following.</li> <li>1) Explain architecture of 8085 with block diagram.</li> <li>2) Explain I/O mapped I/O and memory mapped I/O.</li> </ol>	08

Set

Max. Marks: 80

10

### B.C.A. (Semester - II) (Old) (CBCS) Examination: March/April-2023 ENGLISH (Comp.) Literary Voyage (19409201/20409201)

Day & Date: Monday, 19-06-2023

Time: 12:00 PM To 03:00 PM

**Instructions:** 1) All questions are compulsory.

2) Figures to the right indicate full marks.

### Q.1 A) Answer the following questions by choosing correct option provided.

- What was the author reading in the prose 'Does Education Do 1) Harm'?
  - a) Novels
  - b) Autobiographies d) Poetry c) Biographies
- What is required for discretion in speech in the essay 'Of Discourse'? 2)
  - b) Good words and order a) Good jokes
  - c) Eloquence d) Virtue
- Who plays the huge role and affects the entire Country? 3)
  - a) Intrique b) Monarchy
  - c) Hope d) Calumny

#### 4) According to the poet, the earth is .

- a) Maltreated by human beings
- b) A victim of various accidents
- c) On the point of extinction
- d) Heavily loaded with villainish elements
- How old is pope believed to be when he wrote "Ode on Solitude"? 5)
  - a) 11 b) 12 c) 13 d) 14
- What kind of place is the poet going to in the poem? 6)
  - a) Loud place b) Market place
  - d) Dull place c) Silent place
- Identify the correct synonym from the given options "Idea". 7)
  - a) Proposal b) Plan
  - c) Thought d) None of the above

Seat No.

06

16

- 8) Fill in the blanks with the past tense forms of the verbs given within the brackets.
  - 'The Mechanic \_\_\_\_\_ (repair) the car.
  - a) will repaired b) was repaired
  - c) repaired d) repair
- 9) The outline of a presentation includes \_\_\_\_\_.
  - a) acknowledgment
  - b) probable questions
  - c) an introduction, body and conclusion
  - d) None of the above
- 10) P.P.T Presentation means \_\_\_\_\_
  - a) Power Point Presentation
  - b) Power Presentation
  - c) Point Power Presentation
  - d) None of the above

### B) Answer the following questions in one word/one sentence.

- 1) Which sort of person asks troublesome questions in the essay 'Of Discourse'?
- 2) What benefit could be derived from Struggle of youth?
- 3) What kind of people can achieve the true essence of freedom?
- 4) What is described as septic daggers?
- 5) Which literary era did Alexander Pope write it?
- 6) What does the poet wish to hear from the lover?

### Q.2 Answer the following questions in brief. (Eight out of Twelve)

- 1) What is author's purpose in discussing discourse?
- 2) What is the relation between education and virtue?
- 3) What kind of people can achieve the true essence of freedom?
- 4) What opinion does the author present to the people in India of that time regarding freedom?
- 5) What are the common factors among men of eminence?
- 6) What is the author's purpose in discussing discourse?
- 7) Discuss and write the theme of the poem "Our Earth Will Not Die"?
- 8) Write down the summary of the poem "Ode on Solitude".
- 9) Discuss the tone of compassion used by the poet in the poem "Remember".
- **10)** Write down the process of paneer in milk factory.
- **11)** Prepare a presentation on your favourite social worker.
- 12) Write down the importance of the soft skill "Interpersonal intelligence".

Q.3	A)	Write 1)	e down the answers of any two briefly. Describing the reaching process of Pune to Mahabaleshwar by car.	10
		2)	Define and explain the use of power point presentation in today's advanced digital learning school / college.	
		3)	Explain the difference between formal letter and informal letter.	
	B)	Prep	are a presentation on your own college and its facilities.	06
Q.4	A)	Write	e down the following answers only any two briefly.	12
		1)	Read the following advertisement and write a job application letters.	
			MATOSHREE UMABAI ENGLISH MEDIUM SCHOOL Wanted Teacher	
			Qualification - M.A. B.Ed	
			Experience - Min 1 year	
			Interested candidates send CV and application at Indiaumabaischool@gmail.com.	
		- )	C C	
		3) 4)	Explain the soft skill "Interpersonal Intelligence". Write down the process of making pizza. How to make it within 15 minutes.	
	B)	Expla	ain power point presentation and its importance.	04
Q.5	Write	e dov	vn any two of the following.	16
	a)	felt th	e three such situations from your professional life when you have ne following emotions.	
		2) S	Mad Sad	
	b)	'	Glad e down the process of making sugar in factory in your own	
	5)		Jage.	
	c)	Write	e down the process of reaching the vegetable market in your city	
		from	your home.	

Sea No.	t		Set	Ρ
	B.C	C.A (Semester - II) (Old) (CBCS) Examination: March/Ap Advanced Programming in C (19409202)	oril-2023	
			Max. Marks	: 40
Instru	uction	ns: 1) All questions are compulsory. 2) Figures to the right indicate full marks.		
Q.1	Cho 1)	<ul> <li>bose the correct alternative.</li> <li>Which of the following is a correct format for declaration of function</li> <li>a) return-type function-name (argument type);</li> <li>b) return-type function-name (argument type) { }</li> <li>c) return-type (argument type) function-name;</li> <li>d) Both (a) and (b)</li> </ul>	ז?	08
	2)	<ul> <li> is a variable that stores the address of another pointer.</li> <li>a) Pointer</li> <li>b) Double pointer</li> <li>c) Structure</li> <li>d) Preprocessor</li> </ul>		
	3)	If there is any error while opening a file, fopen will return? a) Nothing b) EOF c) NULL d) Depends on compiler		
	4)	What is sizeof() in c?a) Operatorb) Functionc) Arrayd) None of these		
	5)	Which of the following mode argument is used to truncate? a) a b) f c) w d) t		
	6)	Which of the following cannot be a structure member? a) Another structure b) Function c) Array d) None of the mentioned		
	7)	Which is not a storage class? a) Auto b) Register c) Typedef d) Static		
	8)	Which the following functions used to allocate memory? a) Malloc() b) calloc() c) free d) both a and b		
Q.2	Atte a) b) c) d) e)	empt any four of the following. Define local variable. Write a difference between call by value and call by reference. Define preprocessor. Define function. List the types of function. List the operations on pointer.		08

Page 1 of 2

### Q.3 Attempt any two of the following.

- a) What is pointer? Explain array of pointers.
- b) What is structure? Explain structure with example.
- c) What is macros? Explain types of macros.

### Q.4 Attempt any two of the following.

- a) Explain any four preprocessor directive.
- **b)** Write a program to check given number is palindrome or not using function.
- c) Explain output formatting functions.

### Q.5 Attempt any one of the following.

- a) Explain different file opening modes with example.
- **b)** Explain dynamic memory allocation with suitable program.

**08** 

80

Sea No.	t	Set	Ρ
	B.C	C.A. (Semester - II) (Old) (CBCS) Examination: March/April-2023 Introduction to Operating System (19409203)	
		ate: Wednesday, 21-06-2023 Max. Marks :00 PM To 02:00 PM	: 40
Instr	uctio	<ul><li>ons: 1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>	
Q.1	chơ 1)	oose the correct alternative.An operating system manages.a) Memoryb) Processorc) Disk and I/O deviced) All of above	08
	2)	Which of the following do not belong to queues for processes? a) Job queue b) PCB queue c) Device Queue d) Ready Queue	
	3)	is a logical extension of time sharing operating system. a) Real time b) Multiprocessing c) Distributed d) Multiprogramming	
	4)	A process can be defined asa) any user programsb) any program in executionc) any O.S programd) any file stored on disk	
	5)	The ready queue is a queue of a) processes ready to execute b) processes waiting for I/O c) processes near completion d) completed processes	
	6)	The critical section problem is a problem faced by a) co-operating processes b) O.S processes c) user processes d) None of these	
	7)	<ul> <li>A binary semaphore</li> <li>a) Has the value one or zero</li> <li>b) Is essential to binary computers</li> <li>c) Is used only for synchronization</li> <li>d) Is used only for mutual exclusion</li> </ul>	
	8)	The number of processes completed per unit time is known as a) Output b) Throughput c) Efficiency d) Capacity	
Q.2	An: a) b) c) d) e) f)	Swer the Any Four of following. What is operating system? What is scheduler? List out its types. What is process? List out operations on process. What is semaphores? List out its types. What is threads? List out its types. What is co-operating process?	08

### Page **2** of **2**

### Q.3 Write short Note on Any Two of following.

- a) System Calls
- **b)** Critical Section problem
- c) Monolithic and layered system

### Q.4 Answer the Any Two of following.

- a) Consider the following example. Implement the First come first serve scheduling algorithm and find out following.
  - i) Draw the Gantt chart.
  - ii) Calculate the average waiting time.
  - iii) Calculate the turnaround time.

Process	Brust Time
P1	12
P2	5
P3	4

- b) Explain the system components.
- c) What is process? Explain the life cycle of process.

### Q.5 Answer any one of following.

- a) Explain the services provided by operating system.
- **b)** Explain any four types of operating system with advantages and disadvantages.



80

# SLR-QH-31 Set

Seat No.

### B.C.A. (Semester - II) (Old) (CBCS) Examination: March/April-2023 Basics of Web Programming – II (19409204)

Day & Date: Thursday, 22-06-2023 Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.

2) Figures to the right indicate full marks.

### Q.1 Choose the correct alternative from the option.

- Which of the following keywords is used to define a variable in JavaScript? 1) b)
  - a) var Both a and b C)
    - d) None of these

let

- 2) What is JavaScript?
  - JavaScript is a scripting language used to make the website a) interactive
  - JavaScript is an assembly language used to make the website b) interactive
  - JavaScript is a compiled language used to make the website C) interactive
  - None of the mentioned d)

### 3) Who developed jQuery, and in which year it was first released?

- John Richard in 2001 a) c) John Resig in 2006
- Mark Bensman in 2004 b) d) None of the above
- 4) Which of the following sign is used as a shortcut for jQuery?
  - the % sign a) b)
  - the \$ sign the @ sign c) d)
- 5) The jQuery method used to set the width property of an element is .
  - setWidth( val ) method a)
  - setCSSWidth(val) method C)
- The jQuery method used to remove the set of matched elements is . 6)
  - a) delete() method C)
    - remove() method d)
- Arrays in JavaScript are defined by which of the following statements? 7)
  - It is an ordered list of values a) It is an ordered fist of string c)
    - d) It is an ordered fist of functions
- 8) How can a datatype be declared to be a constant type?
  - a) const let b)
  - c) constant d) var

### Q.2 Answer any four of the following.

- What is jQuery? a)
- Write a Toggle() in JQuery. b)
- What is the use of window object? C)
- What is jQuery Hide Show? d)
- How to write a comment in JavaScript? e)
- What is DOM? What is the use of document object? **f**)

08

Max. Marks: 40

Ρ

- d)
- width(val) method b) None of the above

- b) empty() method
  - None of the above
- b) It is an ordered list of objects

80

the & sign

Q.3	Writ a) b) c)	te short notes on any two of the following. Explain Arithmetic and Comparison Operators. Write a program for adding CSS classes in JQuery. Explain Break statement with example.	08
Q.4	Ans a) b) c)	wer any two of the following. Explain get content in JQueiy with Example. Explain methods of JavaScript navigator object. Explain jQuery noConflict() Method.	08
Q.5	Ans a) b)	w <b>er any one of the following.</b> What is selectors? Explain with example. What is array? Explain any 3 methods.	08

Seat No.		Set P
	B.C.	A. (Semester - II) (Old) (CBCS) Examination: March/April-2023. Office Automation (19409205)
		te: Friday, 23-06-2023 Max. Marks: 40 00 PM To 02:00 PM
Instr	uctio	<ul><li><b>ons:</b>1) All questions are compulsory.</li><li>2) Figures to the right indicates full marks.</li></ul>
Q.1	Cho 1)	ose correct alternative from the following.08Which shortcut key is used to do text Italic?a) Ctrl+Cb) Ctrl+Vc) Ctrl+Id) Ctrl+B
	2)	Spreadsheet is created ina) MS- Wordb) MS- Excelc) MS- Power Pointd) MS- Access
	3)	In database the category of information is called as a) Record b) Tuple c) Field d) String
	4)	<ul> <li>What is best way to create another copy of slide</li> <li>a) From insert tab choose duplicate slide</li> <li>b) Click the slide and press Ctrl+A and paste the new slide</li> <li>c) Redo everything on a new slide that you have to done on previous slide</li> <li>d) None of these</li> </ul>
	5)	If the displayed Time and Date is wrong, you can reset using a) My computer b) Control Panel c) Toolbar d) Desktop
	6)	is the 1990 version of the Macintosh trash can. a) Recycle Bin b) My Computer c) Task bar d) None of these
	7)	What are the smallest and largest font size available in font size Toolbar? a) 1 and 62 b) 8 and 72 c) 10 and 72 d) 8 and 68
	8)	Switching of the computer is called a) Restart b) Stand by

c) Shut down d) Log off

Q.2	Ans 1) 2) 3) 4) 5) 6)	•	08
Q.3	Wri 1) 2) 3)	<b>te Short Note on ANY TWO of the following.</b> Pivot Table in MS-Excel Characteristics of computer Adding graphics in MS-Power Point	08
Q.4	Ans 1) 2) 3)	swer ANY TWO of the following. What is Sorting, Filtering, Validation and subtotal? Note down the steps of creating Form in MS-Access. What is computer? Applications of Computer.	08
Q.5	Ans a) b)	swer any ONE of the following. What is Chart in MS-Excel? Make result sheet for students which Displays Grade of students. (Entering formula is compulsory) Write the steps involved in mail merging. What is the benefit of mail merging?	08

