Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (1) – EXAMINATION – SUMMER 2024

Subject Code: 2CS1010104 **Date:27/04/2024**

Subject Name: Communication Skills – I

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q. 1 Answer the following questions. 20

1. What is extensive reading?
2. Define: pitch.
3. What is listening?
4. Define: writing skill.
5. Write-down the purpose of reading.
6. Define: intonation.
7. Gold is _____ useful metal. (a/ an / the)
8. Jinal is not so thin as_____ .(her / him)
9. _____Sun rises in _____ east. (a/ an / the)
10. An aeroplane is flying _____ the home. (on/ over)
11. We _____ obey your parents. (should / must /will)
12. I saw him _____ the road. (cross)
13. Jatin was made____ the class. (leave)
14. This young man _____ run fast. (will/ must /can)
15. Shiv was_____ the first prize. (award)
16. _____ Ganga river is the longest in India.(an/the/a)
17. Define: intensive reading.
18. Mittal_____ tea every morning.(drink)
19. I _____a good drama day before yesterday.(see).
20. What is communication?

Q. 2 Answer the following questions. 14

(A) Explain objective of communication.

(B) Explain importance of reading. Write in brief comprehension.

OR

(A) Describe various types of listening in detail.

(B) Explain communication process model

Q. 4 Answer the foll...

Q. 3 Answer the following questions. (Any Two) 12

(A) Explain types of communication in detail.

(B) Explain the traits of good listener.

(C) What are characteristic of speeches which influence the people?

(D) Draft the job application to the advertisement appears in "Gujarat Samachar"daily news paper for the Manager at Adani Group of steel limited company, Jamnagar.

Q. 4 Answer the following questions. (Any Two) 12

(A) Describe scanning and critical reading.

(B) Explain email etiquette and steps to draft the email.

(C) Draft the job application to the advertisement appears in "Gujarat Samachar"daily news paper for the post of Assistant Professor at Nootan BCA College, Surat.

(D) Explain technical communication with example. 12

Q. 5 Answer the following questions. (Any Two)

(A) Explain barrier of communication.

(B) Define: listening Vs. hearing in brief.

(C) How can you become a powerful speaker? Explain in brief.

(D) Write a letter to leave from college for10 days to Inchrage Principal.

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Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (I) – EXAMINATION – SUMMER 2024

Subject Code: 2CS1010101 **Date:24/04/2024**

Subject Name: Fundamentals of Computer Programming

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q. 1 [A] Do as Directed. 10

1. Define : Variable
2. What is a flow chart?
3. Give an output: printf("%d %c",70,70);
4. What is an algorithm?
5. Which operator always returns integer value?
6. Different between int x; & int x[5];
7. Different between & and &&.
8. List out basic data type of C program.
9. Define : program
10. What is scanf () function?

[B] Do as Directed. 10

1. How many bytes occupy int and float data?
2. Difference between p++ and ++p.
3. What is a turnery operator?
4. Define: C tokens & keyword.
5. Give an output:

```
int a=25,b=35,c=55;
printf("\n %d %d %d", b,c,a);
```

Q. 2 Answer the following questions.(Any Two) 14

A Explain basic structure of C program.

B List out operators and explain any two with example.

C List out decision making statement and explain If... Else and Else ….If ladder with example.

Q. 3 Answer the following questions (Any Two). 12

A Explain for loop with example.

B Explain while loop with example.

C Explain switch case with example

Q. 4 Answer the following questions (Any Two). 12

A What is an array? Explain one dimensional array with example.

B List out string function and explain any two string function with example.

C Explain Do….While loop with example.

Q. 4 Answer the following questions. (Any Three) 21

(A) Explain special types of matrices with example. 3

(B) Find A15 – A10 and A25 + A20 for A.P 21 , 27 , 33 4

(C) Explain Arithmetic Progression (nth term formula) with formula. 3

(D) Find $13^{P}8 + 17^{P}12$, $9^{C}3 - 7^{C}2$, $13^{P}8 - 7^{C}2$ 4

Q. 5 Answer the following questions. (Any Three) 21

(A) Find A15- A10 for A.P 1.1 ,2.1,3.1,..... 4

(B) How many different number of 4 digit can be arranged by using all digits of the number 5590 3

(C) How many different words can be formed by using all letters of the word (1) COMMONALLY (2) RAMAYAN 3

(D) The sum of 10th term of A.P. is 230 and the sum of its 4th terms is 44. Find the sum of its 14 term. 4

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Course Outcomes (Covered in Question Paper)

CO-1 In order to be able to formulate what a computer system is supposed to do, or to prove that it does meet its specification, or to reason about its efficiency, one needs the precision of mathematical notation and techniques.

CO-2 For instance, to specify computational problems precisely one needs to abstract the detail and then use mathematical objects such as sets, functions, relations, orders, and sequences.

CO-3 To prove that a proposed solution does work as specified, one needs to apply the principles of mathematical logic, and to use proof techniques such as induction.

CO-4 To reason about the efficiency of an algorithm, one often needs to count the size of complex mathematical objects. The Discrete Mathematics course aims to provide this mathematical background.

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER 1 – EXAMINATION – SUMMER 2024

Subject Code: 11-MDC206-1C **Date:15/04/2024**

Subject Name: Fundamentals of Mathematics

Time: 3 Hrs. **Total Marks: 100**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	**Answer the Following (Any Eight)**	**16**		
1.	Differentiate Equal Vs. Equivalent Set.		1	L1
2.	Write rules to partition of set.		1	L1
3.	Finite Vs. Infinite Set		2	L2
4.	What is functionality of into function with example?		2	L1
5.	Define Square matrix.		1	L1
6.	Describe identity function with example.		2	L3
7.	${}_{10}P_5 =$ _____		1	L1
8.	Permutation Vs. Combination		2	L2
9.	${}_{24}C_{24} =$ _____		2	L3
Q. 2	**Answer the following long questions. (Any Three)**	**21**		
(A)	Explain intersection and union of two sets with proper example		3	L2
(B)	State De 'Morgan Law for Union.		3	L3
(C)	If A = set of letters of word YASHVI B= set of letters of word PANKTY C= set of letters of word VATSAL Then verify $A \cap (B \cap C) = (A \cap B) \cap C$		3	L2
(D)	If $f(x) = x2 - 2$ $g(x) = x + 3$ $h(x) = x2$ then find fog, gof.		3	L4
Q. 3	**Answer the following long questions. (Any Three)**	**21**		
(A)	Explain classification of function with example.		7	4 L5
(B)	Let f:R◊R , g: R◊R and h: R◊R is define as $f(x) = x2 + x$, $g(x) = x2 - 1$, and $h(x) = 4x2$. Find fogoh		7	2 L2
(C)	Explain domain, co-domain, range and image with proper example.		7	3 L3
(D)	If $A = \begin{bmatrix} 2 & 5 & 7 \\ 2 & -1 & 0 \\ 3 & 4 & 8 \end{bmatrix}$ $B = \begin{bmatrix} 1 & 4 & 9 \\ 3 & -2 & 4 \\ -5 & 6 & 8 \end{bmatrix}$ verify that $(A + B)^T = A^T + B^T$		7	4 L4

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (1) – EXAMINATION – SUMMER 2024

