

MAR23-3-3376
B. C. A. Semester-II (New Course) Examination
MARCH-2023
BCA-201 Advance Programming Language 'C'

Total Marks : 70

Time : 2½ Hours

Que. 1(a)	Attempt the following	06
	1. The Parameters used in functions call are _____. 2. Define : Static Variable 3. Define Term : Formal Arguments 4. A function that call itself is known as Which Function ? 5. Local variable is also known as _____. 6. By default function return _____.	
Que. 1(b)	Attempt the following. (Any two)	12
	1. What is Recursion ? Explain with example. 2. What is UDF ? Explain example. 3. Discuss about scope, visibility and lifetime of variables.	
Que. 2(a)	Attempt the following.	05
	1. Structure is a _____ data type. 2. Define Term : Union 3. What is Bit Field ? 4. Difference between structure and Array. 5. Explain scope of variable.	
Que. 2(b)	Attempt the following. (Any two)	12
	1. Difference between structure and Union. 2. Explain Structure within Structure with example. 3. Explain Structure with example.	
Que. 3(a)	Attempt the following.	06
	1. Define : Pointer 2. Define : Scale Factor 3. What is NULL character ? 4. A pointer variable contains as its value the _____ to another variable. 5. The ___ operator returns the value of the variable to which its operand points. 6. An integer can be added to a pointer. (True / False)	
Que. 3(b)	Attempt the following. (Any two)	12
	1. Explain pointers in details. 2. Define pointer as function arguments. 3. Explain string as pointer with example.	
Que. 4(a)	Attempt the following.	05
	1. What is default return type of malloc() 2. Explain Function : Fprint() 3. Explain Function : getw() 4. The function _____ may be used to position a file at the beginning. 5. Explain Function : ftell()	
Que. 4(b)	Attempt the following. (Any three)	12
	1. Write a short note on Command line Argument in detail. 2. Write a short note on Macro. 3. Write a Program with structure and pointers. 4. Write a program to swap value of two integer number using UDF. 5. Write a program to accept 10 numbers and sort them with the use of pointer.	

MAR23-3-3371
B. C. A. Semester-II (Old Course) Examination
MARCH-2023
BCA-201 Advance Programming Language ‘C’

Total Marks : 70

Time : 2½ Hours

Que. 1(a)	Do as directed (Any two)	04
	1. What is External Variable ?	
	2. What is function call ?	
	3. Explain Static Variable.	
Que. 1(b)	Answer the following. (Any two)	08
	1. Describe function with arguments and no return a value with suitable example.	
	2. Explain passing one dimensional arrays to function.	
	3. Describe function that return a multiple values with suitable example.	
Que. 1(c)	Write a program to find factorial of given no using recursion.	05
	OR	
Que. 1(c)	Write a program to find factorial of given no using UDF.	05
Que. 2(a)	Do as directed (Any two)	04
	1. What is bit fields ?	
	2. Explain a size of structure.	
	3. How does a array differ from structure ?	
Que. 2(b)	Answer the following. (Any two)	08
	1. Explain structure within structure.	
	2. Explain Arrays within structure.	
	3. Explain difference between structure and Union.	
Que. 2(c)	Write a program using structure within Function.	06
	OR	
Que. 2(c)	Design a structure student_records to contain Roll_no, Name, City and Percentage obtained. Develop a program to read data for 5 students and Display them.	06
Que. 3(a)	Do as directed (Any Four)	04
	1. What is Pointer ?	
	2. A pointer can be added to a pointer. (T / F)	
	3. The _____ operator returns the value of the variable to which its operand points.	
	4. The only integer that can be assigned to a pointer variable is _____.	
	5. An integer can be arrays to a pointer. (T / F)	
Que. 3(b)	Answer the following. (Any two)	08
	1. Explain pointers to functions.	
	2. Explain advantages of Pointer.	
	3. Write a short note a pointer and function.	
Que. 3(c)	Write a program to accept 10 numbers and sort them with use of pointer.	05
	OR	
Que. 3(c)	Write a program to accept 10 numbers and display its sum using pointer.	05
Que. 4(a)	Do as directed (Any Five)	05
	1. What is malloc ?	
	2. What is free ?	
	3. The mode _____ is used for opening a file for updating.	

4. Explain macro ?
5. A file must be opened before it can be used. (T / F)
6. What is gets().

Que. 4(b) Answer the following. (Any two) 08

1. Write a short note on dynamic memory allocation.
2. Write a short note on command line arguments.
3. Explain fseek(), ftell() and rewind () with suitable example.