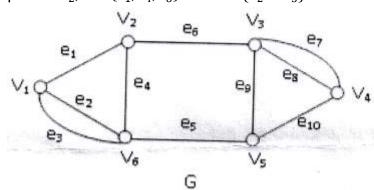
Sea	t	Set	Ρ
No.	BC	C.A. (Semester - II) (Old) (CBCS) Examination: March/April-2023	
	D.0	Basics of Mathematics – II (19409206)	
		te: Saturday, 01-07-2023 Max. Marks: 00 PM To 02:00 PM	40
Instr	uctio	<ul><li>ons: 1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>	
Q.1	Fill 1)	in the blanks by choosing the correct alternatives given bellow. The number of edges in a complete graph $K_6$ is a) 10    b) 15 c) 20    d) 6	08
	2)	The complement of a complete graph is graph. a) Complete b) Simple c) Null d) None of these	
	3)	A tree with 7-vertices has number of edges. a) 7 b) 6 c) 8 d) None of these	
	4)	A complete graph K₃ is regular. a) 8 b) 64 c) 16 d) 7	
	5)	In tree vertex of degree 1 is called as a) leaf b) base of tree c) central vertex of tree d) none of these	
	6)	Total degree of graph is alwaysa) complex numberb) odd numberc) even numberd) none of these	
	7)	How many edges are there in the graph with 10 vertices each of degree 6? a) 30 b) 10 c) 6 d) 60	
	8)	A graph which does not contain any loop and multiple edge's is called as graph. a) Multi b) Self c) Complete d) Simple	
Q.2	<b>Ans</b> 1) 2) 3) 4) 5)	swer any four of the following questions. Define complete graph. Define degree of vertex. Give the example of graph which is Hamiltonian but not Euler. Define Hamiltonian circuit Draw all possible subgraphs of following graph.	08
		V <sub>1</sub> e V <sub>2</sub>	
	6)	Define tree.	

Page 1 of 3

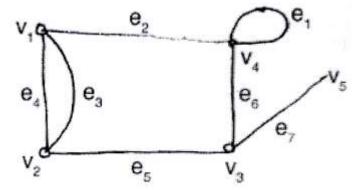
**08** 

### Q.3 Answer any two of the following questions.

**1)** Draw the graph  $G - V_2$ ,  $G - \{e_1, e_4, e_6\}$  and  $G - \{V_2 - V_5\}$ 



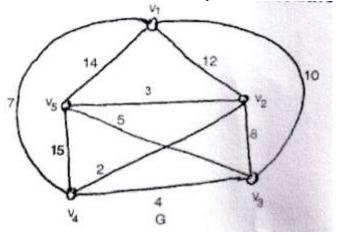
2) Find the adjacency and incidence matrix for the following graph.



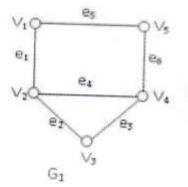
3) Write the note on Chinese postman problem.

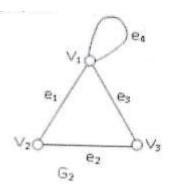
### Q.4 Answer any two of the following questions.

- 1) State & prove hand shaking lemma.
- 2) Solve the following travelling salesman problem with head quarter at vertex V<sub>1</sub>. Hence find the minimum distance travelled by salesman.



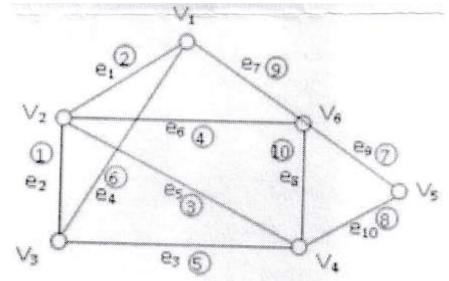
**3)** Find  $G_1 \cup G_2$  for the following pair's of graphs.





### Q.5 Answer any one of the following questions.

 Define shortest spanning tree and by using Kruskal's algorithm; find a shortest spanning tree and its weight of the following graph.



- 2) Define with examples:
  - i) Regular graph
  - ii) Euler graph
  - iii) Complement of graph
  - iv) Sub graph

INO.				l	
	B.C./	A. (Semester - II) (Old) (CBCS) Statistical Method			
		e: Sunday, 02-07-2023 0 PM To 02:00 PM		Max. Marks:	: 40
Instr	uctior	<ul> <li>1) All questions are compulsory.</li> <li>2) Figures to the right indicate full</li> <li>3) Use of calculator is allowed.</li> </ul>	mark	ίS.	
Q.1	Rew 1)	rite the following sentence by choo In order of arrangement of ob a) Permutation c) a and b both	-		08
	2)	Number of 2-digit numbers to be for with expectation is a) 20 c) 25	med I b) d)	by arranging the digits 1, 2, 3, 4, 5 10 None of these	
	3)	<pre>If P(A) = 1, then A is event. a) Impossible c) Sure</pre>	b) d)	Null None of these	
	4)	If $P(A \cap B) = 0$ then events A and B a) Exhaustive c) Mutually exclusive	are _ b) d)	Equally likely	
	5)	If $P(A) = 0.5$ , $P(B) = 0.6$ , $P(A \cap B) = a$ a) 0.6 c) 0.3	0.3 th b) d)	then $P(A/B) = $ 0.5 0.4	
	6)	The p.m.f. of discrete r.v. X is $P(x) =$ Then $P(X = 2.5) =$ a) 1 c) 0.025	$=\frac{x}{10}, x$ b) d)	x = 1,2,3,4. 0.25 0	
	7)	If $X \to B$ (15, 0.4), than $E(X) =$ a) 6 c) 3.6	b) d)	5 None of these	
	8)	The probability curve of normal distr a) A.m. c) Mode	ibutio b) d)	on is symmetric about Median All of these	
Q.2	a) b) c)	the answer of any four of the following of the probability. Define – Probability. State any 2 properties of c.d.f. of disconstruction Define – Binomial distribution Find value of x of ${}^{10}C_2 + {}^{10}C_3 + {}^{11}C_4 + {}^{12}C_4$ Given: P(A) = 0.2 P(B) = 0.45 P(A)	crete C <sub>5</sub> = $^{1}$	r.v. <sup>3</sup> Cx	08

- **e)** Given: P(A) = 0.3, P(B) = 0.45,  $P(A \cup B) = 0.6$  Find  $P(A \cap B)$
- f) If  $X \to P(m)$  with P(X = 1) = P(X = 2), then find value of 'm'.

Set P

## Seat No.

### Q.3 Write short note on any two of the following.

- a) Principles of counting
- **b)** Properties of normal distribution
- c) Poisson distribution

### Q.4 Write the answer of any two of the following.

- **a)** State Axioms of probability and prove that  $P(\overline{A}) = 1 P(A)$
- **b)** The p.d.f. of normal distribution is

 $f(x) = K.e^{-1/50}(x^2 - 20x + 100), -\infty < x < \infty$ Find parameters of the distribution.

c) Find number of passwords to be formed using the alphabets A, B, C, D and digits 1, 2, 3, 4, 5 such that a password consists of 2 alphabets followed by 3 digits.

### Q.5 Attempt any one of the following.

- a) Define:
  - i) Mutually exclusive events
  - ii) Equally likely events
  - iii) Independent events
  - iv) p.m.f.
- b) The p.m.<u>f. of discrete r.v. X is</u>

Х	1	2	3	4	5
P(x)	0.1k	0.2k	0.25k	0.15k	0.3k

Find:

- i) Value of k
- ii) E(X)
- iii) V(X)
- iv) P(2 < X < 5)

**08** 

**08** 

B.C.A. (Semester - II) (Old) (CBCS) Examination: March/April-2023 Introduction to Microprocessor (19409208)				
Day & Date: Monday, 03-07-2023 Max. Marks: Time: 12:00 PM To 02:00 PM				
<ul> <li>Instructions:1) All questions are compulsory.</li> <li>2) Draw neat diagrams and give equations wherever necessary.</li> <li>3) Figures to the right indicate full marks.</li> <li>4) Use of logarithmic table and calculator is allowed. (At. Wts.: H=1, C=12, O=16, N=14, Na=23, Cl=35.5)</li> </ul>				
Q.1	Q.1 Multiple choice questions. 08			
	1)	Which among the following are not the application of microprocessor?		
		a) Word processing b) Microprocessor		
		c) Washing machines d) Communication		
	2)	Harvard architecture is used in		
		a) Microcontrollers b) Microprocessor		
		c) Computer system d) Operating system		
	3) Which is a 64bit microprocessor among the following?			
		a) Intel 8085 b) Intel 8086		
		c) Motorola 68020 d) Intel Pentium		
	4)	The register that may be used as an operand register is		
		a) Accumulator b) B register		
		c) Data-register d) Accumulator and B register		
	5)	Which of the following is not a special function register?		
		a) Program counter b) Instruction pointer		
		c) Accumulator d) Stack pointer		
	6)	How many flags does 8085 have?		
		a) 4 b) 5		
		c) 8 d) 9		
	7)	Pentium is a processor.		
		a) 32 bit b) 16 bit c) 8 bit d) 64 bit		
	•	, , , , , , , , , , , , , , , , , , , ,		
	8)	The addressing mode which makes use of indirection pointer is		
		a) Indirect addressing mode b) Index addressing mode		
		c) Relative addressing mode d) Offset addressing mode		
Q.2	Q.2 Answer any four of the following. 08			
	1) How many machine cycles does 8085 have, mention them?			
	2)	Write a difference between memory mapped I/O and peripheral I/O.		
	3)	Define Pinelining		

- Define Pipelining. 3)
- 4)
- What are the modes of operation used in 8253? Define instruction cycle, machine cycle and T-state. 5)

Page 1 of 2

Seat No.

## (Semester - II) (Old) (CBCS) Examination: March/April-2023 BCA

Set Ρ

#### 08

**08** 

### Page **2** of **2**

### Q.3 Write short notes on any two of the following.

- 1) Explain the features of 8085 in details.
- 2) Explain the various addressing modes of 8085 microprocessor with example.
- 3) Write the program to transfer block of data from one location to other.

## Q.4 Answer any Two of the following.

- 1) Write an assembly language program to add or subtract two 16-bit number.
- 2) Write the concept of I/O and memory interfacing.
- 3) Draw and explain the basic bus system of 8085 microprocessor.

## Q.5 Answer any One of the following.

- 1) With neat PIN diagram explain the various signals of 8085 microprocessor.
- 2) With neat diagram explain the function of 8285 PPI.

			SLR-QH	-36	
Sea No.	t		Set	Ρ	
	B.C.	A (Semester - II) (Old) (CBCS) Examination: Marc Software Engineering - II (19409209)	h/April-2023		
		e: Tuesday, 04-07-2023 0 PM To 02:00 PM	Max. Mark	s: 40	
Instr	uctior	<ul><li>ns:1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>			
Q.1	<b>Choo</b> 1)	DescriptionWhich of the following is not related to DFD?a)Bubble (process)b)Arrow (flow)c)Secondary Storaged)Data Store		08	
	2)	Weak entity set is represented asa) Underlineb) Double linec) Double diamondd) Double rectangle	9		
	3)	<ul> <li>During system implementation the following are donei</li> <li>programs are written and tested with operational data</li> <li>user documentation is created and users trained</li> <li>programmers are recruited and trained</li> <li>the system is tested with operational data</li> </ul>	implementation the following are done are written and tested with operational data mentation is created and users trained ers are recruited and trained		
		a) i and iiib) ii and iiic) ii and ivd) i, ii and iv			
	4)	<ul> <li>HIPO stands for</li> <li>a) Hierarchy input process output</li> <li>b) Hierarchy input plus output</li> <li>c) Hierarchy plus input process output</li> <li>d) None of these</li> </ul>			
	5)	Conversion method in which users, being used to an old system use the old system, alongside the new system, is a) parallel run b) multitasking c) multi-processing d) all of the above			
	6)	White Box techniques is also referred asa) Design based testingb) Structural testingc) Error guessing techniqued) None of the mer	•		
	7)	Third normal form is based on the concept ofa) Closure Dependencyb) Transitive Dependencyc) Normal Dependencyd) Functional Dependency			
	8)	Decision Nodes are represented bya) Disksb) Squaresc) Circlesd) Triangles			

Page 1 of 2

Q.2	<ul> <li>Answer any four of the following.</li> <li>1) What are the DFD components or Symbols?</li> <li>2) What is white box testing?</li> <li>3) Explain pilot approach.</li> <li>4) Explain Decision tree.</li> <li>5) What is normalization? Explain 1 NF.</li> <li>6) What is system maintenance? What are different types of maintenance?</li> </ul>	08
Q.3	<ul> <li>Write notes on any two of the following.</li> <li>1) System Implementation</li> <li>2) Black box Testing</li> <li>3) Data Dictionary</li> </ul>	08
Q.4	<ul> <li>Answer any two of the following.</li> <li>1) What is the need of Flowchart? Explain different symbols in flow chart.</li> <li>2) What is a Decision Table? Explain with an example.</li> <li>3) Explain Top-Down incremental implementation. State its advantages.</li> </ul>	08
Q.5	<ul> <li>Answer any One of the following.</li> <li>1) What is system configuration? Explain collection of system statistics.</li> <li>2) Draw the context level and first level data flow diagram for the following subsystems: <ul> <li>a) Library System</li> <li>b) Employee Payroll System</li> </ul> </li> </ul>	08

# Seat B.C.A (Semester - III) (New) (CBCS) Examination: March/April-2023 OOPS with C++ - I (19409301) Day & Date: Monday, 03-07-2023 Max. Marks: 40 Time: 09:00 AM To 11:00 AM

**Instructions:**1) All questions are compulsory.

- 2) Draw neat diagrams and give equations wherever necessary.
- 3) Figures to the right indicate full marks.