Subject Code: 11-CAM201-1C **Date:10/04/2024**

Subject Name: Problem Solving Using C

Time: 2 Hrs. **Total Marks: 5**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following MCQs/Short/Definition questions (1 or 2 mark each)	16		
	1. Define Algorithm with example.		1	L1
	2. What is Identifier? Give valid example of identifier.		3	L2
	3. Write a general Syntax of Scanf() function.		4	L1
	4. State the use of clrscr().		3	L2
	5. State the general Syntax of Nested if…else statement.		4	L1
	6. Give full form of ASCII.		5	L5
	7. Use of Continue Statement.		4	L2
	8. Define the use of Increment/Decrement operator with example.		3	L2
Q. 2	Answer the following long questions. (Any Two)	14		
	(A) Discuss Flowchart symbols with Example		3	L1
	(B) What is Data type? Discuss primary data type in details.		4	L3
	(C) Demonstrate the use of Goto statement with example.			
Q. 3	Answer the following long questions. (Any Two)	10		
	(A) Define Entry Control Loop. Explain While Loop with Example.		4	L3
	(B) What is one Dimension Array? Explain with example.		4	L2
	(C) Explain String handling function Strlen() and Strcmp() with example.		3	L2
Q. 4	Answer the following questions. (Any Two)	10		
	(A) Write a C program to find out maximum num from three num.		6	L3
	(B) Write a C program to check given num is palindrome num or not.		6	L3
	(C) Write a C program of armstrong number.		6	L3

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Course Outcomes (Covered in Question Paper)	
CO-1	To have fundamental knowledge on flowcharts and algorithms
CO-2	To formulate the problem and express the same using flowcharts and algorithms
CO-3	To understand the basic terminology used in computer programming using C
CO-4	To study, analyze and understand logical structure of a computer program, and different construct to develop a program in 'C' language
C0-5	To write, compile and debug programs in C language
CO-6	To design programs involving decision structures, loops and functions

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (I) – EXAMINATION – SUMMER 2024

Subject Code: 11-CAM202-1C **Date:12/04/ 2024**

Subject Name: Computer Organization and Architecture

Time: 3 Hrs. **Total Marks: 100**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following MCQs/Short/Definition questions (2 mark each)	16		
1.	Give the full name: RAM and EEPROM.		1	1
2.	List out the Major parts of computer.		1	1
3.	Differentiate between Inject Printer and Laser Printer.		1	2
4.	List out Input devices.		2	1
5.	Give the full name: CD and DVD.		1	1
6.	Difference between Analog and Digital system?		2	2
7.	Define AND gate circuit and Truth Table.		3	1
8.	Define Computer.		1	1
Q. 2	Answer the following long questions. (Any Three)	21		
(A)	Explain Hard Disk with Figure.	7	3	3
(B)	Describe Advantage and Disadvantage of Computer.	7	2	2
(C)	Explain computer Generation in details.	7	1	2
(D)	Explain Various types of Impact Printer	7	3	3
Q. 3	Answer the following long questions. (Any Three)	21		
(A)	Explain Keyboard with figure.	7	1	2
(B)	1. Convert (111.25) 10 ➔ (?) 8 2. Convert (22.52) 8 ➔ (?) 16	7	3	3
(C)	1. Convert (BB.AA) 16 ➔ (?) 10 2. Convert (1100.111) 2 ➔ (?) 10	7	3	3
(D)	1. Add 1001.1 and 1001.0 2. Subtract from 110.1100 to 010.1100	7	3	3
Q. 4	Answer the following questions. (Any Three)	21		
(A)	Write short note on encoder	7	4	3
(B)	Describe 3 to 8 line Decoder.	7	3	2
(C)	Define Ex-NOR gate circuit and Truth Table with three input signal.	7	3	1
(D)	Discuss CRT? Draw internal parts of CRT with description.	7	2	2
Q-5	Attempt the Following (Any Three)	21		
(A)	Define Logic Gate? Explain Basic Gates.	7	3	1
(B)	Explain Full Subtractor with figure	7	3	2
(C)	Discuss ROM with its type	7	3	3
(D)	Explain half Adder.	7	3	2

Course Outcomes (Covered in Question Paper)

CO-1 Understand working principles of fundamental components of a typical computer system.

CO-2 Learn various number systems and conversion among them.

CO-3 Recognize various basic building blocks (logic gates) and combinational circuits.

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (1) – EXAMINATION – SUMMER 2025

Subject Code: 12-AEC102-1C **Date:28/04/2025**

Subject Name: Communication Skills-I

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following MCQs/Short/Definition questions (1 or 2 mark each)	16		
1.	What is Tense?		2	1
2.	Tell the name of two ways of Communication.		4	1
3.	Name the eight parts of speech.		2	1
4.	Identify the Countable and Uncountable Noun From the given Words. Apples, Bags, Tea, Table, Milk, Wisdom.		2	1
5.	List the three primary tenses in English.		2	1
6.	Identify the proper interjection from the following sentences. 1. Wow! That is a beautiful dress indeed. 2. Hurray! We won the match.		4	1
7.	Define the word "Communication."		1	1
8.	Choose the correct present continuous tense form of the verb for the blank: I _____ to watch a movie at Wide-angle.(go) A. going B. am going C. am gone D. have going		4	5
Q. 2	Answer the following long questions. (Any Two)	14		
(A)	Explain Paralanguage for effective reading.		3	4
(B)	Discuss Barriers of communication.		4	2
(C)	Compare "listening" and "hearing".		1	5
Q. 3	Answer the following long questions. (Any Two)	10		
(A)	Explain Communication process model.		4	3
(B)	Discuss four C's of writing.		1	2
(C)	Write down short note on Nature and Gap of Communication.		4	1
Q. 4	Answer the following questions. (Any Two)	.10		
(A)	Write a leave application to your school principal for Medical Reason.		1	1
(B)	Discuss Characteristics of a good listener.		1	2
(C)	Write a job application for the post of "Software Developer" in XYZ Company at Baroda.		1	1

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Course Outcomes (Covered in Question Paper)	
CO-1	Students will be able to learn and understand the four major skills of Communication i.e. LSRW.
CO-2	Students will be enriched with good vocabulary and diction
CO-3	Students' comprehension skills will be enhanced by this course.
CO-4	Students will be able to Develop and/or present verbal

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER -2 – EXAMINATION – SUMMER 2025

Subject Code: 12-CAM301-1C **Date:23/04/ 2025**

Subject Name: Advance Programming using C

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following MCQs/Short/Definition questions (1 or 2 mark each)	16		
1.	What is User defined function? .		1	L1
2.	What is union? Explain the C syntax of union.		2	L2
3.	Define the term: static variable.		2	L1
4.	What is pointer? How to declare pointer variable.		2	L1
5.	Define bit fields.		2	L3
6.	Define fopen(), and rewind().		2	L1
7.	Define the scale factor.		2	L1
8.	What is linked list and node.		2	L4
Q. 2	Answer the following long questions. (Any Two)	14		
(A)	List out all category of user define function. Explain function with no argument and with no return value in detail.	7	1	L1
(B)	Discuss array of structure with example.	7	1	L2
(C)	Develop a recursive function with a specific example	7	2	L2
Q. 3	Answer the following long questions. (Any Two)	10		
(A)	Create a structure with nested structures.	5	2	L1
(B)	Explain getc( ) and putc ( ) with example.	5	2	L2
(C)	Describe malloc( ),calloc ( ),Relloac( ) function	5	4	L1
Q. 4	Answer the following questions. (Any Two)	10		
(A)	Design a program using pointers to manipulate arrays.	5	2	L6
(B)	Write a C Program of Structure stud_ info(Rollno,Name,Percentage)	5	2	L6
(C)	Explain nested macro substitution with example.	5	4	L2

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Course Outcomes (Covered in Question Paper)	
CO-1	To understand the concept of software modules (using function).
CO-2	To use by structure, unions and pointers in designing application in C
CO-3	To apply the knowledge of the advance concepts in using dynamic memory allocation
CO-4	To understand store/retrieve data to/from files on auxiliary memory.