Que. 4(c) Write a program using fseek and ftell functions. 05

OR

Que. 4(c) Write a c program to read empin data file which contains empno, empname and basic. To create empout data file as per practical no 23 format. 05

MAR23-3-3377
B. C. A. Semester-II (New Course) Examination
MARCH-2023
BCA-202 Internet & Web Designing

Total Marks : 70

Time : 2½ Hours

Que. 1(a)	Answer the following : 1. What is Internet ? 2. Full form : SMTP, FTP 3. What is E-Commerce ?	06
Que. 1(b)	Explain the following. (Any two) 1. What is computer network ? Explain Advantages of it. 2. Explain all type of Network ? 3. Explain any three Topologies.	12
Que. 2(a)	Answer the following : 1. Give the type of webpage. 2. What is Tag ? List out Empty tag.	05
Que. 2(b)	Explain the following. (Any two) 1. Explain Attribute of body tag with example. 2. Explain <Form> tag with its attribute and example. 3. Explain <Table> tag with its attribute and example.	12
Que. 3(a)	Answer the following : 1. Define syntax of internal style sheet of CSS. 2. What is class ? What is use class in web page ? 3. List out Border property names.	06
Que. 3(b)	Attempt the following. (Any two) 1. Explain font and color attribute in detail. 2. Explain background attribute in detail. 3. Explain three features of style sheet.	12
Que. 4(a)	Answer the following : 1. What is Java Script and variable ? 2. What is use of UDF ? Give example.	05
Que. 4(b)	Attempt following. (Any two) 1. Explain External Javascript in detail. 2. Explain JavaScript loop. 3. Write a program in JavaScript to display factorial of Given number.	12

MAR23-3-3372
B. C. A. Semester-II (Old Course) Examination
MARCH-2023
BCA-202 Internet & Web Designing

Total Marks : 70		Time : 2½ Hours
Que. 1(a)	Do as directed	05
	1. What is Extranet ?	
	2. What is E-commerce ?	
	3. What is WWW ?	
	4. What is URL ?	
	5. List our application area of Internet ?	
Que. 1(b)	Attempt the following questions. (Any two)	12
	1. What is computer network with its network ?	
	2. Explain ISP, Extranet and VPN in details ?	
	3. Explain difference between LAN and MAN ?	
Que. 2(a)	Do as directed	06
	1. What is the use of <MARQUEE> tag with example ?	
	2. What is uploading and downloading ?	
	3. Define cellspacing and cellpadding ?	
Que. 2(b)	Answer the following. (Any two)	12
	1. Explain <TABLE> tag with suitable example ?	
	2. Explain Ordered list and Unordered list ?	
	3. Explain any four formatting tag with suitable example ?	
Que. 3(a)	Do as directed	05
	1. CSS stands for _____.	
	2. What is different between <P> and tag ?	
	3. What is the use of class in web page ?	
	4. List out only border property names ?	
	5. Give the syntax of CSS with example ?	
Que. 3(b)	Answer the following. (Any two)	12
	1. Explain External style sheet with suitable example ?	
	2. Explain font and color attribute in CSS with example ?	
	3. Explain <FORM> tag with suitable example ?	
Que. 4(a)	Do as directed	06
	1. What is java script ?	
	2. What is function ?	
	3. Define rules for variable name in java script ?	
	4. Only list out of all operators which are use in java script ?	
	5. _____ is the extension of external java script ?	
	6. Define extension of CSS ?	
Que. 4(b)	Answer the following. (Any two)	12
	1. What is a control statement ? Explain control statement in details.	
	2. Explain for loop and do..while loop with example ?	
	3. Write a java script code to display factorial of the given numbers.	