#### Q.1 Multiple choice questions.

No.

- Wrapping data and its related functionality into a single entity is known 1) as
  - a) Abstraction b) Encapsulation
  - C) Polymorphism d) Modularity
- 2) Which operator is overloaded for a count object?
  - a) b) >> << < d) c) >
- What is the size of a Boolean variable in C++? 3)
  - 1 bit b) 1 byte a)
  - 4 bytes 2 bytes C) d)
- What is an inline function? 4)
  - A function that is expanded at each call during execution a)
  - A function that is called during compile time b)
  - A function that is not checked for syntax errors C)
  - A function that is not checked for semantic analysis d)
- 5) What is a friend function in C++?
  - A function which can access all the private, protected and public a) members of a class
  - A function which is not allowed to access any member of any class b)
  - A function which is allowed to access public and protected members of C) a class
  - A function which is allowed to access only public members of a class d)
- 6) Which of the following operator cannot be overloaded?
  - ?: a) + b)
  - d) % C) -
- 7) Which of these following-members are not accessed by using direct member access operator?
  - public b) private a)
  - Both private & protected protected d) C)
- By default how the value are passed in c++? 8)

call by value

a)

- call by reference b)
- c) call by pointer d) call by object

SLR-QH-37



Q.2	Answer any Four of the following.	08
	<ol> <li>What is class?</li> <li>What is the role of protected access specifier?</li> <li>Write syntax and use of 'enum' keyword.</li> </ol>	
	<ul><li>4) Write different rules to use constructor.</li></ul>	
	5) What is nesting of member function?	
	6) What is this pointer?	
Q.3	<ul> <li>Write short notes on any Two of the following.</li> <li>1) Explain scope resolution operator with example.</li> <li>2) What is Constructor?</li> <li>3) 'Delegation' as OOP's concept.</li> </ul>	08
_		
Q.4	<ul> <li>Answer any Two of the following.</li> <li>How single friend function can act as bridge between two or more classes?</li> </ul>	08
	<ol> <li>How single friend function can act as bridge between two or more classes?</li> <li>Explain "Function Overloading" with example.</li> </ol>	
	<ol> <li>Difference between procedure oriented programming and Object Oriented Programming.</li> </ol>	
Q.5	Answer any One of the following.	08

- 1) What is operator overloading? What is the rule to overload unary & binary operator?
  - 2) Explain basic concepts of oops.

# Q.2 Answer any Four of the following.

# Ρ Set

Day & Date: Tuesday, 04-07-2023 Time: 09:00 AM To 11:00 AM

Seat

No.

**Instructions:**1) All guestions are compulsory.

2) Draw neat diagrams and give equations wherever necessary.

Data Structures using 'C'-I (19409302)

3) Figures to the right indicate full marks.

#### Q.1 Multiple choice questions.

- In which algorithm a main problem is breakdown into two or more 1) subproblems?
  - a) Branch & bound b) Greedy
  - c) Divide & conquer d) None of these
- 2) Which of the following application makes use of a circular linked list?
  - Undo operation in a text editor **Recursive function calls** b) a) d) All of the mentioned
  - Allocating CPU to resources c)
- 3) "Stack Overflow" situation occurs while performing operation.
  - lsFull() b) IsEmpty() a)
  - Push() d) Pop() C)
- Which of the following queue allows us to add or delete elements from both 4) ends?
  - Linear Circular a) b) d) Deque
  - Priority C)
- 5) Which of the following linked list has double parts in its node structure?
  - a) Singly linear b) **Doubly linear**
  - Both b) & c) Doubly circular d) C)
- The type of expression in which operator succeds its operands is? 6)
  - **Prefix Expression** Infix Expression b) a)
  - Postfix Expression None of the mentioned C) d)
- Which of these best describes an array? 7)
  - A data structure that shows a hierarchical behavior a)
  - Container of objects of similar types b)
  - Container of objects of mixed types c)
  - All of the mentioned d)
- If the elements "A", "B", "C" and "D" are placed in a queue and are deleted 8) one at a time, in what order will they be removed?
  - ABCD DCBA a) b)
  - C) DCAB d) ABDC

Max. Marks: 40

08

B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2023

08

80

80

- - 08

### Q.2 Answer any four of the following.

- 1) Define Data Structure.
- 2) State the application of Queue.
- 3) What is node? Write the Node structure of SLL.
- 4) What is time & space complexity?
- 5) Why stack is called LIFO data structure?
- 6) What is ADT?

# Q.3 Write short notes (Any Two)

- 1) Operations of array
- 2) Circular queue
- 3) Use of stack in recursion

# Q.4 Answer any two of the following.

- 1) Explain backtracking and dynamic programming.
- 2) What is Linear linked list? Explain its following operations.
  - i) insret\_at\_begin()
  - ii) Search()
- 3) Write a program to check entered string is palindrome or not using stack.

# Q.5 Answer any One of the following.

- 1) Write a program to implement queue using array.
- 2) What are the types of Linked List? Explain any type of Linked List with example.

# B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2023 Database Management System (19409303) Day & Date: Wednesday, 05-07-2023 Time: 09:00 AM To 11:00 AM

**Instructions:** 1) All questions are compulsory.

Seat

No.

2) Figures to the right indicate full marks.

#### Q.1 Choose correct alternative from the following.

- Data about data is termed as \_\_\_\_\_. 1)
  - Directory a)
  - C) Meta Data
- 2) DBMS stands for .
  - Database Management System a)
  - Database Manage System b)
  - Data Management System c)
  - **Database Management Service** d)

#### 3) Relational Algebra is a \_\_\_\_\_ query language that takes two relations as input and produces another relation as an output of the query.

b) Databank

d)

None of these

- Relational b) Structural a)
- C) Procedural d) Fundamental
- of the following is not type of database model. 4)
  - a) Hierarchical b) Network
    - Decentralized Distributed c) d)
- 5) property is 'all or nothing' property.
  - Atomicity Consistency a) b)
  - Isolation C) d) Durability
- The term is used to refer to a row. 6)
  - a) Field Tuple b)
  - C) Attribute Column d)
- 7) is not a feature of DBMS.
  - Minimum Duplication and Redundancy of Data a)
    - High Level of Security b)
    - Single-user Access only c)
  - Support ACID Property d)
- 8) level describes the structure of the whole database for a group of users.
  - Physical a) b) External Conceptual d) None of these C)

#### Answer the following questions briefly. (any four) Q.2

- What is Data? 1)
- What is Data security? 2)
- What is Entity? 3)
- 4) Define Relationship.
- What are the advantages of DBMS? 5)
- What is shadow paging? 6)

# **SLR-QH-39**

Set

Max. Marks: 40

Q.3	Wri 1) 2) 3)	<b>te short notes on any two of the following.</b> Relation, tuple and domain Database Users Deadlock	08
Q.4	Ans 1) 2) 3)	wer any two of the following. Differentiate between Network and Hierarchical model. What are the limitations of traditional file system? Explain advantages and disadvantages of Data Distribution.	08
Q.5	Ans 1) 2)	wer any one of the following. What is transaction? Explain ACID properties. What is join? Explain types of join with example.	08

Seat No.	t	Set P
E	3.C.A	A. (Semester - III) (New) (CBCS) Examination: March/April-2023 Software Testing & Quality Assurance (19409304)
		e: Thursday, 06-07-2023 Max. Marks: 40 0 AM To 11:00 AM
Instr	uctio	<ul> <li>ns: 1) All questions are compulsory.</li> <li>2) Figures to the right indicate full marks.</li> <li>3) Draw necessary diagrams whenever necessary.</li> </ul>
Q.1	Choo 1)	ose correct alternative for the following.08Software Debugging is a set of activities that can be planned in advance and conducted systematically.08
		a) True b) False
	2)	A set of activities that ensure that software correctly implements a specific function. a) verification b) testing
		c) implementation d) validation
	3)	Software mistakes during coding are known as a) errors b) failures c) bugs d) defects
	4)	Test should be conducted for every possible a) data b) case c) variable d) all of the mentioned
	5)	Cyclomatic Complexity method comes under which testing method.a) Yellow boxb) White boxc) Gray boxd) Black box
	6)	<ul> <li>Which of the following is the way of ensuring that the tests are actually testing code?</li> <li>a) Control structure testing</li> <li>b) Complex path testing</li> <li>c) Code coverage</li> <li>d) Quality assurance of software</li> </ul>
	7)	Effective testing will reduce cost.a) maintenanceb) designc) codingd) documentation
	8)	<ul> <li>Which of the following is not a regression test case?</li> <li>A representative sample of tests that will exercise all software functions</li> </ul>
		b) Additional tests that focus on software functions that are likely to be
		<ul> <li>affected by the change</li> <li>c) Tests that focus on the software components that have been changed</li> <li>d) Low-level components are combined into clusters that perform a specific software subfunction</li> </ul>

# Seat No.

SL	R-	Qŀ		40
----	----	----	--	----

Q.2	a) b) c) d)	wers any four of the following. List out dynamic testing techniques of WBT. What are the various goals of loop testing? What is alpha testing? List out steps of the test plan List out types of functional testing. When we can start testing?	08
Q.3	a)	<b>e short notes on any two of the following.</b> Volume testing Decision table testing Review process	08
Q.4	Ans a) b) c)	wers any Two of the following. Differentiate top-down and bottom-up incremental integration testing Explain Equivalence Class Partitioning. Create test execution report for Gmail login.	08
Q.5	Ansv a) b)	<b>wer any one of the following.</b> What is performance testing? Explain its various types. Explain defect life cycle.	08

Seat No.	t	Set	Ρ
E	3.C.A	A. (Semester - III) (New) (CBCS) Examination: March/April-2023 Web Development Using PHP (19409305)	
		te: Friday, 07-07-2023 Max. Marks: 00 AM To 11:00 AM	40
Instr	uctio	<ul><li>ns: 1) All questions are compulsory.</li><li>2) Figures to the right indicate full marks.</li></ul>	
Q.1	Mult 1)	tiple choice questionsWhat is PHP stand for?a) Personal Home Pageb) Hypertext Preprocessorc) Pretext Hypertext Processord) Preprocessor Home Page	08
	2)	Which of the following is not a Superglobals in PHP? a) \$_SERVER b) \$_ENV c) \$_FILES d) \$_PUT	
	3)	What should be the correct syntax to write a PHP code? a) < php > b) php ? c) ? d) php ?	
	4)	When you use the \$_GET variable to collect data, the data is visible to a) none b) only you c) everyone d) selected few	•
	5)	Which two predefined variables are used to retrieve information from forms? a) \$GET & \$SET b) \$_GET & \$_POST c) \$_GET & \$_SET d) GET & SET	
	6)	Which one of the following function is used to start a session? a) start_session() b) session_start() c) session_begin() d) begin_session()	
	7)	Which function returns an array consisting of associative key/ value pairs? a) count() b) array_count() c) array_count_values() d) count_values()	
	8)	Which superglobal stores a variety of information pertinent to a file uploaded to the server via a PHP script? a) \$_FILE Array b) \$_FILES Array c) \$_FILES_UPLOADED Array d) \$_FILE_UPLOADED Array	
Q.2	Ans	<ul> <li>i) What are the different types of Array in PHP?</li> <li>ii) Explain GET and PST method in short.</li> <li>iii) What are the difference between echo and print?</li> <li>iv) What are the uses of explode and implode functions?</li> <li>v) How can you make a connections with MySql server using PHP?</li> <li>vi) Explain setcookie() function in PHP?</li> </ul>	08

Q.3	<ul> <li>Write short notes on any two of the following.</li> <li>i) Explain array sorting functions.</li> <li>ii) Explain soundex() and metaphone().</li> <li>iii) Write a program for a Armstrong number.</li> </ul>	08
Q.4	<ul> <li>Answer any two of the following.</li> <li>i) Explain query string with example.</li> <li>ii) Explain function parameter passing technique.</li> <li>iii) Explain session with example.</li> </ul>	08
Q.5	Answer any one of the following.i)Explain MySQL Architecture.ii)Explain following variables:a)\$_POSTb)\$_REQUESTc)\$_ENVd)\$_COOKIES	08