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (2) – EXAMINATION – SUMMER 2025

Subject Code: 12-CAM207-1C **Date:24/04/ 2025**

Subject Name: Python Programming

Time: 3 Hrs. **Total Marks: 100**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following.	16		
1.	Solve the following python code. Str1="hello World" print str1[2 : 5]		2	3
2.	How to remove values from a list?		2	1
3.	What is the difference between .py and .pyc files?		1	1
4.	What is the purpose of // operator?		2	1
5.	Differentiate between a list and a tuple in python		2	2
6.	When would you use triple quotes as a delimiter?		2	1
7.	Define slice operator of list.		2	1
8.	Write down program code for delete folder in file handling.		4	2
9.	What is full form of IDLE and PVM?		1	1
10.	Differentiate Between append() and extend().		3	2
11.	How do we convert the string to lowercase?		3	1
12.	Solve the output: fruits = ["apple", "banana" ,"cherry"] for x in fruits: if x == "banana" : break print(x)		2	3
13.	Explain the indentation with example.		2	1
14.	List out different Tkinter widgets.		5	1
15.	What is mainloop () in Python?		6	1
16.	What is Tkinter?		6	1
Q. 2	Answer the following long questions. (Any Three)	21		
(A)	What is list? Explain all methods with example.		3	1
(B)	Compare: C and Python		1	5
(C)	List out all control statements. Explain elif statement with example.		2	1
(D)	Discuss the advantages and disadvantages of python.		1	2
Q. 3	Answer the following long questions. (Any Three)	21		
(A)	What do you mean by operators? Describe Arithmetic and Relational operators with example.		2	2
(B)	Describe the features of Python programming language.		1	2
(C)	Explains Input – output statements with example.		2	1
(D)	Demonstrate the python virtual machine with diagram.		1	3

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (2) – EXAMINATION – SUMMER 2025

Subject Code: 12-VAC106-1C **Date:29/04/2025**

Subject Name: Universal Human Value – II

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following MCQs/Short/Definition questions (1 or 2 mark each)	**16**		
1.	Define : Eco-friendly system.	2	1	3
2.	What is the definition of Value Education?	2	1	1
3.	Explain the concept of "Natural Acceptance" in self-exploration.	2	1	2
4.	Describe the co-existence of the sentient 'I' and the material 'Body.'	2	2	2
5.	Apply the concept of Trust (Vishwas) and Respect (Samman) in real-life scenarios.	2	3	3
6.	Identify one of the three basic requirements for the fulfillment of human aspirations.	2	8	1
7.	Propose one method to ensure Sanyam and Swasthya in one's life.	2	2	3
8.	List one basic guideline for Value Education.	2	6	1
Q. 2	Answer the following long questions. (Any Two)	**14**		
(A)	Evaluate the impact of a harmonious family on individual well-being.	7	1	6
(B)	Design a strategy for an individual to transition towards a socially and ecologically responsible professional.	7	4	3
(C)	Evaluate the role of Trust (Vishwas) in building strong family relationships.	7	7	4
Q. 3	Answer the following long questions. (Any Two)	**10**		
(A)	Create a visual representation of a universal harmonious order in society.	5	8	3
(B)	Critically assess the current scenario of understanding Happiness and Prosperity in society.	5	1	6
(C)	Examine the difference between intention and competence in human relationships.	5	1	4
Q. 4	Answer the following questions. (Any Two)	**10**		
(A)	Apply the concept of Trust (Vishwas) and Respect (Samman) in real-life scenarios.	5	1	3
(B)	Evaluate the role of Recyclability and Self-regulation in maintaining harmony in nature.	5	7	6
(C)	Assess the significance of Samadhan, Samridhi, and Svah-astitva as comprehensive human goals.	5	8	4

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Q. 4 Answer the following questions. (Any Three) 21

(A) What do you mean by text file? Explain the writing data into text file in file handling.

(B) Define string. Explain string methods in detail.

(C) What is binary file? Explain the writing data in binary file.

(D) What is checkbox button? Explain it with example.

Q. 5 Answer the following questions. (Any Three) 21

(A) What are Widgets? Demonstrate basic Tkinter widgets with example.

(B) Describe various options of button widget with example.

(C) Write a program to swap two numbers without using third variable.

(D) Write a program to calculate sum of given number.

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Course Outcomes (Covered in Question Paper)	
CO-1	To understand the scope of python
CO-2	To understand and implement programming concepts in python.
CO-3	To understand inbuilt library of python with functions.
CO-4	To understand and implement File handling using python.
CO-5	To understand GUI programs
CO-6	To understand Tkinter

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (2) – EXAMINATION – SUMMER 2025

Subject Code: 12-CAE208-1C **Date:25/04/2025**

Subject Name: Java Script & CSS Boot Strapping with HTML

Time: 3 Hrs. **Total Marks: 100**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Do As Directed.	16		
1.	Define the purpose of the typeof operator in JavaScript	2	1	3
2.	What are the basic data types in JavaScript?	2	1	2
3.	Give an example of ternary operator.	2	2	1
4.	List out arithmetic operators in JavaScript.	2	1	1
5.	What is the difference between == and === operators in JavaScript?	2	2	2
6.	Define : DOM.	2	3	1
7.	What are events in JavaScript?	2	4	3
8.	Write down the use of getDay() and getDate() in JS.	2	3	3
Q. 2	Answer the following long questions. (Any Three)	21		
(A)	How do you include JavaScript code in an HTML document?	7	1	2
(B)	Create JavaScript function for Addition and Subtraction of two nos.	7	2	6
(C)	What is an object? Explain How to create Object in JS.	7	3	2
(D)	Demonstrate examples of client-side form validation techniques.	7	4	3
Q. 3	Answer the following long questions. (Any Three)	21		
(A)	List out any five string methods. Explain with example.	7	2	2
(B)	How do you create an event listener in JavaScript?	7	2	6
(C)	Describe array in JavaScript. How do you access elements in an array?	7	3	3
(D)	What is recursion? Create recursion function in Java Script.	7	3	5
Q. 4	Answer the following questions. (Any Three)	21		
(A)	List out conditional statements in JavaScript. Explain with examples.	7	1	2
(B)	Describe the structure and purpose of HTML forms.	7	4	3
(C)	Discuss DOM methods to access and change document content	7	3	2
(D)	Provide examples of creating tables with Bootstrap.	7	5	6
Q. 5	Answer the following questions. (Any Three)	21		
(A)	Explain use of inner HTML in Java Script with example	7	1	3
(B)	Generate onclick event using example	7	4	6
(C)	Explain following array methods with example: concate(), pop(), push(), slice(), sort()	7	3	3
(D)	Implement the steps involved in connecting Bootstrap to an HTML page.	7	5	3

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Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (3) – EXAMINATION – WINTER-2025

Subject Code: 13-CAM213-2C **Date:03/11/2025**

Subject Name: Operating System

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following Short questions.	**16**		
	1. Define an Operating System .		1	1
	2. List the types of Operating Systems.		1	1
	3. What is the purpose of a PCB?		1	2
	4. Explain the concept of Multiprocessing.		1	2
	5. What is the difference between Buffering and Caching?		1	2
	6. Define Deadlock in an Operating System.		3	1
	7. What is static and dynamic memory allocation?		4	1
	8. Define Segmentation in memory management.		3	1
Q. 2	Answer the following long questions. (Any Two)	**14**		
	(A) Differentiate: Multiprogramming vs. Multiprocessing vs. Multitasking.	7	1	2
	(B) Demonstrate deadlock recovery.	7	3	3
	(C) Describe internal and external fragmentation.	7	4	2
Q. 3	Answer the following long questions. (Any Two)	**10**		
	(A) Describe functions of operating system.	5	1	2
	(B) Illustrate process life cycle.	5	2	4
	(C) Demonstrate file structure in operating system.	5	5	3
Q. 4	Answer the following questions. (Any Two)	**10**		
	(A) What are types of operating system? Explain distributed and real-time operating system.	5	1	2
	(B) Demonstrate paging in details.	5	4	3
	(C) Classify file access method in operating system.	5	5	4