Total Marks : 70	Time : 2½ Hours
Que. 1(a)	Define following with example (Any Three) 06
	1. Complement of a set 2. Proper Subset 3. Subset
Que. 1(b)	Solve the following (Any three) 12
	1. State and prove De Morgan's Law for Intersection.
	2. If U = {1, 2, 3, 4, 5, 6, 7, 8, 9}, A = {1, 2, 3, 4, 5}, B= {1, 3, 5, 7} and C={4, 5, 6, 7, 8} then find $(B \Delta C) - A$ and $(A \cap B) \cup C$
	3. If A = {a,b,c,d,e}, B = {b,c,e,f,g} and C = {d,e,f,g,i} then verify $(A \cup B) - C = (A - C) \cup (B - C)$
Que. 2(a)	Define the following with example (Any three) 05
	1. Function.
	2. Composite Function
Que. 2(b)	Attempt any two from the following. 12
	1. If $f(x) = x + 2$, $g(x) = 3x$, $h(x) = 5x^2$, find fogoh(x) and gohof(x)
	2. Let a and b be positive integers and suppose Q is defined recursively as follows :
	$Q(a, b) = \begin{cases} 15 & , \text{ if } a < b \\ Q(a-b, b+2)+a & , \text{ If } a \geq b \end{cases}$
	Find Q(5, 9) and Q(19, 3)
	3. Find the value of the following
	(a) [-8.01] (b) INT(-2.98)
	(c) 25(mod 3) (d) log ₁₁ 121
Que. 3(a)	Define following with example 06
	1. Matrix 2. Transpose of Matrix 3. Null Matrix
Que. 3(b)	Attempt any TWO from the following. 12
	1. if $A = \begin{pmatrix} 1 & 3 & 2 \\ -2 & 0 & 1 \\ -3 & 2 & 1 \end{pmatrix}$ and $B = \begin{pmatrix} 6 & 10 & 3 \\ -1 & 4 & 7 \\ 5 & 2 & 8 \end{pmatrix}$ Then Prove that $(A+B)^T = A^T + B^T$
	2. Find the inverse of matrix : $A = \begin{pmatrix} \cos \theta & \sin \theta & 0 \\ -\sin \theta & \cos \theta & 0 \\ 0 & 0 & 1 \end{pmatrix}$
	3. if $A = \begin{pmatrix} 5 & 4 \\ 3 & -1 \end{pmatrix}$ then prove that $AA^{-1} = I$.
Que. 4(a)	Define the following with example. 05
	1. Arithmetic Progression
	2. Combination
Que. 4(b)	Attempt any TWO from the following. 12
	1. for 25, 23, 21, 19, 17 (find 20 th term)
	2. How many different words can be permuted by using all the letters of the word : COMMITTEE.
	3. find the sum of 5, 9, 13, 17(16 th term)

MAR23-3-3373
B. C. A. Semester-II (Old Course) Examination
MARCH-2023
BCA-203 Discrete Mathematics

Total Marks : 70

Time : 2½ Hours

Que. 1(a)	Define following with example (Any Three)	06
	1. Universal Set 3. Disjoint Set 2. Power Set 4. Complement Set	
Que. 1(b)	Solve the following (Any three)	12
	1. State and prove De Morgan's Law. 2. $1 + 3 + 5 + 7 + \underline{\hspace{1cm}} + (2n - 1) = n^2$ 3. If $A = \{1, 2, 3\}$, $B = \{-1, 0, 1, 2\}$, $C = \{2, 3, 4, 5\}$ then find $A \cup B$, $B \cup C$, $C \cup A$, $A \cup B \cup C$. 4. If $n(A) = 25$, $n(B) = 30$ and $n(A \cup B) = 42$ then find $n(A \cap B)$.	
Que. 2(a)	Define the following with example (Any three)	06
	1. Recursive Function. 2. One-to-One Function 3. Floor Function 4. Function	
Que. 2(b)	Solve the following.	02
	1. $\text{ABS}(-0.008)$ 2. $25 \pmod{3}$ 3. $\text{Log}_{10}0.001$ 4. $\text{INT}(18.3)$	
Que. 2(c)	Solve the following. (Any Two)	09
	1. The function $f : \mathbb{R} \rightarrow \mathbb{R}$ be defined by $f(x) = 5x + 3$. Find the formula for the inverse function $f^{-1} : \mathbb{R} \rightarrow \mathbb{R}$. 2. If $f(x) = x + 2$, $g(x) = 3x$ and $h(x) = 5x^2$ then find $\text{fogoh}(x)$ and $\text{gohof}(x)$. 3. Let $f : \mathbb{R} \rightarrow \mathbb{R}$ and $g : \mathbb{R} \rightarrow \mathbb{R}$, $f(x) = 5x^2 - 2x + 4$, $g(x) = x^3 - 2$ find the formula of $\text{fog}(x)$ and also find $\text{fog}(-2)$.	
Que. 3(a)	Define following with example (Any Three)	06
	1. Transpose of Matrix 3. Identity Matrix 2. Square Matrix 4. Upper Triangular Matrix	
Que. 3(b)	Solve the following. (Any two)	12
	1. Find inverse of $A = \begin{pmatrix} 1 & 3 & 2 \\ -2 & 0 & 1 \\ -3 & 2 & 1 \end{pmatrix}$ 2. Find the value of $2A + 5B - C$ where $A = \begin{pmatrix} 1 & 0 & -2 \\ 3 & 1 & 4 \\ 6 & 3 & 2 \end{pmatrix}$ $B = \begin{pmatrix} -1 & 4 & 5 \\ 3 & 6 & 1 \\ 0 & 0 & 3 \end{pmatrix}$ $C = \begin{pmatrix} 5 & 2 & 3 \\ 1 & 0 & -3 \\ 0 & 4 & -2 \end{pmatrix}$ 3. Find Determinant of following. 1. $A = \begin{pmatrix} 5 & 2 & 3 \\ 1 & 0 & -3 \\ 0 & 4 & -2 \end{pmatrix}$ 2. $B = \begin{pmatrix} 4 & 8 \\ -2 & 4 \end{pmatrix}$	