	1					
Seat No.					Se	et P
E	3.C.A	A. (Semester	r - III) (New)	(CBCS) Ex	amination: March/April-202	23
		-	Computer N	etworks –	(19409306)	
		e: Saturday, 08 0 AM To 11:00			Max. Ma	rks: 40
Instru	uctio	<i>,</i> ,	tions are comp	•		
			to the right ind eat diagrams w			
Q.1	Mult	iple choice qu	uestions.			08
	1)	The first Netv	vork was called			
		a) CNNET c) ASAPN		b)		
	0)	,		d)	NSFNET	
	2)	with TCP IP r	• •	s is an additio	n to OSI model when compared	
			ion layer	b)	Presentation layer	
		c) Session	layer	d)	Session and Presentation layer	
	3)			packet moves	s from the lower to the upper	
		layers, heade a) Added	ers are	b)	Rearranged	
		c) Remove	ed	d)	Randomized	
	4)		ore bits in a dat the error is cal		en changed during the	
		a) random		b)	burst error	
		c) inverted	error	d)	double error	
	5)		of rules that gov			
		a) Protoco c) RFCs	ls	b) d)	Standards	
	$\mathbf{c}$	,	incina modio a	,	Servers	
	6)	network?	lission media p	novides the h	ighest transmission speed in a	
		a) coaxial		b)	twisted pair cable	
		c) optical f	iber	d)	None of these	
	7)		ent over guideo	and unguide	d media as analog signal by	_
				b)	amplitude	
		c) frequen	су	d)	phase	
	8)	Wireless tran	smission of sig	nals can be d	one via	
		a) radio wa	aves	b)	microwaves	
		c) intrared		a)		
Q.2	Ans	-	of the followir	ng.		08
	a) b)	-	stance			
	-		ing			
	-	Bit Length	-			
Q.2	8) Ans	modulation. a) digital c) frequent Wireless tran a) radio wa c) infrared wer any Four Hamming Dis Gateway Internet work	ent over guided cy smission of sig aves <b>of the followir</b> stance	b) d) nals can be d b) d)	one via	

- e) Noise
- f) Twisted pair cable

Q.3	Write 1) 2) 3)	e short notes on any Two of the following. Analog Signal CDMAx Data Representation	08
Q.4	Ansv 1) 2) 3)	wer any Two of the following. Explain the star and ring topology. Explain the phase modulation in detail. Write a note on Packet switching.	08
Q.5	Ansv 1) 2)	wer any One of the following. Draw and explain the OSI reference model. What is CSMA? Explain the CSMA/CD and CSMA/CA protocols.	08

#### c) Right hand side What is the full form of TCS? a) Tax Collected by Staff Tax Consumption at Source b) Tax Collected at Source C) d) Tax Collected from Sales earning profit is called a) Profit b) Capital c) Fixed Assets d) None of these What is the full form of GST? a) Goods and Supply Tax b) Goods and Services Tax c) General Sales Tax d) Government Sales Tax

- 3)

- Cash, goods or assets invested by the proprietor in the business for

- 4)

#### The art of recording all business transactions in a systematic manner 5) in a set of books is called -

- a) Accounting b) Book – keeping c) Ledger d) None of these.
- Which shortcut key is used for Select Company in Tally? 6)
  - a) F1 b) Alt + F1
  - d) Alt + F3 c) F3
- Which shortcut key is used to take print of any report in Tally? 7)
  - a) Ctrl + P b) Shift + P
  - c) Alt + P d) Alt + Ctrl + P
- 8) Credit balance of Trading Account means
  - a) Gross Loss
  - c) Net Profit
- What is TAN ? 9)
  - a) Tax Absorb Number
  - b) Tax Assign Number
  - Tax Account Number C)

# B.C.A. (Semester – III) (New) (CBCS) Examination: March/April-2023 Financial Accounting with Tally (19409307)

Day & Date: Monday, 10-07-2023 Time: 09:00 AM To 12:00 PM

Seat

No.

**Instructions:** 1) All questions are compulsory.

- Figures to the right indicate full marks.
  - 3) Draw neat labeled diagrams wherever necessary.

#### Q.1 Multiple choice questions. A)

2)

- Every debit has corresponding 1)
  - a) Debit
- b) Credit d) None of these

Max. Marks: 80

10

Set



		10) The basis of re	cording transactions	S -	
		a) Vouchers	b)	Profit	
		c) Order form	n d)	Quotation list	
	B)	Fill in the blank.			06
	-	1) Surplus of incom	e over expenses is _		
		,	not recoverable is kn		
				d signs on it is the	
		,	ournal is known as		
		,	redit should be debite		
		6) The amount drav	wh by businessmen to	or his personal use is	
Q.2	Solv	e any Eight of the fo	llowing		16
Q.2	1)	Write types of Ledge	-		10
	2)	Write use of the Key	-		
	3)	Write use of the key			
	4 <b>)</b>	Write use of the key			
	5)	How can you copy t	he text from Tally?		
	6)		company statutory de	etails?	
	7)	How can you create			
	8)		ion in Tally: Part payr	nent of Rs 10,000 made to	
	0)	Manish by cheque Write Path of view tr	rial balancad		
	9) 10)			ld to Rony on credit for Rs. 60,000	
	10)		ion in Tally. Coous sc		
Q.3	A)	Attempt any Two of	the following.		10
	/	1) Explain the featu	-		
		2) Explain the GST			
		<ol> <li>Explain Accounti</li> </ol>	ing Concept		
	B)	Sunanda Mart furnisl	hes the following info	mation	06
	-,		the month of April, 20		•••
		<b>U</b>	arted with cash Rs. 1,		
		-	nased from Manisha		
		3) Stationery p	urchased for cash Rs	. 2,200.	
			k account with SBI for		
		,	to Priya for Rs. 16,00		
		6) Received a	cheque of Rs. 16,000	from Priya.	
~ 4	۸)	Attempt any Two of	the fellowing		00
Q.4	A)	Attempt any Two of	-	nd thair usa	08
			nortcut keys in Tally a ng of Book Keeping a		
		,	of Company Creation	2	
	Β)	,		•	•••
	B)		transactions and writ	e voucher type of each entry	08
		(as per the Tally).	nenced a husiness w	th a capital of Rs. 1,00,000.	
		-		e Bank of India and deposited Rs.	
		30,000.	nao openea min otal	e Bank of mala and deposited its.	
			urniture by paying cas	sh Rs. 10.000.	

4) Goods purchased on credit from Mohan for Rs. 20,000.

## Q.5 Attempt any Two of the following.

a) Prepare a simple cash Book. 2019 April

1	Cash in hand	Rs.2,50
5	Cash paid to Suresh	Rs 1,000
7	Cash purchase	Rs. 500
14	Cash received from Poonam	Rs. 1,000
16	Cash Sales	Rs. 800
20	Paid Carriage	Rs. 100
25	Paid Salary	Rs. 500

**b)** From the following balances of Mangesh, prepare balance sheet as on 31st December, 2018.

Particulars	Debit (Rs)	Credit (Rs)
Plant and Machinery	8,00,000	
Land and Building	6,00,000	
Furniture	1,50,000	
Cash in hand	20,000	
Bank overdraft		1,80,000
Debtors and Creditors	3,20,000	2,40,000
Bills receivable and Bills payable	1,00,000	60,000
Closing stock	4,00,000	
Investment	80,000	
Capital		15,00,000
Drawings	1,30,000	
Net Profit		6,20,000
	26,00,000	26,00,000

c) From the following information, prepare trading and profit and loss account of Abhay for the year ending 31st December, 2016 and balance sheet as on that date. The closing stock on 31st December, 2016 was valued at Rs. 2,000.

	Rs.		Rs.
Opening stock	500	Purchases	1,300
Sales	5,000	Wages	700
Discount received	500	Salary	500
Building	50,000	Capital	50,000
Cash in hand	4,500		

# B.C.A. (Semester - IV) (CBCS) Examination: March/April-2023 OOPS with C++ - II (19409401)

Day & Date: Monday, 19-06-2023 Time: 09:00 AM To 11:00 AM

Seat

No.

Instructions :1) All questions are compulsory.

2) Draw neat diagrams and give equations wherever necessary.

- 3) Figures to the right indicate full marks.
- 4) Use of logarithmic table and calculator is allowed.

(At. Wts.: H=1, C=12, O=16, N=14, Na=23, CI=35.5)

#### Multiple choice questions. Q.1

- How many specifiers are used to derive a class? 1)
  - a) 1 2 b) c) 3 d) 4
- What is a virtual function in C++? 2)
  - a) Any member function of a class
  - b) All functions that are derived from the base class
  - c) All the members that are accessing base class data members
  - d) All the functions which are declared in the base class and is re-defined/ overridden by the derived class
- 3) The concept of deciding which function to invoke during runtime is called
  - a) late binding
  - b) dynamic linkage
  - c) static binding
  - d) both late binding and dynamic linkage
- 4) What is meant by multiple inheritance?
  - a) Deriving a base class from derived class
  - b) Deriving a derived class from base class
  - c) Deriving a derived class from more than one base class
  - d) None of the mentioned
- 5) Which of the following is used to create an output stream?
  - ifstream a) ofstream b)
  - c) iostream d) fsstream
- Which of the following is not used as a file opening mode? 6)
  - a) ios::trunk ios::binary b)
  - c) ios::in ios::ate d)
- 7) Why do we need to handle exceptions?
  - a) To avoid unexpected behaviour of a program during run-time
  - b) To let compiler remove all exceptions by itself
  - c) To successfully compile the program
  - d) To get correct output

Max. Marks: 40

08

# Set

	8)	<ul> <li>What is meant by the template parameter?</li> <li>a) It can be used to pass a type as an argument</li> <li>b) It can be used to evaluate a type</li> <li>c) It can of no return type</li> <li>d) It can be used to delete a type</li> </ul>	
Q.2	Ansv a) b) c) d) e) f)	wer any four of the following. What is the difference between inheritance and polymorphism? What is Subclass? Which function is used to position back from the end of file object? What is return type of "is_open()" function? Why do we need to handle exceptions? Write the correct syntax of the try-catch block.	80
Q.3	a)	e short notes on any two of the following. Basic concepts of OOPs. Types of Templates in C++. Abstract base class.	08
Q.4	Ansv a) b) c)	wer any Two of the following. What is overriding in C++? Explain with suitable example. Write C++ program that demonstrates use of 'virtual base class'. Explain the following ostream member functions put(), flush()	08
Q.5	Ansv a)	wer any one of the following. What is Exception? How exception is handled in C++ illustrate with one example?	08

**b)** Write a program in C++ that checks two files are identical or not.

# Seat No.

# B.C.A (Semester - IV) (CBCS) Examination: March/April-2023 Data Structures using 'C'- 4.0 II (19409402)

Day & Date: Tuesday, 20-06-2023 Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.

- 2) Draw neat diagrams and give equations whenever necessary.
- 3) Figures to the right indicate full marks.

# Q.1 Multiple choice questions

- 1) Quick sort is a \_
  - a) greedy algorithm
  - b) divide and conquer algorithm
  - c) dynamic programming algorithm
  - d) backtracking algorithm
- 2) What is a complete binary tree?
  - a) Each node has exactly zero or two children
  - b) A binary tree, which is completely filled, with the possible exception of the bottom level, which is filled from right to left
  - c) A binary tree, which is completely filled, with the possible exception of the bottom level, which is filled from left to right
  - d) A tree In which all nodes have degree 2
- 3) Which of the following is not true about QuickSort?
  - a) in-place algorithm
  - b) pivot position can be changed
  - c) adaptive sorting algorithm
  - d) can be implemented as a stable sort
- 4) A person wants to visit some places. He starts from a vertex and then wants to visit every place connected to this vertex and soon. What algorithm he should use?
  - a) Depth First Search

C)

- Trim's algorithm d) Krusk
- 5) Which of the following is not an advantage of trees?
  - a) Hierarchical structure
  - b) Faster search
  - c) Router algorithms
  - d) Undo/Redo operations in a notepad
- 6) Heap sort is an implementation of \_\_\_\_\_ using a descending priority queue.
  - a) insertion sort b) selection sort
  - c) bubble sort d) merge sort
- 7) Dijkstra's Algorithm cannot be applied on \_\_\_\_\_.
  - a) Directed and weighted graphs
  - b) Graphs having negative weight function
  - c) Unweighted graphs
  - d) Undirected and unweighted graphs

Max. Marks: 40

- b) Breadth First Search
  - l) Kruskal's algorithm

	8)	<ul> <li>Which of the following is not an application of binary search?</li> <li>a) To find the lower/upper bound in an ordered sequence</li> <li>b) Union of intervals</li> <li>c) Debugging</li> <li>d) To search in unordered list</li> </ul>	
Q.2	Ans a) b) c) d) e) f)	wer any four of the following. What is a binary search tree? Write any 4 applications of graph. Write the function of preorder & postorder of tree traversal. What is Hashing? What is an indexed sequential searching? Write any 4 applications of tree	08
Q.3	Wri a) b) c)	<b>te short notes on any two of the following.</b> Radix sort Operations of Binary Tree Height Balanced Tree	80
Q.4	Ans a) b) c)	swer any Two of the following. Explain Binary Expression Tree with example. Explain the types of Graph in detail. What is a searching? Explain its types in detail.	08
Q.5	Ans a) b)	swer any one of the following. What is a Graph? Explain graph traversal in detail. WAP to demonstrate Selection sort.	08

c) d)	All of the rows from a table that match the previous WHERE clause. Nothing				
lf yo a) c)	u want to undo a GRANT, you sh REVOKE UNGRANT	ould b) d)	l use UNDO ROLLBACK		
a) b)	e SQL ALTER statement can be u to change in table data to change in table structure delete rows from the table delete new record in the table	ised			
A da a)	ata type can be changed after a ta True	able b)	has been created. False		
A ta a)	ble column can have null values <sub>-</sub> True	b)	 False		

#### 2) With SQL, how do you select all the columns from a table named "Persons"?

- SELECT Persons; c)
- 3) Which of the following is not a valid aggregate function?
  - COUNT MAX a) b)

2) Figures to the right indicate full marks.