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (3) – EXAMINATION –WINTER-2025

Subject Code: 13-CAM212-2C **Date:30/10/ 2025**

Subject Name: Data Structure using OOPS

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
1	Answer the Following MCQs/Short/Definition questions (2 mark each)	**16**		
	1. Define: Inheritance , class	2	3	1
	2. State the use of scope resolution operator.	2	2	2
	3. Define: Data Structure , Non Linear data structure	2	4	1
	4. Define Object, Polymorphism.	2	1	1
	5. List out the different types of inheritance?			
	6. What is the advantage of stack?			
	7. What are the different types of Queue?			
	8. What is function overloading?			
2	Answer the following long questions. (Any Two)	**14**		
	(A) Explain Basic Structure of C++ program.	7	2	2
	(B) Explain for loop and while loop with Example.	7	1	2
	(C) Write a difference between Object oriented programming and Procedure oriented programming.	7	2	2
3	Answer the following long questions. (Any Two)	**10**		
	(A) Which are the different types of inheritance? Explain multiple Inheritance with example.	5	3	2
	(B) Explain constructor with suitable example.	5	3	2
	(C) Discuss the concept of Friend Function with suitable Example.	5	2	2
4	Answer the following questions. (Any Two)	**10**		
	(A) What is sorting? Explain Bubble Sort with proper example.	5	5	1
	(B) Write an algorithm for Selection sort.	5	5	2
	(C) Explain Binary Search with algorithms.	5	5	4

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Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (3) – EXAMINATION –WINTER 2025

ubject Code: 13-CAM214-2C **Date:06/11/2025**

ubject Name: Database Management System

ime: 3 Hrs. **Total Marks: 100**

nstructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
	Answer the Following Definition questions (2 mark each)	**16**		
1.	What is a Database system?	2	1	1
2.	What is Normalization?	2	1	1
3.	Define : Query, Report	2	2	1
4.	What is Mapping?	2	1	1
5.	List some commands of DDL.	2	3	1
6.	Define : Tuple, Domain	2	2	1
7.	List out Data types in Ms-Access.	2	3	1
8.	Define Relationship with example.	2	2	1
.2	Answer the following long questions. (Any Three)	**21**		
(A)	Explain comparison between Traditional files v/s DBMS.	7	3	2
(B)	Discuss about Component of Database System.	7	2	2
(C)	Explain advantage of DBMS.	7	3	2
(D)	What are the tasks of database administrator?	7	1	1
). 3	Answer the following long questions. (Any Three)	**21**		
(A)	Explain Internal/Conceptual Mapping.	7	3	2
(B)	What is Relational algebra? Explain set Operation.	7	1	1
(C)	Explain three level architecture of database system.	7	3	2
(D)	List out all Data Model, explain Relation data model.	7	3	1
Q. 4	Answer the following questions. (Any Three)	**21**		
(A)	Explain 2nd and 3rd normal form with example.	7	3	2
(B)	Explain BCNF with example.	7	3	2
(C)	Draw Entity-Relationship Diagram.	7	6	4
(D)	Discuss about any four keys.	7	2	2
Q. 5	Answer the following questions. (Any Three)	**21**		
(A)	What is Table? Write down steps for create Table in Ms-Access.	7	1	1
(B)	What is form? Write down steps for create form in Ms-Access.	7	1	1
(C)	Explain Field General Properties in Details.	7	3	2
(D)	Write down steps for Append query, Delete query and Update query.	7	6	4

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER 3 – EXAMINATION – WINTER-2025

Date: 08/11/2025

Subject Code: 13-MDC215-2C

Subject Name: Project Management using Business Analytics

Time: 3 Hrs. **Total Marks: 100**

Instructions:

1. Q-1 is Compulsory.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.
5. L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create
6. CO: Course Outcomes, BL: Bloom's Taxonomy Levels

		Marks	CO	BL
		16		
Q. 1	Answer the Following (2 mark each)			
1.	Define Business Analytics and its scope.	2	1	1
2.	What is included in the Bibliography?	2	1	1
3.	Define project planning	2	1	2
4.	Define an internship project	2	1	2
5.	Name two types of documentation.	2	4	1
6.	Mention one technique used in business analytics	2	1	1
7.	Why is an index important in project documentation?	2	4	2
8.	Explain the structure of an individual project.	2	4	2
		21		
Q. 2	Answer the following long questions. (Any Three)			
(A)	Describe the role of business analytics in enhancing business performance and competitiveness.	7	3	2
(B)	Explain the concepts of descriptive statistics, including mean, median, and mode, and their applications in business analytics.	7	1	2
(C)	Define documentation in the context of project management and explain its importance.	7	4	2
(D)	Discuss the dynamics of managing different types of projects and the challenges associated with each.	7	4	4
		21		
Q. 3	Answer the following long questions. (Any Three)			
(A)	Outline the steps involved in writing a comprehensive project plan.	7	4	3
(B)	Describe the role of project leadership in ensuring effective project documentation and planning.	7	4	2
(C)	Describe the process of project index formation and its importance in organizing project conten	7	4	2
(D)	Discuss the different categories of projects (in-house, internship, external) and their respective characteristics.	7	4	4
		21		
Q. 4	Answer the following questions. (Any Three)			
(A)	Discuss the key characteristics of effective documentation and the different types of documentation used in projects.	7	4	4
(B)	Explain the process and significance of hypothesis testing in business analytics	7	3	2
(C)	Explain how proper documentation can impact the success of a project.	7	4	2
(D)	Explain the primary purposes of project documentation and the challenges associated with it	7	4	4

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (4) – EXAMINATION – SUMMER 2025

Subject Code:2CS1010403 **Date:16/04/ 2025**

Subject Name: SYSTEM ANALYSIS AND DESIGN

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q. 1 Objective Questions /Short Definition Questions/ Short Questions **20**

(1) What do you mean by system?
(2) List out the types of users.
(3) Give the examples of systems
(4) What is fact finding technique?
(5) List out types of decision table.
(6) Define : code
(7) List out the types of output.
(8) What is cohesion?
(9) Write down the full form of HIPO
(10)Define DFD,PDFD,LDFD

Q. 2 Answer the following questions. **14**

(A) Explain various types of systems.
(B) Describe the characteristics of system.

OR

(A) Explain the symbols used in DFD with proper example
(B) Discuss logical DFD and physical DFD.

Q. 3 Answer the following questions. (Any Two) **12**

(A) Explain fact finding techniques.
(B) Discuss questionnaires and observation fact finding technique in detail.
(C) Discuss decision tree with example
(D) Explain write a note on Structured English.

Q. 4 Answer the following questions. (Any Two) **12**

(A) Explain the principles of code design.
(B) Discuss the basic principles of output. Also explain various types of output.
(C) Explain the types of forms. Also discuss the principles of form design.
(D) Explain different types of output media. Also list out the objective of output design.

Q. 5 Answer the following questions. (Any Two) **12**

(A) How HIPO diagram is used to develop system software? Explain it in detail with its advantages and disadvantages.
(B) Explain Warnier/Orr Diagrams.
(C) Explain testing with its all levels

OR

Draw all the levels of Data Flow Diagram for Library Management System. Also define various Inputs, Processes and Outputs.