Que. 4(a)	Solve the following	
1.	For what value of ${}_7P_3 \times {}_8P_4$	02
2.	Define Permutation and Combination.	02
3.	How many different words can be formed using all letter of the word MISSISSIPPI ?	02
Que. 4(b)	Find require term of the following.	04
1.	5, 15, 45, (7 th term)	
2.	5, 8, 11, 14 (16 th term)	
3.	2, 4, 8, 16,(10 th term)	
4.	$5, \frac{13}{2}, 8, \frac{19}{2}, \dots\dots\dots(81^{\text{th}}$ term)	
Que. 4(c)	If ${}_nP_r = 60$ and ${}_nC_r = 10$ then find the value of n and r.	03
Que. 4(d)	In how many ways a four letters can be formed out of 11 letters ?	04

MAR23-3-3379
B. C. A. Semester-II (New Course) Examination
MARCH-2023
BCA-204 System Analysis & Design

Total Marks : 70

Time : 2½ Hours

Que. 1(a)	Attempt any six : 1. Define : System Analysis ? 2. What is End User ? 3. Give full form : SPM 4. What is Sub System ? 5. What is Prototype ? 6. Give full form : SADS 7. Define : Data Dictionary.	06
Que. 1(b)	Answer the following : (Any Two) 1. Describe the various Fact – Finding Techniques in detail. 2. List out the Phases of SDCL and explain the Analysis Phase of SDLC in detail. 3. Explain Types of System in detail.	12
Que. 2(a)	Do as directed : (Any Two) 1. What is Code ? How it is use in system ? 2. Define : Data Validation 3. List out types of output.	05
Que. 2(b)	Answer the following questions : (Any Two) 1. Describe the basic principles of Form Design. 2. Discuss all the components of CASE tools. 3. Explain the Output Media in detail.	12
Que. 3(a)	Do as directed : (Any Two) 1. What is flowchart ? Describe a different Flowchart Symbols and its use. 2. Define : Black-Box Texting 3. What is conversion ? Explain in short. 4. Fill form : (i) VTOC (ii) HIPO	06
Que. 3(b)	Answer the following (Any Two) 1. Explain HIPO Chart with example. 2. What is testing ? Discuss the levels of Testing. 3. What is Documentation ? Explain it in detail.	12
Que. 4.	Draw and discuss the different level of DFDs for “PAYROLL SYSTEM” in detail. OR	17
Que. 4(a)	Do as directed : (Any Two) 1. What is DFD ? List out different symbols used in DFD. 2. Differentiate : Logical DFD vs Physical DFD 3. Define : User Interface	05
Que. 4(b)	Answer the following (Any Two) 1. Explain the Characteristics of system. 2. Write short note on Decision Table 3. Discuss System Prototype Method in detail.	12

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B. C. A. Semester-II (New Course) Examination
MARCH-2023
BCA-204 System Analysis & Design

Total Marks : 70

Time : 2½ Hours

Que. 1(a)	Attempt any six : 1. Define : System Analysis ? 2. What is End User ? 3. Give full form : SPM 4. What is Sub System ? 5. What is Prototype ? 6. Give full form : SADS 7. Define : Data Dictionary.	06
Que. 1(b)	Answer the following : (Any Two) 1. Describe the various Fact – Finding Techniques in detail. 2. List out the Phases of SDCL and explain the Analysis Phase of SDLC in detail. 3. Explain Types of System in detail.	12
Que. 2(a)	Do as directed : (Any Two) 1. What is Code ? How it is use in system ? 2. Define : Data Validation 3. List out types of output.	05
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