What identifies a row in a table as unique?

- MIN CALCULATE d) C)
- A SELECT statement without a WHERE clause returns 4)
  - An error, because a SELECT statement is invalid without a WHERE a) clause.
  - All of the rows from a table. b)
  - All of the rows from a table that match the previous WHERE clause C)
  - d) Ν

Day & Date: Wednesday, 21-06-2023

Multiple choice questions.

Instructions: 1) All questions are compulsory.

Regular Key

Primary Key

Time: 09:00 AM To 11:00 AM

a)

c)

Seat

No.

Q.1

1)

7)

8)

- 5) If you
  - a) F
  - ι C)
- 6) The S
  - a) t
  - b) t
  - C) С
  - d) c

- a) SELECT \* FROM Persons;

B.C.A (Semester - IV) (CBCS) Examination: March/April-2023 MYSQL (19409403)

> b) SELECT \*. Persons; d) SELECT all FROM Persons;

b) Main Key

d) Foreign Key

SLR-QH-46

Ρ

Max. Marks: 40

08

Set

Q.2	a) b) c) d)	wer any four of the following. Explain update command. Write a query to set Primary Key in MySQL. Explain any 4 string functions. Explain type conversion. Define Grant Command. Explain Foreign Key Constraint.	80
Q.3	Writ a) b) c)	e short notes on any two of the following. Explain how to add & remove column in existing table using alter table command. Explain Order by & Group by clause Explain Architecture of MySQL.	08
Q.4	Ans a) b) c)	<b>wer any Two of the following.</b> Explain set operations with example. Explain subquery with example. Explain cursors with types.	08
Q.5	Ans a) b)	<b>wer any one of the following.</b> Explain Join with its types with examples. Explain Stored Procedure its types of parameters with example.	08

L			
	В	C.A (Semester - IV) (CBCS) Examination: March/April-2023 Ethics and Cyber Law (19409404)	
		te: Thursday, 22-06-2023 Max. Marks 00 AM To 11:00 AM	: 40
Instr	ructic	<ul> <li>ans: 1) All questions are compulsory.</li> <li>2) Draw net diagrams and give equations wherever necessary.</li> <li>3) Figures to the right indicate full marks.</li> </ul>	
Q.1	Cho 1)	bose the correct alternative from the option.Hacking bank account related information is an example ofa) Software piracyb) unauthorized accessc) cyber lawd) fair use	08
	2)	Punishment for child pornography is provided under Section of the I.T. Act. a) 66 b) 67-A c) 67-B d) 67-C	
	3)	Sending unsolicited bulk and commercial messages over the internet is a) Stalking b) Phishing c) Spamming d) Spoofing	
	4)	Information Technology Act was passed in the year a) 1999 b) 2000 c) 2008 d) 2012	
	5)	Computer virus is aa) Programmeb) Filec) Diskd) Audio	
	6)	IT Act 2000, amended in a) 2005 b) 2008 c) 2011 d) 2015	
	7)	Harassing someone through electronic message is offence of a) Hacking b) Squatting c) Stalking d) Phishing	
	8)	<ul> <li>means a system of a secure key pair consisting of a private key for creating digital signature and public key for verifying digital signature.</li> <li>a) Cryptography</li> <li>b) Asymmetric cryptosystem</li> <li>c) Symmetric cryptosystem</li> <li>d) None of the above</li> </ul>	
Q.2	Ans a) b) c) d) e) f)	wer any four of the following. What is Software Piracy? Explain the Intellectual Property Aspects. Explain the E Mail Spoofing. What is cybercrime and punishment? What are weaknesses in the IT Act? Explain the scope and limitations of Ethical Hacking.	08

Explain the scope and limitations of Ethical Hacking. f)

SLR-QH-47 Ρ

# Seat No.

Set

Q.3	Wrii a) b) c)	t <b>e short notes on any two of the following.</b> Password Sniffing Security Aspects Penetration Testing	08
Q.4	Ans a) b) c)	wer any Two of the following. Explain the FUS Triangle. What is phishing? What is Newsgroup Spam?	08
Q.5	Ans a) b)	wer any one of the following. What is security attacks? Explain the types of security attacks. What is Foot Printing? What is the objective of Foot Printing?	08

	В.(	C.A. (Semester - IV) (CBCS) E Angular JS (		•	
		e: Friday, 23-06-2023 D AM To 11:00 AM		Max. Marks	: 40
tr	uctior	<ul><li><b>ns:</b>1) All questions are compulsory.</li><li>2) Figures to the right indicates ful</li></ul>	l marl	<s.< th=""><th></th></s.<>	
	Choo 1)	ose correct alternative from the fol How many \$RootScope an Angular, a) Zero c) Two			08
	2)	Which of the following components AngularJS? a) Value c) Constant	can bo b) d)	e injected as a dependency in Factory Application Module	
	3)	<ul><li>AngularJS applications are a mix of</li><li>a) HTML and PHP</li><li>c) HTML and TypeScript</li></ul>	which b) d)	of the following technologies? HTML and JavaScript PHP and JavaScript	
	4)	<ul><li>What angular function is used to ma</li><li>angular.bootstrap</li><li>angular.copy</li></ul>	nually b) d)	start up an angular application? angular.element None of the above	
	5)	What MVC stands for? a) Model View Control c) Main View Controller	b) d)	Model View Controller Main View Control	
	6)	<ul> <li>AngularJS is perfect for</li> <li>a) Create Single Page Applications</li> <li>b) Creating a Desktop Application</li> <li>c) Create Web Services</li> <li>d) None of these</li> </ul>	S		
	7)	<ul><li>Which directive can be used to write</li><li>a) ng-expression</li><li>c) ng-statement</li></ul>	-	IlarJS expressions? ng-bind ng-bindexpression	
	8)	Which directive initializes application a) ng-app c) ng-model	n data b) d)	? ng-init ng-application	
2	1) 2) 3)	<b>ver any four of the following.</b> What is AngularJS? Define Ng-app Directive. What is an \$error directive? Define Filter AngularJS.			08

Day

Time

Seat

No.

Instr

### Q.1

# Q.2

- What is scope in AngularJS? -, 5)
- State the syntax for UpperCase filter. 6)

Page 1 of 2

SLR-QH-48



Q.3	Wri 1) 2) 3)	<b>te short note on any two of the following.</b> Write Difference between AngularJS and JavaScript expressions? Write short notes Two way data binding. Write short notes on Currency and Number Formatting Filters.	08	
Q.4	Ans 1)	wer any two of the following. What is MVC? Explain MVC Architecture in details.	08	
	2) 3)	Write a program to create a Single Page Application. Write a Sample "hello world" program using AngularJS.		
Q.5	Answer any one of the following.			
	a) b)	What is Expressions? Explain Number and String Expressions. Explain style directives and conditional directives with example.		

Seat	
No.	

# B.C.A. (Semester - IV) (CBCS) Examination: March/April-2023 Advance 4.0 d Computer Networks (19409406)

Day & Date: Saturday, 01-07-2023 Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.

- 2) Draw neat diagrams and give equations wherever necessary.
- 3) Figures to the right indicate full marks.

#### Multiple choice questions. Q.1

- Data in network layer is transferred in the form of \_\_\_\_\_. 1) b) Packets
  - a) Layers
  - **Bytes** C)
- 2) A 4 byte IP address consists of \_\_\_\_\_.
  - only network address a)
    - only host address b)
    - network address & host address C)
    - d) network address & MAC address
- 3) Which of the following routing algorithms can be used for network layer design?
  - shortest path algorithm a)
  - link state routing C)
- b) distance vector routing d) all of the mentioned
- TCP/IP model does not have \_\_\_\_\_ layer but OSI model have this layer. 4)
  - session layer a)
- b) transport layer d) network layer

d) Bits

- application layer C)
- 5) User datagram protocol is called connectionless because \_\_\_\_
  - all UDP packets are treated independently by transport layer a)
  - it sends data as a stream of related packets b)
  - it is received in the same order as sent order C)
  - it sends data very quickly d)
- 6) The process of transforming plain text into unreadable text \_\_\_\_\_.
  - Decryption b) Encryption a) C) Network Security
    - d) Information Hiding
- 7) A digital signature is \_\_\_\_\_.
  - a bit string giving identity of a correspondent a)
    - A unique identification of a sender b)
    - an authentication of an electronic record by trying it uniquely to a key C) only a sender knows
    - an encrypted signature of sender d)
- 8) Which of the following methods is used to broadcast two packets on the medium at a time?
  - Collision a)
  - c) Asynchronous

- b) Synchronous
- d) None of the above

Max. Marks: 40

Q.2	Answer any four of the following.		
	1) Write full form of ARP, SNMP.		
	2) Define routing.		
	3) What is flow control?		
	4) What is Congestion?		
	5) What is Cryptography?		
	6) Mention an authentication mechanism		
Q.3	Write short notes on any two of the following.	08	
	1) Distance Vector Routing		
	2) TCP/IP		
	3) Data Compression		
Q.4	Answer any two of the following.	08	
	1) Define Network security. Explain the network security techniques.		
	2) Explain the different network services.		
	3) How do you control the Congestion in Datagram Subnets?		
Q.5	Answer any one of the following.	08	
	1) Explain connection establishment and connection release in transport layer.		
	2) What is routing algorithm? Explain shortest path routing with diagram.		

Seat No.	t				Set P	
NO.	B.	C.A			=	
			Python Programm	ing		
Day & Date: Sunday, 02-07-2023 Max. Time: 09:00 AM To 12:00 PM					Max. Marks: 80	
Instr	Instructions: 1) All questions are compulsory. 2) Figures to right indicate full marks.					
Q.1	<ul> <li>Q.1 A) Multiple choice questions.</li> <li>1) Which of the following is not relational operator in python?</li> </ul>				<b>10</b> operator in python?	
			a) >=	,	<=	
			c) =	a)	! =	
		2)	Which one of the following is corr variable, x with value 10?			
			a) int x; x=10; c) x=10	b) d)	int x=10; declare x=l 0	
		- `		,		
		3)	Which of the following will give er a) I, m, p="python", 10,14		l, m, p=10	
			c) $l=m=p=12$	,	None of the above	
		4)	<ul><li>4) What is the output of the following code? print(9//2)</li></ul>			
			a) 4	,	4.5	
			c) 5	d)	None of the above	
		5)	Which operator is used to calcula	ate po	ower of m raise to n?	
			a) m^n	b)	m*n	
			c) m**n	d)	None of these	
		6)	What is the value of x if: x= int (43.55+10/2)			
			a) 44 c) 46	b) d)	45 48	
				u)		
		7)	Python was developed by a) Dennis Ritchie	 b)	James Gosling	
			c) Guido van Rossum	d)	Bjarne Stroustrup	
	<ul> <li>8) What will be the output of following python code?</li> <li>x=(10,50)</li> <li>x. append((80,90,100))</li> </ul>				thon code?	
			print len(x) a) 3	b)	2	
			c) 5	d)	Error	

06

16

10

06

08

08

16

### 9) Which is the correct syntax of open() function?

- a) file = opened(file\_name [, access\_mode])
- b) file object = open(file\_name [, access\_mode])
- c) file object = opens(file\_name)
- d) none of the mentioned

### 10) \_\_\_\_\_ is not a standard exception in Python.

- a) NameError b) AssignmentError
- c) IOError d) ValueError

### B) Fill in the blank.

- 1) \_\_\_\_\_ is used to hold the screen.
- 2) \_\_\_\_\_ is used to draw a line in canvas tkinter.
- 3) \_\_\_\_\_ is used to create an object.
- 4) \_\_\_\_\_method is used to identify a thread.
- 5) When child class inherits from only one parent class is called \_\_\_\_\_.
- 6) \_\_\_\_\_ is the extension of python file.

### Q.2 Solve any Eight of the following.

- 1) What is GUI?
- 2) Which are the advantages of function?
- 3) What is use of Regular Expression?
- 4) What is use of module?
- 5) Explain local and global variable.
- 6) Explain random module.
- 7) What is use of finally block in exception handling?
- 8) Which are the methods of thread class?
- 9) What is use of super() method?
- 10) Explain membership operator used in python.

Q.3	A)	Attempt any Two of the following.	
-----	----	-----------------------------------	--

- 1) Explain button and label widgets.
- 2) Explain thread in python.
- 3) Explain continue statements.

### **B)** Short note on Regular Expression.

### Q.4 A) Attempt any Two of the following.

- 1) Write down features of python.
- 2) Explain different datatypes used in python.
- 3) Explain for and while loop.
- B) What is exception? Explain with program.

### Q.5 Attempt any Two of the following.

- a) What is list? Explain different operations performed on list.
- **b)** Explain MySQLdb module. Write program to insert records into table and fetch all records from table.
- c) What is inheritance? Explain any two types of inheritance.