****

4 Attempt Any Two.

(A) The following data refer to the mark obtained by 10 students in two subjects Mathematics ans Science in examination:

Student	1	2	3	4	5	6	7	8	9	10
Marks in maths	23	27	29	32	13	29	19	31	42	29
Marks in sci.	18	25	27	35	8	15	17	30	38	25

Obtain Spearman's rank correlation co-efficient and give your comments

(B) Find the correlation co-efficient for the data given below:

X	48	49	50	51	52	53	54	55	56
Y	98	100	88	102	95	125	120	110	125

(C) Find equations of two regression line from the following data:

X	2	8	10	-2	5	-4
Y	3	2	5	10	-2	-3

12

Q. 5 Attempt Any Two.

(A) Write six stages to sampling procedure.

(B) Write a reason, In Linear Regression why there are two Regression lines? give example

(C) Discuss Population Vs. Sample with different example.

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (4) – EXAMINATION – SUMMER 2025

Subject Code:2CS1010401 **Date:12/04/2025**

Subject Name: Programming with Python

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **CO = Course Outcome, BL= Bloom's Taxonomy Level**

		CO	BL	20
Q. 1	Do as directed.			
	(1) Define: Numeric datatype with example.			
	(2) What is the difference between a list and a tuple in Python?			
	(3) What will be the output of the following Python code?			

```
fruits = ["orange", "apple" ,"watermelon"]
for x in fruits:
  if x == "apple" :
    break
  print(x)
```

	(4) Define +, * and [ ] operator in list.			
	(5) What is use of Google API sheet?			
	(6) Comparison between C++ and Python.			
	(7) What is JSON File?			
	(8) What is binary file? How to write data in a binary file.			
	(9) Explain range () with example.			
	(10) What is indentation?			
Q. 2	Answer the following questions.			14
	(A) Explain the following file handling methods with suitable example open(), read(), readline(), write(), writeline(), close()			
	(B) What is control statement? Explain if…elif in detail.			
	OR			
	(A) Explain data type in python in detail.			
	(B) What is looping? Explain for loop in detail.			
Q. 3	Answer the following questions. (Any Two)			12
	(A) Explain features of python.			
	(B) What is string? Write down all string functions with example.			
	(C) How to creating and accessing tuple element with example.			
	(D) Write a Python program to write data into output.txt file.			
Q. 4	Answer the following questions. (Any Two)			12
	(A) What is File? How to create, read and write file in file handling.			
	(B) Write down features of Google Sheet.			
	(C) Explain the Input – output statement with example.			
	(D) Explain jumping control with example.			
Q. 5	Answer the following questions. (Any Two)			12
	(A) What is Google sheet? Write down steps to create a Google sheet.			
	(B) What are sequence datatypes? Explain tuple in detail.			
	(C) Write a Python program to display the Fibonacci series.			
	(D) Write a Python program to calculate sum of given number.			

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Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (4) – EXAMINATION – SUMMER 2025

Subject Code: 2CS1010402 **Date:15/04/2025**

Subject Name: Desktop Application Development-II

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **CO = Course Outcome, BL= Bloom's Taxonomy Level**

		CO	BL	
Q. 1	Objective Questions			20
1.	What is Client – Server architecture?			
2.	Difference between ADO and ADO.NET			
3.	Comparison of Front-end and Back-end.			
4.	How to work in 1-tier architecture?			
5.	Why using ExecuteNonQuery() Method in ADO.NET?			
6.	Comparison of Report and Chart.			
7.	Define: Dataset and Data record.			
8.	What is Connection Object in ADO.NET?			
9.	What is use of Imports System.Data.Sql?			
10.	Which one is the Back-End Frameworks?			14
Q. 2	Answer the following questions.			
	(A) What is Stream Write Class? Explain all Methods in Details.			
	(B) What is ADO.NET Command? Explain SQL Command Methods with Example.			
	OR			
	(A) Explain ADO.NET features.			
	(B) Define Data Adapter (), SqlConnection () and Execute Reader ().			12
Q. 3	Answer the following questions. (Any Two)			
	(A) Different Between ADO and ADO.NET?			
	(B) Explain Desktop base Client server process.			
	(C) How to Store Encrypted Data in File Handling Explain with Example Step by Step?			
	(D) How to Create Simple Chart Using Wizard explain Step by Step?			12
Q. 4	Answer the following questions. (Any Two)			
	(A) Explain 1-tier, 2-tier, and 3-tier architecture with Example.			
	(B) Explain Login and Registration process in ADO.NET with Example?			
	(C) What is Stream Reader Class? Explain all Methods in Details.			
	(D) Explain Web Application base Client server Process.			12
Q. 5	Answer the following questions. (Any Two)			
	(A) What is ADO.NET Dataset? Explain SQL Dataset Methods.			
	(B) What is ADO.NET Data Reader? Explain SQL Data Reader Methods.			
	(C) How to Create Simple Report Using Wizard explain Step by Step?			
	(D) Design the login form and write code in VB.NET.			

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Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (4) – EXAMINATION – SUMMER-2025

Subject Code: 14-AEC110-2C **Date:17/04/ 2025**

Subject Name: Digital Marketing

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
		16		
Q. 1	Answer the Following Short/Definition questions (2 mark each)			
	1. What is Digital Marketing?	2	1	1
	2. List five key components of digital marketing	2	1	1
	3. Define SEO and SEM.	2	3	1
	4. What does SERP stand for?	2	3	1
	5. Define the term branding in digital marketing.	2	4	1
	6. Define Pay-Per-Click (PPC) advertising.	2	2	2
	7. What does SERP stand for?	2	3	1
	8. What is the difference between organic and paid marketing?	2	2	1
		14		
Q. 2	Answer the following long questions. (Any Two)			
	(A) Difference between Traditional Marketing and Digital Marketing.	7	1	3
	(B) Explain The Internet Marketing Mix (4Ps of Online Marketing)?	7	2	2
	(C) Explain why digital marketing is important for businesses today.	7	2	2
		10		
Q. 3	Answer the following long questions. (Any Two)			
	(A) Develop a social media marketing campaign for a new product launch.	5	3	3
	(B) Why do businesses need both content marketing and email marketing?	5	2	4
	(C) Describe the difference between SEO and SEM.	5	3	3
		10		
Q. 4	Answer the following questions. (Any Two)			
	(A) Should businesses invest more in PPC or content marketing? Explain.	5	2	5
	(B) How does digital marketing help businesses reach a global audience?	5	3	3
	(C) Discuss the challenges of digital marketing.	5	1	2

****

Course Outcomes (Covered in Question Paper)	
CO-1	To have fundamental knowledge of various terminology – digital marketing, search engine, etc.
CO-2	To understand various concepts such as mobile marketing, social media marketing, PPC, etc
CO-3	To understand SEO, SEM.
CO-4	To learn order processing steps.

Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (4) – EXAMINATION – SUMMER-2025

Subject Code: 14-CAE219-2C **Date:16/04/ 2025**

Subject Name: Advanced JavaScript

Time: 3 Hrs. **Total Marks: 100**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following Short questions :	**16**		
	1. Define NPM.		3	1
	2. What is Constructor?		1	1
	3. Write Benefits of JSX.		4	2
	4. List Types of DOM.		2	1
	5. What is use of package.json ?		3	1
	6. What is use of JavaScript inner HTML?		1	2
	7. How to verify the Node.js installation?		3	2
	8. List commonly used location properties.		2	1
Q. 2	Answer the following long questions. (Any Three)	**21**		
	(A) Define : Math Methods any 7 in JavaScript.	7	1	2
	(B) Discuss BOM Navigator Property with Description.	7	2	3
	(C) What is JSX? Explain key features of JSX with its coding syntax.	7	3	2
	(D) Write 3 methods of history object with description.	7	2	3
Q. 3	Answer the following long questions. (Any Three)	**21**		
	(A) Describe Dot Notation and Bracket Notation with appropriate example.	7	2	3
	(B) List out types of objects and explain any five with example.	7	1	3
	(C) Write a Difference between DOM V/S BOM.	7	2	3
	(D) What is React? Discuss the need for React.	7	3	4
Q. 4	Answer the following questions. (Any Three)	**21**		
	(A) Explain function implementation in React JS with example.	7	3	4
	(B) List DOM methods and explain them with appropriate example.	7	2	5
	(C) Classify Case study: Assessment and validation in React JS.	7	5	5
	(D) How to create an object? Describe three types of creating an object with example.	7	1	4
Q. 5	Answer the following questions. (Any Three)	**21**		
	(A) Define: String Methods any 7 in JavaScript.	7	1	5
	(B) Describe Graphical User Interface implementation in React JS Elements (any five) with example.	7	4	5
	(C) How to set up React.js on Windows and Ubuntu?	7	3	6
	(D) Classify Case Study: Simple Implementation of ReactJS.	7	5	6

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (4) – EXAMINATION – SUMMER-2025

Subject Code: 14-CAM217-2C **Date:12/04/ 2025**

Subject Name: Advanced Database Management System

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	**Define Following Terms.**	**16**		
1.	What is ORACLE?		1	1
2.	Use of varchar Data type		2	2
3.	What is RDBMS?		1	1
4.	Define Save point		1	1
5.	Full form: DML, TCL		2	2
6.	What is a Trigger?		1	1
7.	What is View?		1	1
8.	What is the primary key?		1	1
9.	Use of Order by Clause in SQL		2	2
10.	What is Cursor?		1	1
11.	List out DDL Command		2	2
12.	Discuss about sub query.		2	3
13.	Define Data Administrator.		1	1
14.	What is Revoke?		1	1
15.	Use of ROLLBACK		2	2
16.	What is PL/SQL?		2	2
Q. 2	**Answer the following questions. (Any Two)**	**14**		
(A)	Discuss the advantages and disadvantages of RDBMS.		2	3
(B)	Explain E.F.Codd's rules in Details.		2	4
(C)	Explain any five Numeric Functions.		2	4
Q. 3	**Answer the following questions. (Any Two)**	**10**		
(A)	What is DDL? Explain in Details.		1	4
(B)	What is Joins? Explain any two types of Joins in Details.		1	4
(C)	Explain Aggregate Function with example.		2	4
Q. 4	**Answer the following questions. (Any Two)**	**10**		
(A)	What is Index? Explain types of Index.		1	4
(B)	Explain any six String Functions with example.		2	4
(C)	Difference between stored procedure and function.		2	3

****

Course Outcomes (Covered in Question Paper)	
CO-1	Understanding fundamental concepts of RDBMS, SQL, and basic commands
CO-2	Applying SQL commands for data manipulation and retrieval.
CO-3	Analyzing SQL functions, clauses, and transactions.
CO-4	Implementing advanced database concepts like indexing, stored procedures, and triggers.

Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER - 4 – EXAMINATION – SUMMER 2025

Subject Code: 2CS1010405 **Date:18/04/ 2025**

Subject Name: Electronic Commerce (E-Commerce)-II

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Objective Questions /Short Definition Questions/ Short Questions	20		
	(1) Define E-Commerce.		1	1
	(2) Full Form of URL and SEO.		1	1
	(3) What is Firewall?		3	1
	(4) Compare M-Commerce and E-Commerce.		2	5
	(5) Define an Encryption and Decryption.		3	1
	(6) Create Cipher Text from Plain Text ("Hello") using 'Caesar cipher' Technique.		3	6
	(7) What is Cryptography?		3	1
	(8) Define cyber security.		4	1
	(9) Full form of DFD and UML.		2	1
	(10) Define M-Commerce.		1	1
Q. 2	Answer the following questions.	14		
	(A) Discuss Payment Gateway.		1	2
	(B) Define transposition techniques and explain any two with an example.		3	1
	OR			
	(A) Explain mobile structure of E-Commerce.		1	2
	(B) Describe Credit Card.		1	1
Q. 3	Answer the following questions. (Any Two)	12		
	(A) Discuss the advantages and disadvantages of M-Commerce.		2	2
	(B) Describe Electronic Fund Transfer.		2	1
	(C) Design an Activity Diagram for "Online movie Ticket Booking"		4	6
	(D) Explain web structure of E-Commerce.		1	1
Q. 4	Answer the following questions. (Any Two)	12		
	(A) Explain Play Fair technique with an example.		3	1
	(B) Discuss E-Commerce components in Details.		1	2
	(C) Write a short note on E-Check.		2	3
	(D) Explain VPN (Virtual Private Network).		3	1
Q. 5	Answer the following questions. (Any Two)	12		
	(A) Design the DFD for "Online Shopping".		4	6
	(B) Explain ethical issues in E-Commerce.		4	1
	(C) Classify all substitution technique and explain any two with an example.		3	4
	(D) Illustrate types of cyber threats.		3	3

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Seat No.: 123 PRN 13797

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (5) – EXAMINATION –WINTER 2025

Date:04/11/2025

Subject Code: 15-CAM304-3C

Subject Name: SOFTWARE PROJECT MANAGEMENT **Total Marks: 50**

Time: 2 Hrs.

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following MCQs/Short/Definition questions (1 or 2 mark each)	16		
1)	Define PERT chart.	1	1	L1
2)	What is Software Quality?	1	2	L1
3)	What is Software Reliability?	1	2	L1
4)	State the main advantage of Waterfall model.	1	3	L1
5)	What do you understand by the term "Software Life Cycle"?	1	3	L2
6)	Provide full form of RAD model.	1	3	L1
7)	What is the purpose of tracking meetings in project management?	1	1	L2
8)	Define Risk estimation problem.	1	2	L1
9)	What does FURPS stand for?	1	2	L1
10)	What is meant by Software Development Process?	1	3	L1
11)	Define Software Quality Assurance (SQA).	1	2	L1
12)	How does leadership affect team performance?	1	4	L2
13)	What is the role of software development team?	1	4	L2
14)	What is meant by scheduling work in a project?	1	1	L2
15)	What is project duration in planning?	1	1	L1
16)	Define process Tailoring.	1	3	L1
Q. 2	Answer the following long questions. (Any Two)	14		
(A)	Explain the team and leadership in detail with example.	7	4	L2
(B)	Explain definition and software development process in detail.	7	3	L2
(C)	Discuss Software process model: Water Fall model in detail.	7	3	L2
Q. 3	Answer the following long questions. (Any Two)	10		
(A)	Explain Prototyping model in brief with diagram.	5	3	L3
(B)	Describe Schedule work and Escalation meetings in detail.	5	1	L2
(C)	Illustrate communicating in Harmony in detail with example	5	4	L3
Q. 4	Answer the following questions. (Any Two)	10		
(A)	Explain software reviews in detail with example.	5	2	L2
(B)	Describe Format Technical Review (FTR) in detail with example.	5	2	L2
(C)	Discuss Project requirements in brief.	5	1	L2

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Seat No.: _____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER 5 – EXAMINATION – WINTER -2025

Date:07/11/ 2025

Subject Code: 15-CAE305-3C

Subject Name: Web Development using PHP

Total Marks: 50

Time: 2 Hrs.