# Seat No.

## B.C.A (Semester - V) (New) (CBCS) Examination: March/April-2023 ENGLISH (Business English) (20409501)

Day & Date: Sunday, 02-07-2023 Time: 03:00 PM To 05:00 PM

Instructions: 1) All questions are compulsory.

2) Figures to the right indicate full marks.

#### Q.1 Rewrite the following sentence by choosing the correct alternatives:

1) What occasion is being celebrated in the story 'The Gift of the Magi'? Christmas b)

d)

Della's birthday

- a) Easter
- New year's c)
- 2) What was the aunt's reaction to Phatik living with the family?
  - b) welcoming a) sad
  - annoyed and angry overjoyed d) C)
- 3) What was the solitary reaper doing in the field? Tilling the field b)
  - Reaping the harvest a)
  - c) Watering d) Planting
- 4) What does Queen Gulnaar desire in the poem the Queen's Rival? more jewellery b)
  - the king's attention a)
    - more clothes a rival d) C)
- Where did the schoolmaster live in the poem, 'The Village Schoolmaster'? 5)
  - apartment cottage b) a) bunglow C)
    - d) mansion
- 6) What decides a person's future according to this poem "The Road Not Taken"? the path one leaves behind b)
  - the path one chooses to walk a)
  - the regrets d) the success c)
- 7) Soma had watched a movie.
  - (Change the voice of above sentence)
  - a) A movie had watched by Soma.
  - A movie had been watched by Soma. b)
  - A movie had been watching by Soma. c)
  - None of the above d)
- the computer when you finish your work. 8)
  - (Fill in the blanks with phrasal verb related to technology)
  - Back up Shut down a) b)
  - Sign up d) Log in C)

SLR-QH-51

Set

Ρ

Max. Marks: 40

## Q.2 Answer the following questions briefly. (Any Four)

- a) Why was Della sad in the beginning of the story "The Gift of the Magi"?
- **b)** How did Phatik feel arriving at the uncle's house?
- c) Write down the central idea of the poem "The Solitary Reaper" by William Wordsworth.
- d) Write a note on character sketch of Queen Gulnaar.
- e) How did the children view the schoolmaster in the poem "The Village Schoolmaster"?
- **f)** Discuss the title of the poem "The Road Not Taken". Is it appropriate for the poem?
- Q.3 Write down the answers of the following question. (Any One)

What are learning skills and write down the four types of learning skills?

### OR

Write down the importance of communication skill in the professional career?

**Q.4** Write down the answers of the following question. (Any One) What are 21<sup>st</sup> century skills?

### OR

If you perceive a conflict between two employees in your office, what strategy would you adopt to ensure that they resolve their conflict and work better as a team?



12

10

·				
Seat No.				Set P
В.С	C.A. (S	emester - V) (New) (CBCS) Core Java (19		mination: March/April-2023 502)
		onday, 03-07-2023 I To 06:00 PM		Max. Marks: 80
Instruct		) All questions are compulsory. ) Figures to the right indicate full r	narks	5.
Q.1 a)	Muli 1)	ti <b>ple choice questions.</b> is a super class of frame a) Pane c) JFrame	e. b) d)	<b>10</b> Applet Component
	2)	Which component is used to cor program? a) JRE c) JIT	,	
	3)	keyword must be used t a) super c) extent	o inh b) d)	erit a class. this extends
	4)	Class objects are created in a) Object area c) Java stack	a b) d)	area. Method area Heap area
	5)	statement is used to ca a) Simple c) File Reader	ll the b) d)	procedures and functions. Prepared Statement File Writer
	6)	Which of these events will be ge a) Action Event c) Component Event		
	7)	name method used to sta a) init (); c) run ();	art a t b) d)	thread execution. start (); resume ();
	8)	Which of the following is a methologies	od ha b) d)	ving same name as that of its delete constructor
	9)	What is the numerical range of a a) -128 to 127 c) 0 to 32767	b) d)	r data type in Java? 0 to 256 0 to 65535
	10)	keyword must be used to a) try c) throw	b mor b) d)	nitor for exceptions. finally catch

		SLR-QH	I-52
	b)	<ul> <li>One Sentence Answer.</li> <li>1) What is package?</li> <li>2) What is API?</li> <li>3) Give the definition of Applet.</li> <li>4) What is event?</li> <li>5) What is class?</li> <li>6) What is mean by implicit object?</li> </ul>	06
Q.2	Solv a) b) c) d) e) f) g) h) i) j)	Ve any eight of the following. Write any 4 java operators. What is the use of 'final' keyword? Give the stages of thread life cycle. Define 'this' keyword. Give the names of JDBC drivers. Explain Catch exception. What is mean by object? Give any 5 data types in java. Define static method. Write any 5 keywords in java.	16
Q.3	a)	<ul> <li>Attempt any two of the following.</li> <li>1) Write a java program to check whether no. is Prime or not.</li> <li>2) What is abstract class? Give syntax &amp; example.</li> <li>3) Explain JDK tools in detail.</li> </ul>	10
	b)	Explain in detail Java Thread Cycle.	06
Q.4	a)	<ul> <li>Attempt any two of the following.</li> <li>1) What is Listener? Explain Action Listener with example.</li> <li>2) Write a java program to check whether no. is Perfect or not.</li> <li>3) Give the features of JDBC.</li> </ul>	08
Q.4	b)	Write a program to check whether no. is amstrong or not. (Java Program)	08
Q.5	Atte a) b)	mpt any two of the following. What is Exception? Give the types of Exception. Explain JDBC drivers.	16

c) What is Callable Statement? Give example code of it.

SL	R-0	ϽH	-53
<u> </u>			

Seat	
No.	

B.C.A. (Semester - V) (New) (CBCS) Examination March/April-2023 Visual Programming (19409503)

Day & Date: Tuesday, 04-07-2023 Time: 03:00 PM To 06:00 PM

**Instructions**: 1) All questions are compulsory.

2) Figures to the right indicate full marks.

# Q.1 a) Multiple choice questions.

- 1) Which of the following statements is incorrect about delegate?
  - a) Delegates are reference types
  - b) Delegates are object oriented
  - c) Delegates are type-safe
  - d) Only one method can be called using a delegate
- 2) An Event is \_\_\_\_
  - a) The result of a users action
  - b) result of a party
  - c) code to force users action
  - d) a delegate

## 3) Choose the wrong statement about the LINQ?

- a) The main concept behind the ling is query
- b) ling makes use of foreach loop to execute the query
- c) It is not required that ling should make use of IEnumerable interface
- d) None of the mentioned
- 4) Which LINQ statement is used to merge two data sources to perform queries?
  - a) where b) select
  - c) join d) group
- 5) Which of these keywords is not a part of exception handling?
  - a) try b) finally
  - c) thrown d) catch
- 6) A delegate defines \_\_\_\_
  - a) Washington representative
  - b) class that encapsulates methods
  - c) means of passing arrays into methods
  - d) substitute for an inherited method
- 7) To fill a dataset for a report include \_\_\_\_\_ at the top of the file.
  - a) Imports CiystalDecisions.CrystalReports
  - b) CrystalDecisions.CrystalReports.Engine
  - c) Exports CrystalDecisions.CrystalReports.Engine
  - d) Imports CiystalDecisions.CrystalReports.Engine
- 8) How can you enhance the performance of crystal reports?
  - a) Avoid using sub-reports as it hampers the performance
    - b) Use report bursting indexes
    - c) crystal\_reports\_hosting
    - d) All of these

Max. Marks: 80

Set

10

Ρ

06

16

10

06

**08** 

**08** 

16

- 9) An Event has \_\_\_\_\_ as default return type.
  - a) No return type for events b) String
  - c) Double d) Integer
- 10) In Inheritance which of the following members of base class are accessible to derived class members?
  - a) static b) protected
  - c) private d) shared

#### b) Fill In the blanks.

- 1) \_\_\_\_\_ assemblies can be stored in Global Assembly Cache.
- 2) A \_\_\_\_\_ is an identifier assigned to memory location where data is stored.
- 3) SOAP Stands for \_\_\_\_\_
- 4) \_\_\_\_\_ objects are immutable.
- 5) The modifiers used to define an array of parameters or list of arguments is \_\_\_\_\_.
- 6) \_\_\_\_\_ is used to access members of class before the object of that class is created.

## Q.2 Solve any eight of the following. (Any 8)

- a) Give the characteristics of abstract class.
- b) Differentiate between value type and reference type.
- c) What is Exception?
- d) Explain Enumerations.
- e) What is boxing? How is it achieved?
- f) List different stream classes.
- g) Define Constructor.
- **h)** What is namespace?
- i) What is the importance of finally block?
- j) What is the difference between SDI and MDI?

# Q.3 a) Attempt any two of the following.

- 1) What is delegate? Explain types of delegates.
- 2) Write a note on method overloading.
- 3) Write a program to implement generic class.

b) What is method overriding? Explain with suitable example.	
--	--

#### Q.4 a) Attempt any two of the following.

- 1) Explain the parameter passing techniques in detail.
- 2) Explain Indexer with example.
- 3) Explain CLR in detail.
- **b)** Write a program to handle custom exception.

#### Q.5 Solve any two questions of the following:

- a) Explain .Net framework with suitable block diagram in detail.
- **b)** What is operator overloading? Write a program to overload any two binary operators.
- c) What is inheritance? Explain types of inheritance.

Seat No.	t			Set	Ρ
	B.C	.A. (S	Semester - V) (New) (CBCS) Exa	-	
			Computer Graphics (	19409504)	
			dnesday, 05-07-2023 To 06:00 PM	Max. Marks:	80
Instr	uctio		All questions are compulsory. Figures to right indicate full marks.		
Q.1	۸)	Muli	iple choice questions.		10
Q. I	A)	1)	On raster system, lines are plotted wi	ith .	10
		- /	a) Lines b)	Dots	
			c) Pixels d)	None of the mentioned	
		2)	Display processor is also called a		
			a) display coprocessor b)	graphics controller	
			c) both (a) and (b) d)	output device for graphics	
		3)	In information technology, LCD stand		
			a) Liquid Crystal Display b)		
			c) Local Current Directory c)		
		4)	Orthographic projection represents th a) One dimension b)	-	
			c) Three dimensions d)		
		5)	The point, from which the observer is		
			called a) Center of projection b)	Point of projection	
			c) Point of observer d)	View point	
		6)	Which of the following is a Computer	Graphics type?	
		,	a) Raster and Vector b)	Raster and Scalar	
			c) Scalar only d)	All of the above	
		7)	The transformation that is used to alt		
			a) Scaling b) c) Translation d)	Rotation Reflection	
		8)	A translation is applied to an object b		
		8)	a) Repositioning it along with straig	-	
			b) Repositioning it along with circula	•	
			c) Only b		
			d) All of the mentioned		
		9)	Which of the following is a correct ab	breviation of DDA algorithm?	
			<ul><li>a) Data differential analyzer</li><li>b) Direct differential analyzer</li></ul>		
			c) Digital difference analyzer		
			d) Digital differential analyzer		

- 10) How many axes do 3D graphics consist of?
  - a) Two axes c) Five axes

- b) Three axes One axis
- d)
- Fill in the blanks. B)
  - 1) GIF stands for
  - The orthographic projection, projection lines are \_\_\_\_\_. 2)
  - The transformation that produces a parallel mirror image of an object 3) are called
  - 4) A transformation that slants the shape of an object is called \_\_\_\_\_.
  - The disadvantage of line DDA is Time consuming. 5)
    - True False a) b)
  - 6) Rotation is a rigid body transformation that moves objects without deformation.
    - True b) False a)

#### Q.2 Solve any Eight of the following.

- **Define Computer graphics** 1)
- What is resolution? 2)
- What do you mean by scan conversion? 3)
- Define polygon. 4)
- 5) What is antialiasing?
- What is scaling? 6)
- What is shearing? 7)
- 8) Define clipping.
- What is the need of homogeneous coordinates? 9)
- 10) What is reflection?

Q.3	A)	<ul> <li>Attempt any Two of the following.</li> <li>1) Explain 2-D Transformation Translation.</li> <li>2) Explain Bresenham's Line Algorithm.</li> <li>3) Explain Types of Graphics Devices.</li> </ul>	10
	B)	Explain Homogenous Coordinates for Scaling.	06
Q.4	A)	<ul> <li>Attempt any Two of the following.</li> <li>1) Write a program to create a bar chart.</li> <li>2) Explain short in Digital Differential Analyzer.</li> <li>3) Explain Inverse Transformation with example.</li> </ul>	08
	B)	Write a program to translate an object using 2D Transformation.	08
Q.5	Atte	empt any Two of the following.	16

- Q.5 Attempt any Two of the following.
  - Explain Bitmap Method with example. 1)
  - 2) Explain Bresenham's Circle Drawing Algorithm.
  - 3) Explain initgraph(), detectgraph() and closegraph() function with example.

16

Set

Max. Marks: 80

Page	1	of	2

Seat	
No.	

B.C.A. (Semester - V) (New) (CBCS) Examination March/April-2023 Recent Trends in IT (19409505)

Day & Date: Thursday, 06-07-2023 Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.

- 2) Draw neat labelled diagrams wherever necessary.
- 3) Figures to right indicate full marks.
- 4) Use of log table and calculators is allowed.