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	**Answer the Following questions (2 mark each)**	**16**		
1.	What is Web Browser?		1	1
2.	Mention two features of open source software.		1	1
3.	Write a simple PHP script to print "Hello World".		1	3
4.	What is the difference between `include()` and `require()`?		2	2
5.	What is a syntax error?		1	1
6.	What is the difference between GET and POST?		2	2
7.	What is a cookie?		4	1
8.	What is a session?		4	1
Q. 2	**Answer the following long questions. (Any Two)**	**14**		
(A)	Different between Client Side and Server Side Scripting?	7	1	2
(B)	Explain all types of HTML form elements with example?	7	1	2
(C)	Discuss Command with Example: INSERT, SELECT, UPDATE, DELETE	7	5	3
Q. 3	**Answer the following long questions. (Any Two)**	**10**		
(A)	What is Operators in PHP? Explain All Type PHP Operators in Details?	5	2	2
(B)	What is String? Explain Any 10 String Function with Example.	5	2	3
(C)	Advantages of mysqli over mysql.	5	5	2
Q. 4	**Answer the following questions. (Any Two)**	**10**		
(A)	What is Looping Statements? Explain All Types of Looping Statements with Example.	5	2	2
(B)	Pros and Cons of Open Source?	5	1	4
(C)	What is cookie? Explain with example.	5	4	3

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER -5 – EXAMINATION – WINTER 2025

Subject Code: 15-CAM303-3C **Date:01/11/2025**

Subject Name: System Analysis and Design

Time: 3 Hrs. **Total Marks: 100**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	Answer the Following questions (Any Eight)	16		
1.	What is System? List out Characteristics of System.		1	1
2.	Validation Vs. Verification		4	2
3.	State the Element of System.		2	1
4.	What is a fact-finding technique?		3	1
5.	Describe output Consideration.		3	2
6.	Functionality of Data Dictionary.		4	1
7.	Write rules of DFD.		3	1
8.	Write use of HIPO chart.		2	1
9.	What is DFD?		1	1
Q. 2	Answer the following long questions. (Any Three)	21		
(A)	Explain SDLC in Details.		2	3
(B)	Discuss types of system with example.		2	5
(C)	Discuss Fact finding techniques.		3	4
(D)	Describe Decision Table with figure.		3	5
Q. 3	Answer the following long questions. (Any Three)	21		
(A)	Describe Role of System Analysts.		4	3
(B)	What is decision Tree? Explain with figure.		4	4
(C)	Discuss types of output Media with Example.		2	2
(D)	Explain Steps of Data Capture process.		2	1
Q. 4	Answer the following questions. (Any Four)	28		
(A)	Explain type of forms with examples.		2	1
(B)	Differentiate PDFD Vs. LDFD		3	2
(C)	Discuss Symbols of DFD with suitable figure.		4	1
(D)	Explain Types of output with suitable example.		1	2
(E)	Explain Design software.			
Q. 5	Answer the following questions. (Any one)	14		
(A)	Draw DFD for Inventory Management System up to 2nd level		2	1
(B)	Draw DFD for Library Management System up to 2nd level		3	2

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER 5 – EXAMINATION – WINTER-2025

Subject Code: 15-CAM302-3C **Date:29/10/2025**

Subject Name: Advanced Java Programming

Time: 2 Hrs. **Total Marks: 50**

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	**Answer the Following questions (2 mark each)**	**16**		
1.	What is Event Handling?	2	1	1
2.	What is the difference between event source and event listener?	2	1	2
3.	Define: GUI programming	2	2	1
4.	Write a short note on AWT and Swing.	2	2	2
5.	Different between ODBC and JDBC	2	3	2
6.	What is Servlet? List its types	2	4	1
7.	Write syntax of JSP directive and use of page/include/taglib directive.	2	5	2
8.	How many implicit objects are available in JSP? List them	2	5	1
Q. 2	**Answer the following long questions. (Any Two)**	**14**		
(A)	Discuss the Event Delegation Model with diagram	7	1	2
(B)	Demonstrate the working of four GUI components	7	2	3
(C)	Explain the Architecture of J2EE with a diagram.	7	4	3
Q. 3	**Answer the following long questions. (Any Two)**	**10**		
(A)	What is ActionEvent? Write a program that uses ActionListener to handle a button click.	5	1	6
(B)	Explain the life Cycle of a Servlet with a diagram	5	4	2
(C)	Implement any five JSP EL implicit objects with suitable example.	5	5	5
Q. 4	**Answer the following questions. (Any Two)**	**10**		
(A)	Write short note on Cookies in servlet.	5	4	3
(B)	Illustrate the JSP life cycle by drawing its phases and explain with an example JSP program	5	5	3
(C)	Analyze the process of reading HTTP request headers in a Servlet	5	4	4

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (5) – EXAMINATION – WINTER-2025

Subject Code: 2CS1010501 **Date:29/10/ 2025**

Subject Name: Web Development

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

Sem-5 winter Exam 2025

Q. 1	Attempt the Following :			14
	1. What is CTS in .NET Framework?		1	2
	2. Define CLR and its role.		1	4
	3. Differentiate between Windows based and Web based Applications.		2	1
	4. List any four ASP.Net Standard Controls.		3	2
	5. What is the use of Required Field Validator control?		3	1
	6. Write two features of AJAX in ASP.Net.		4	1
	7. Define Client–Server Architecture.		4	4
	8. What is the difference between Front-End and Back-End?		5	1
	9. List any two ADO.NET features.		5	2
	10. What is the use of Report in ASP.Net?			
Q. 2	Answer the following questions.			12
	(A) Explain .NET Framework components: CTS, CLS, CLR, BCL, and Metadata.		1	2
	(B) Explain ASP.Net Application Life Cycle and Page Life Cycle events.		1	2
	OR			
	(A) Discuss ASP.Net Server Control Events with suitable examples.		1	3
	(B) Write a note on IIS Server and its role in ASP.Net.		1	2
Q. 3	Answer the following questions. (Any Two)			12
	(A) Explain Label, Text Box, Button and Hyper Link Controls with example.		2	3
	(B) Discuss List Box, Drop down List and Radio Button List controls with example.		2	3
	(C) Explain File Upload, Image and Panel controls.		2	3
	(D) Describe the use of Checkbox, Checkbox List and Bulleted List controls.		2	3
Q. 4	Answer the following questions. (Any Two)			12
	(A) Explain various Validation Controls in ASP.Net with examples.		3	3
	(B) Discuss Calendar Control, Ad Rotator Control and Multi View Control.		3	3
	(C) Explain Menu, Tree View and Sitemap Path Navigation controls.		3	3
	(D) Write a note on AJAX Technology and its controls (Script Manager, Update Panel, Timer).		3	2
Q. 5	Answer the following questions. (Any Two)			12
	(A) Differentiate between ADO and ADO.NET. Explain its features.		5	4
	(B) Explain ADO.NET Architecture with neat diagram.		5	2
	(C) Explain Connection, Command and Data Reader classes with methods.		5	3
	(D) Write a note on Reports in ASP.Net and explain creating a simple report.		5	3

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (6) – EXAMINATION – SUMMER-2025

Date:08/04/2025

Subject Code: 2CS1010602

Subject Name: Basics of Android Framework

Total Marks: 70

Time: 3 Hrs.

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Answer the following questions.		**20**		
1.	What is android? Which are the Features of android.		1	1
2.	What is Frequency and bandwidth?		1	1
3.	List out Layers of WAP Architecture.		2	1
4.	Full form of UDDI and SOAP.		2	2
5.	Different between Analog and Digital signal		1	1
6.	Benefits of Client-Server Architecture.		2	2
7.	List out Characteristics of Mobile Computing.		4	1
8.	Define GSM and GPRS.		4	1
9.	List out Entities of Mobile IP.		3	1
10.	Define Smart phone.		4	2
Answer the following questions.		**14**		
(A)	Explain Client/Server Architecture.		2	1
(B)	Discuss Wireless LAN in detail.		1	2
	OR			
(A)	Explain Advantages and Disadvantages of Android Operating System.		4	2
(B)	Discuss Features or Characteristics of Web Service.		2	2
Answer the following questions. (Any Two)		**12**		
(A)	Explain Mobile IP in detail.		3	1
(B)	Discuss Messaging services in detail.		4	2
(C)	Explain N-tier Architecture		2	1
Answer the following questions. (Any Two)		**12**		
(A)	Discuss Architecture of Android Operating System in details.		2	1
(B)	What is WAP? Discuss WAP Model and WAP Protocol Stack.		2	1
(C)	Discuss Case Study on Educational Mobile App		4	1
Answer the following questions. (Any Two)		**12**		
(A)	Discuss Web Services in detail.		2	1
(B)	Define Mobile Computing. Discuss Characteristics of Mobile Computing.		4	1
(C)	Discuss Case Study on Healthcare Mobile App.		4	1

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SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (6)– EXAMINATION – SUMMER-2025

Subject Code: 2CS1010601 **Date:07/04/ 2025**

Subject Name: Web Application Development Using Advance Java

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
1	**Do As Directed.**	**20**		
1.	What do you mean by multithreading?		3	1
2.	When deadlock is generated?		3	1
3.	Give the use of Byte Stream class.		3	3
4.	Stat the difference between FileReader class and FileWriter class.		3	2
5.	Which are the various methods of Applet class?		2	1
6.	Write down the use of Color class.		2	3
7.	When text event is generated?		1	1
8.	Define : AWT		1	1
9.	What do you mean by ODBC?		4	1
10.	List out J2EE containers.		4	1
	Attempt Following.	**14**		
A.	Explain the life cycle of Thread.		3	2
B.	How Byte Stream class is used to write into and read bytes from file? Discuss it with example.		3	4
	OR			
A.	Explain the various methods of Applet class with example.		2	2
B.	Demonstrate Action Event and Action Listener with proper Example.		1	3
	Attempt Following. (Any Two)	**12**		
A.	How to create thread using Thread class? Discuss it with proper example.		3	2
B.	How to handle primitive data types using file? Explain with example.			
C.	Explain various methods Graphics class with proper example			
D.	Explain Window Event and Window Listener with proper example.			
	Attempt Following. (Any Two)	**12**		
A.	How to load JDBC driver? Demonstrate it with example		4	3
B.	Illustrate Mouse Event and Mouse Listener		1	4
C.	Discuss the difference between Java application and Java applet.		2	5
D.	Demonstrate the features of Font class in detail.		2	3
	Attempt Following. (Any Two)	**12**		
A.	Demonstrate the features of AWT Button control with example.		1	3
B.	Derive the advantages of multithreading. Also write down the difference between Multithreading and Multitasking.		3	6
C.	Explain event delegation model		1	2
D.	Explain J2EE architecture.		4	2

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Sem-6 Summer

Seat No.: _____ PRN_____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (6)– EXAMINATION – SUMMER-2025

Subject Code: 2CS1010601 **Date:07/04/ 2025**

Subject Name: Web Application Development Using Advance Java

Time: 3 Hrs. **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Do As Directed.		**20**		
1.	What do you mean by multithreading?		3	1
2.	When deadlock is generated?		3	1
3.	Give the use of Byte Stream class.		3	3
4.	Stat the difference between FileReader class and FileWriter class.		3	2
5.	Which are the various methods of Applet class?		2	1
6.	Write down the use of Color class.		2	3
7.	When text event is generated?		1	1
8.	Define : AWT		1	1
9.	What do you mean by ODBC?		4	1
10.	List out J2EE containers.		4	1
Attempt Following.		**14**		
A.	Explain the life cycle of Thread.		3	2
B.	How Byte Stream class is used to write into and read bytes from file? Discuss it with example.		3	4
	OR			
A.	Explain the various methods of Applet class with example.		2	2
B.	Demonstrate Action Event and Action Listener with proper Example.		1	3
Attempt Following. (Any Two)		**12**		
A.	How to create thread using Thread class? Discuss it with proper example.		3	2
B.	How to handle primitive data types using file? Explain with example.		3	2
C.	Explain various methods Graphics class with proper example		2	2
D.	Explain Window Event and Window Listener with proper example.		1	2
Attempt Following. (Any Two)		**12**		
A.	How to load JDBC driver? Demonstrate it with example		4	3
B.	Illustrate Mouse Event and Mouse Listener		1	4
C.	Discuss the difference between Java application and Java applet.		2	5
D.	Demonstrate the features of Font class in detail.		2	3
Attempt Following. (Any Two)		**12**		
A.	Demonstrate the features of AWT Button control with example.		1	3
B.	Derive the advantages of multithreading. Also write down the difference between Multithreading and Multitasking.		3	6
C.	Explain event delegation model		1	2
D.	Explain J2EE architecture.		4	2

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Seat No.: _____ PRN _____

SANKALCHAND PATEL UNIVERSITY

BCA – SEMESTER (6) – EXAMINATION – SUMMER 2025

Date:09/04/ 2025

Subject Code: 2CS1010603

Subject Name: SENSOR TECHNOLOGY-II

Total Marks: 70

Time: 3 Hrs.

Instructions:

1. **Q-1 is Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Question paper is prepared as per the Bloom's Taxonomy Levels 1 to 6.**
5. **L1- Remember, L2 -Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create**
6. **CO: Course Outcomes, BL: Bloom's Taxonomy Levels**

		Marks	CO	BL
Q. 1	**Answer the Following Definition questions (2 mark each)**	**20**		
1.	Define Current and Voltage.	2	1	1
2.	State Ohm's Law with formula.	2	2	2
3.	Draw Motion sensor figure.	2	5	3
4.	Define Ultrasonic Sensor.	2	4	1
5.	What is Temperature and Pressure?	2	3	2
6.	What is Microprocessor?	2	1	6
7.	Which Sensor can detect nearby object?	2	1	1
8.	Full form of PIR motion sensor.	2	1	1
9.	How to Work Analog to Digital Converters.	2	2	3
10.	Define Motion Sensor.	2	1	6
Q. 2	**Answer the following long questions. (Any Three)**	**14**		
(A)	Explain Advantages and dis-advantages of sensor.	7	2	2
(B)	Explain AC/DC Electric Charges in Sensor Technology.	7	2	2
	OR			
(A)	Discuss Rules for Good Sensor.	7	2	4
(B)	Difference Between Light Sensor and Ultrasonic Sensor.	7	5	4
Q. 3	**Answer the following long questions. (Any Three)**	**12**		
(A)	How to Work Bridge Circuits.	6	2	3
(B)	Explain Interface Electronics Circuits.	6	2	2
(C)	What is Capacitance? How it's Work.	6	1	3
(D)	What is Resistance? How it's Work.	6	1	3
Q. 4	**Answer the following questions. (Any Three)**	**12**		
(A)	Explain any Five Types of Sensors with Example.	6	2	2
(B)	Discuss about Features of Sensors Technology.	6	2	4
(C)	What is Data Transmission? Explain Types of Data Transmission.	6	1	2
(D)	Explain Force, Strain, Tactile and Pressure Sensors	6	2	2
Q. 5	**Answer the following questions. (Any Three)**	**12**		
(A)	Explain Nano Technology in Details.	6	2	2
(B)	Explain Types of Position Sensors.	6	2	2
(C)	What is Arduino UNO? Explain Advantages and Disadvantage.	6	1	2
(D)	What is Raspberry Pi? Explain Advantages and Disadvantage.	6	1	2

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