## Q.1 a) Multiple choice questions.

- a) National Environmental Policy
- b) National Water Policy
- c) Environment Act
- d) Air Policy

## 2) Which of the following are the features of cloud computing?

- a) Security b) Availability
- c) Large Network Access d) All of the mentioned

## 3) Which of the following is a type of cloud computing service?

- a) Service-as-a-Software (SaaS)
- b) Software-and-a-Server (SaaS)
- c) Software-as-a-Service (SaaS)
- d) Software-as-a-Server (SaaS)
- 4) Which of the following is the application of cloud computing?
  - a) Adobe b) Paypal
  - c) Google G Suite d) All of the above
- 5) Which of the following is an example of a SaaS cloud service?
  - a) Google Workspace b) Dropbox
  - c) Salesforce d) All of the above
- 6) IBM and \_\_\_\_\_ have announced a major initiative to use Hadoop to support university courses in distributed computer programming.
  - a) Google Latitude
  - b) Android (operating system)
  - c) Google Variations

c) Data Visualization

- d) Google
- 7) Above the file systems comes the \_\_\_\_\_ engine, which consists of one Job Tracker, to which client applications submit MapReduce jobs.
  - a) MapReduce b)
  - c) Functional programming d) Facebook
- 8) Which of the following is one of the key data science skills?
  - a) Statistics

- b) Machine Learning
- d) All of the mentioned

Google

10

Ρ

<sup>1)</sup> Which is the most recent pronouncement of the government's commitment to improving environmental conditions?

		9)	clouc a)	d computing? Storage	g type of vir	b)	Application	
		10)	, What a)	CPU t is the full form Internet of Tech Internet of Thing	inology	d) b) d)	All of the mentioned Incorporate of Things Incorporate of Technology	
	b)	<b>Defin</b> 1) 2) 3) 4) 5) 6)	Greer descr Big-D Types 3 V's	owing terms. n disposal ribe the 3Rs of g data s of big-data of Big data c Cloud	reen IT			06
Q.2	Solv a) b) c) d) e) f) g) h) i)	Deplo laas S Virtua Defin Enviro Role Applio BI Sta Energ	byment Stands alizatio e IOT onmer of Data cation ands fo gy Sav	n ntal Impact of IT a Scientist of big-data	ıg.			16
Q.3	a)	Atten 1) 2) 3)	Expla Expla	<b>iy Two of the fo</b> ain Burden and C ain HDFS Archite a short note on	Opportunity ecture.	-		10
	b)	Write	a sho	rt note on Deplo	yment mod	el.		06
Q.4	a)	Atten 1) 2) 3)	Write Define	a short note on e cloud computi a short note on	IOT Frame ng and expl	ain e	ssential characteristics.	08
Q.4	b)	Defin	e IOT	and explain IOT	Architectur	e.		08
Q.5	Atte a) b)	Hado	op Ma	<b>o of the follow</b> i ster Slave Archi ce Vs Bl	•			16

c) Define machine learning and explain types of machine learning.

Instr	uctio	2) 3)	All questions are compulsory. Draw neat labelled diagrams wherever necessary. Figures to the right indicate full marks. Use of log table and calculators is allowed.
Q.1	A)	<b>Mult</b> i 1)	i <b>ple choice questions.</b> Core of Linux operating system is a) Terminal b) Shell c) Kernel d) Command
		2)	Linux Kernel was founded by a) Richard Stallman b) Linus Torvalds c) Bill Gates d) Ben Thomas
		3)	Using command can hidden files be viewed. a) Is -a b) Is -h c) Is -I d) Is -k
		4)	Any shell script beings with the line to denote the name of theshell to be used for interpretation.a) #!/bin/shb) #!/bin/cshc) #!/bin/kshd) Any one of them
		5)	command is used to print a file.a)wcb)pgc)lpd)print
		6)	Identify the one which is not a communication command. a) mail b) mesg c) write d) grep
		7)	<ul> <li>GNU GPL stands for</li> <li>a) GNU general Public License</li> <li>b) GNU Lesser General Public License</li> <li>c) GNU Not Unix</li> <li>d) Gnu Image Manipulation Programme</li> </ul>
		8)	<ul> <li> shell was released by AT&amp;T as an improvement to the Bourne shell</li> <li>a) Bourne Again Shell</li> <li>b) C-Shell</li> <li>c) Korn-Shell</li> <li>d) None of these</li> </ul>
		9)	LILO stands fora) Linux loaderb) Linux Leveraging Orderc) Linux Low Orderd) None of the above
		10)	Linux command changes the access mode of a file. a) pwd b) chmod c) mkdir d) rmdir

Day & Date: Friday, 07-07-2023 Time: 03:00 PM To 06:00 PM

Seat

No.

B.C.A. (Semester - V) (New) (CBCS) Examination: March/April-2023 Linux and Shell Programming (19409506) Max. Marks: 80

SLR-QH-56

Set Ρ

06

# B) True or False.

priority with nice.

- 1) The system administrator is responsible for setting up and maintaining the system or server.
- 2) Directory is a type of file.
- 3) CentOs is sponsored by Red Hat.
- 4) rm command in linux removes given directory.
- 5) Linux operating system is allows users to create commands?
- 6) A Linux file system is a structured collection of files on a disk drive or a partition.

Q.2	Solv a) b) c) d) e) f) g) h) i) j)	e any EIGHT of the following. Hardware requirement Process status DHCP Ping X System NFS Software requirements File compression System process Special groups	16		
Q.3	A)	<ul> <li>Attempt any Two of the following.</li> <li>1) Explain Difference between Windows and Linux.</li> <li>2) What is the role of system administrator?</li> <li>3) Write a shell script to find out the greatest among three inputs.</li> </ul>	10		
	B)	Explain Network tools in linux (ping, finger, trace route, who, host, rlogin, slogin, rcp, rsh,ssh). (Any 7)	06		
Q.4	A)	Attempt any two of the following.(a)Explain process Boot Loaders.b)Explain Linux Working environments.c)Explain Hierarchy of file system.	08		
	B)	Explain Control and Loop structure of shell.	08		
Q.5	Atte a) b) c)	empt any two of the following. Explain distributions and features of Linux OS in detail. Explain Linux commands (mkdir, rm, cd, mv, cp, pwd, ls, cat, head, tail, more, less, sort, uniq, egrep) syntaxes with proper output (Any 8) Explain Multiple jobs in background and foreground and changing process			

Seat No.	t	Set	Ρ
	B.C.	.A. (Semester - VI) (New) (CBCS) Examination: March/April-2023	]
		ENGLISH Literary Mindscapes – I (19409601)	
		te: Monday, 19-06-2023 Max. Marks 00 PM To 05:00 PM	: 40
Instr	uctio	ons:1) All questions are compulsory. 2) Figures to the right indicate full marks.	
Q.1	<b>Ans</b> 1)	swer the following questions by choosing the correct option.What did the Quicks garden have near the pond?a) vegetable patchb) poolc) fruit orchardd) tree house	08
	2)	How much money was Aksionov accused of stealing? a) 8000 rubles b) 20000 rubles c) 2000 rubles d) 80000 rubles	
	3)	What kind of room are the children sitting in the poem "Sita"? a) out in the open b) a darkened room c) classroom d) bedroom	
	4)	What makes for itself a cooling covert against the hot season? a) daffodils b) beauty c) clear rills d) animals	
	5)	What springs again like elastic in the poem "Life"? a) tragedy b) family c) hope d) death	
	6)	<ul> <li>What does the line "An endless fountain of immortal drink" refer to?</li> <li>a) the continuous flow of sacred or holy water</li> <li>b) water of Ganges</li> <li>c) water from the Yamuna</li> <li>d) water from the tap</li> </ul>	
	7)	The lion roared fiercely. (Identify the adverb) a) fiercely b) the lion c) roared d) None of the above	
	8)	<ul> <li>She said," I want to talk to you" (Change into reported speech)</li> <li>a) She said that she wanted to talk to him/her.</li> <li>b) She told that she wants to talk to you.</li> <li>c) She said that I want to talk to you.</li> <li>d) None of the above</li> </ul>	
Q.2	<b>Ans</b> 1) 2) 3) 4) 5) 6)	swer the following questions in brief. Why was the Quick family garden wild and carefree? What was the major change in the character of Aksionov in prison? Explain the story of Sita in the poem "Sita"? How does the duke reveal his role in the death of the duchess? Why "Ode to Beauty" considered to be a romantic poem? Describe the imagery in the poem "Life"?	12

# 

# Q.3 Write down the answer of any one of the following.

- 1) Explain the literacy skill "Technology Literary" and its importance.
- 2) Explain Life Skills (FLIPS).

# Q.4 Write down the answer of any one of the following.

1) Explain the characteristics of a good leader.

## OR

- 2) Discuss and write the following important skills and its use in the present age in your own words.
  - a) Environment consciousness
  - b) Global Awareness
  - c) Health Literacy

10

# No. B.C.A. (Semester - VI) (New) (CBCS) Examination: March/April-2023 Advanced Java (19409602)

Day & Date: Tuesday, 20-06-2023 Time: 03:00 PM To 06:00 PM

Seat

**Instructions:** 1) All questions are compulsory.

2) Figures to the right indicate full marks.

#### Q.1 A) Multiple choice questions.

- Which of the following is not a core component of Hibernate? 1)
  - a) Criteria b) Transaction
  - c) Session d) Provider
- 2) HQL stands for .
  - a) Hibernate Query Language b) High Query Language

c) High Queue Language

- d) None of these
- CGI stands for 3)
  - a) Computer Gateway Information
  - b) Common Gateway Interface
  - c) Client Gateway Interface
  - d) Common Gateway Interchange
- website nothing on the page will change by the user or even 4) site administrator.
  - a) Static b) Dynamic
  - d) None c) Standard
- The method in Servlets is used to process the HttpPost() 5) requests.
  - a) doGet() b) doPost()
  - c) sendRedirect() d) None
- 6) \_\_\_\_ represents object of pageContext which is used to access context data for page execution.
  - a) Out b) Page
  - c) Page context d) Page set up
- JSTL function tests if an input string contains the specified 7) substring.
  - a) fn: join() b) fn: replace()
  - d) fn: contains() c) fn: split
- 8) XML JSTL tag sets a variable to the value of an xpath expression.
  - a) <x:if> b) <x:set> c) <x:when>

Page 1 of 2

Max. Marks: 80

			SLR-QH-	58
		9)	Persistent object is a component of architecture.a) Servletb) Springc) JSPd) Hibernate	
		10)	method signifies the end of Servlet's life.a) init()b) destroy()c) service()d) None	
	B)	One 1) 2) 3) 4) 5) 6)	sentence answer. Give the syntax of doGet() method. Give a syntax of getSession() method. Give a syntax of include() method of Request Dispatcher in servlet. Give the definition of cookie. What is the syntax of Declaration tag? What is Hibernate? Give its definition.	06
Q.2	Solv 1) 2) 3) 4) 5) 6) 7) 8)	Expl Expl Give Give Wha Give Wha	y eight of the following. ain doPost() method of Servlet. ain page implicit object of jsp. the advantages of HttpSession in Servlet. the syntax to delete cookie. the syntax to delete cookie. the syntax of init() & destroy() method of Servlet. the syntax of init() & destroy() method of Servlet. the advantages of Spring.	16
Q.3	A)	Atte 1) 2) 3)	<b>mpt any two of the following.</b> Write jsp program to print fibonacci series. Explain include() and forward() method of RequestDispatcher in Servlet. Write a java servlet program of addition of two numbers.	10
	B)		<b>rt note.</b> ain in detail Hibernate architecture.	06
Q.4	A)	<b>Atte</b> 1) 2) 3)	<b>mpt any two of the following.</b> Write a jsp program to print whether number is prime or not. Write a program to create cookie in java servlet. Write a program to collect user information using cookie.	80
	B)	<b>Exp</b> l Expl	lain: ain about care tags in JSTL tag library.	08
Q.5	Atte a) b)	Expl Expl	any two of the following. ain Servlet life cycle. ain Spring in JDBC.	16

c) Explain Java Bean.

Seat No.			Set	Ρ
	C.A. (S	Semester – VI) (New) (CBCS) Examination: March/A Dot Net Technology (19409603)	pril-2023	
			/lax. Marks	: 80
Instru	ctions:	<ol> <li>All questions are compulsory.</li> <li>Draw neat labeled diagrams wherever necessary.</li> <li>Figures to right indicate full marks.</li> <li>Use of log table and calculators is allowed.</li> </ol>		
Q.1	1)	a conset the correct alternative from the option is an extension of the sitemap file.a) .mapb) .sitemapc) .sited) None of these		10
	2)	Default scripting language in ASP.Net a) EcmaScript b) VBScript c) PERL d) JavaScript		
	3)	Ajax stands for Synchronous JavaScript and XML. a) True b) False		
	4)	directive is used link an assembly to a page or user.a) @Pageb) @Importc) @Assemblyd) @Reference		
	5)	is a valid property for Literal Control. a) ID b) runat c) Name d) Both a and b		
	6)	property is common for all validation control. a) ControlToValidate b) Type c) Error d) All of these		
	7)	How do you get information from a form that is submitted using "post" method? a) Request.QueryString b) Request.Form c) Response.write d) Response.writeln	g the	
	8)	What type of data can Cookies store? a) String b) encrypt c) DateTime d) Int32		
	9)	Web service can be discovered using a) UDDI b) UDDII c) UDDDI d) UDII		
	10)	What is the base class from which all Web forms inherit?a) Master Pageb) Page Classc) Session Classd) None of the Above		

# B) Fill in the blank.

- 1) A \_\_\_\_\_ is a collection of settings that define the look of controls and web pages.
- \_\_\_\_\_ are a State Management Technique that can store the values of control after a post-back.
- 3) A \_\_\_\_\_ is a software program that uses XML to exchange information with other software via common internet protocols.
- 4) \_\_\_\_\_ is the method to preserve the Value of the Page and Controls between round trips.
- 5) Configuration settings in ASP.NET are stored \_\_\_\_\_ files that you can easily read and edit.
- 6) The extension of MasterPage is \_\_\_\_\_.

# Q.2 Solve any Eight of the following.

- 1) Write the features of ASP.Net.
- 2) Define web service.
- 3) What is the difference between the ASP and ASP.NET?
- 4) What is the difference between a page theme and a global theme?
- 5) How to display validation messages in one control?
- 6) What is the difference between Web.config and Machine.config files?
- 7) List out the properties of Calendar control.
- 8) What is the use of Global.asax file?
- 9) What's the use of Response.Output.Write()?
- 10) What is a cookie?

# Q.3 A) Attempt any Two of the following.

- 1) Why Master page required? Explain nested master pages with examples.
- 2) Explain client and server architecture of AJAX.
- 3) Explain Multi View Control with example.

B)	Write short note on Proxy in web services with example.	06
----	---	----

# Q.4 A) Attempt any Two of the following.

- 1) What is navigation? Explain TreeView control with example.
- 2) What is ADO.Net? Explain architecture of ADO.Net.
- 3) Explain validation group property with example.

# **B)** Explain cross-page posting in detail

# Q.5 Attempt any Two of the following.

- a) Explain ASP.Net page life cycle.
- **b)** What is Personalization? Explain personalization model with tag.
- c) What is state management? Explain different state management techniques in detail.

06

#### 16

10

**08** 

08

No. B.C.A. (Semester - VI) (New) (CBCS) Examination: March/April-2023 Data Warehouse and Data Mining (19409604)

Day & Date: Thursday, 22-06-2023 Time: 03:00 PM To 06:00 PM

Seat

**Instructions:** 1) All questions are compulsory.

- 2) Figures to the right indicate full marks.
- 3) Use of log tables and calculators allowed
- 4) Draw a neat labelled diagram wherever necessary.

## Q.1 A) Choose the correct alternative.

- Measure minimizes the expected number of tests to classify a given tuple.
  - a) Gini index b) Gain ratio
  - c) Information gain d) None
- 2) \_\_\_\_\_ is used to day to day operations.
  - a) OLTP b) OLAP c) OLAM d) None
- 3) \_\_\_\_\_ is a summarization of the general characteristics or features of a target class of data.
  - a) Data Characterization

c) Data discrimination

- b) Data Classificationd) Data selection
- 4) Outlier analysis is used on data objects which are \_\_\_\_\_ than set of data.
  - a) Similar b) Dissimilar
  - c) Different d) None
- 5) The FP-growth algorithm has \_\_\_\_\_ phases.
  - a) One b) Two c) Two d) Four
- 6) Which of the following is the collection of data objects that are
  - similar to one another within the same group? a) Partitioning b) Grid
  - c) Cluster d) Table
- 7) \_\_\_\_\_ function is obtained by applying a distributive aggregate function.
  - a) Distributive b) Holistic
  - c) Algebraic d) None

Max. Marks: 80

Set

- 8) The type of relationships in Star Schema \_\_\_\_\_
  - a) One to many
    - c) Many to one d) One to one

#### 9) \_\_\_\_\_ variable has only two states.

- a) Interval scale b) Binary
- c) Categorical d) Ordinal
- 10) \_\_\_\_\_ rule involves associations between presence or absence of items.

b)

Many to many

- a) Multilevel
- b) Correlation
- c) Boolean d) Single level

# B) Fill in the blanks.

- The goal of \_\_\_\_\_ is to discover both the dense and sparse regions of a data set.
- 2) The basic idea of the Apriori algorithm is to generate \_\_\_\_\_ item sets of a particular size & scans the database.
- 3) \_\_\_\_\_ method of analysis does not classify variables as dependent or independent.
- 4) The \_\_\_\_\_ server is used to store and analyze highly volatile and changeable data.
- 5) \_\_\_\_\_ is not a data pre-processing method.
- 6) \_\_\_\_\_ normalization is not very well efficient in handling the outliers.

#### Q.2 Answer the following (any eight)

- 1) What is data characterization?
- 2) What is correlation analysis for numeric data?
- **3)** What is meant by clustering?
- 4) Define OLAP.
- 5) Define Fact table.
- 6) What is roll-up operation?
- 7) Define support and confidence in Association rule mining.
- 8) What is Bayesian Belief Networks?
- 9) What is web mining?
- 10) What is data reduction?

# Q.3 A)Attempt the following. (any two)101)Explain difference between MOLAP and ROLAP.2)2)Explain Data summarization.

3) Explain closed frequent item sets.

#### B) Write short note on spatial data mining.

06

06

# Q.4 A) Attempt the following. (any two)

- 1) Explain K-nearest-Neighbour classification.
- 2) Explain outlier detection.
- 3) Explain various applications of data mining.

## B) Solve the following.

Using Equi-depth binning method, partition the data given below into 4 bins and perform smoothing according to the following methods. Smoothing by bin means,

Smoothing by bin median,

Smoothing by bin boundries.

24,25,26,27,28,56,67,70,70,75,78,89,89,90,91,94,95,96,100,102,103,107 ,109,112

## Q.5 Attempt the following. (any two)

- a) Explain the various components of Data warehouse.
- b) Explain different data types used in clustering.
- c) A database consists of nine transactions taken from grocery store. Enumerate all the frequent itemsets using Apriori algorithm with minimum support threshold S= 3 and minimum confidence threshold C=50%. Show the candidate and frequent itemsets for each database scan. List all the association rules that are generated and highlight the strong ones, sort them by confidence.

Tid	Items
1	Milk, Bread, Eggs
2	Bread, Sugar
3	Bread, Cereal
4	Milk, Bread, Sugar
5	Milk, Cereal
6	Bread, Cereal
7	Milk, Cereal
8	Milk, Bread, Eggs, Cereal
9	Milk, Bread, Cereal

80

**08** 

Seat No.						Set	Ρ
E	B.C.A	λ. (Se				mination: March/April-2023	
			Crypto	graphy and Network	k Se	curity (19409605)	
			lay, 23-0 To 06:00			Max. Marks	: 80
Instru	uctio	,		ions are compulsory. to the right indicate full r	narks		
0.4	• )		tele ele el				40
Q.1	A)	<b>Mult</b> 1)	-	<b>ice questions.</b> s the science and art of t	ransfo	orming messages to make them	10
				and immune to attacks?			
			· ·	yptography Ish function	b) d)	Cryptoanalysis Digital signature	
		2)	,	Cipher is an example of	,		
		<i>L</i> )			b)	 Mono-alphabetic Cipher	
			c) Mu	Ilti-alphabetic Cipher	d)	Bi-alphabetic Cipher	
		3)		nce Technique is an exar			
			,	bstitution	b)	Transposition	
		4)	,	oduct cipher	d)	Caesar cipher	
		4)	a) 32	key length at each roun	a or L b)	56	
			c) 48		d)	64	
		5)	Which o	one of the following is act	ive at	tack?	
				asquerade	b)	Traffic analysis	
		- )	,	vesdropping	d)	Shoulder surfing	
		6)		Ill that uses two TCP con stion	nectio b)	ons is Application gateway	
			,	cuit level gateway	d)		
		7)	IPsec se	ervices are available in _		Layer.	
		,		plication	b)	Data link	
			c) Ne	twork	d)	Transport	
		8)		ure socket layer provide			
			,	cryption of messages se rver authentication	пгру	both client and server	
			/	tional client authentication	on		
			d) All	of these			
		9)		fidentiality, data to be see			
			,	crypted prected	b) d)	Decrypted Both (a) and (b)	
		10)	,		,		
		10)		ic authentication works o man characteristics	bn the b)	Passwords	
			,	nart cards	d)	Pin	

	B)	Give the answer of below questions.	06
		<ol> <li>MAC stands for</li> <li>A sender must not be able to deny sending a message that was sent,</li> </ol>	
		is known as	
		<ol> <li>In brute force attack, on average half of all possible keys must be tried to achieve success.</li> </ol>	
		a) True b) False	
		4) SET stands for	
		<ul> <li>5) A cipher replaces one character with another character.</li> <li>6) Which layer filters the proxy firewall?</li> </ul>	
Q.2	Solv	ve any Eight of the following.	16
	a)	Define Cryptography.	
	b)	Long form of IDEA and RSA.	
	c)	Define integrity and nonrepudiation?	
	d)	Compare stream cipher with block cipher with example.	
	e)	Specify the components of encryption algorithm.	
	f)	Define confidentiality and authentication.	
	g)	What are the design parameters of Feistel cipher network?	
	h)	What are roles of public and private key? What is message authentication?	
	i) j)	What are the services provided by PGP services?	
	"	what are the services provided by 1 Or services:	
Q.3	A)	Attempt any Two of the following.	10
		1) Explain steganography.	
		2) Explain S/MIME.	
		3) Explain IP Security.	
	B)	Write a short note on Kerberos.	06
Q.4	A)	Attempt any Two of the following.	08
		<ol> <li>Explain Types of Security attacks.</li> </ol>	
		2) Explain SSL	
		3) Explain Security services.	
	B)	Explain DES in detail.	08
Q.5		mpt any Two of the following.	16
	a)	Explain AES in details.	
	b)	Explain Firewall with different types.	
	c)	Explain substitution techniques in cryptography.	

			<b>~</b>
eat lo.		Set	Ρ
В	.C.A. (Se	mester - VI) (New) (CBCS) Examination March/April-2023 Advanced Python (19409606)	
		rday, 01-07-2023 Max. Marks to 06:00 PM	80
nstru	,	Il questions are compulsory. Figures to the right indicate full marks.	
).1 ;	a <b>) Mult</b> i 1)	ble choice questions. package manager system is used to install Django. a) POP b) PIP c) pip d) None of the above	10
	2)	Which method of the socket module allows a server socket to acceptrequests from a client socket from another host?a) socket.accept()b) socket.sendto(address)c) socket.acceptsocketd) none	
	3)	<ul> <li>What is the difference between the TCP and UDP protocols?</li> <li>a) TCP is compatible with Python, while UDP is not</li> <li>b) There are no differences</li> <li>c) TCP is not connection-oriented, while UDP is</li> <li>d) TCP is connection-oriented, while UDP is not</li> </ul>	
	4)	Which architecture pattern Django uses a) MVC b) MVT c) HTML d) PVT	
	5)	Django is written in language. a) Python b) JAVA c) .net d) C	
	6)	fg in tkinter widget is stands for a) active foreground b) background c) foreground d) fore guard	
	7)	<ul> <li>How the grid() function put the widget on the screen?</li> <li>a) According to x, y coordinates</li> <li>b) According to left, right and top</li> <li>c) According to row and column</li> <li>d) None of the above</li> </ul>	
	8)	An XML document can be depicted using what kind of structure? a) A. Paragraph b) Tree c) Stem and Leaf d) Nested	
	9)	What does XML stand for? a) Extensible Method Language b) Example Markup Language c) Extensible Markup Language d) Both a and c	

Seat	
No.	

Da Tir

# Q.

		<ul> <li>10) Which function searches through the XML tree and retrieves the element that matches the specified tag.</li> <li>a) find</li> <li>b) findtag</li> <li>c) match</li> <li>d) xmltag</li> </ul>	
	b)	<ul> <li>Fill in the blank.</li> <li>1) config() in python tkinter is used for</li> <li>2) Django was first publicly released in</li> <li>3) is the correct way to draw a line to canvas tkinter.</li> <li>4) XML is designed to store data and</li> <li>5) module used in DOM xml parser.</li> <li>6) To send email in python we use module.</li> </ul>	06
Q.2	a) b) c)	ve any eight of the following. What are the advantages of Django? What is use of API? What is socket? What is use of XML parser? Which languages used for Django templates? Explain text widget. Explain radio button widget. Write difference between project and app. What is Web Framework? Explain canvas layout Management.	16
Q.3	a)	<ul> <li>Attempt any two of the following.</li> <li>1) Explain Django templates.</li> <li>2) Explain DOM API's.</li> <li>3) Explain SAX parser in detail.</li> </ul>	10
	b)	Write short note on Django views.	06
Q.4	a)	<ul> <li>Attempt any two of the following.</li> <li>1) What is event? Explain tkinter events.</li> <li>2) Explain TCP/IP server methods.</li> <li>3) Describe MVC design pattern.</li> </ul>	08
	b)	Explain different containers used in python.	08
Q.5	Atte a)	empt any two of the following. Explain socket programming. Write python program to send email. Explain template and forms in Diango with example.	16

b) Explain template and forms in Django with example.c) Explain all the methods that are used in etree module of xml parser.