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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA

SEM: I - CARRY OVER THEORY EXAMINATION JUNE 2023

Subject: Fundamental of Computers and Programming in C

Time: 3 Hours

Max. Marks: 100

General Instructions:**IMP:** Verify that you have received the question paper with the correct course, code, branch etc.**1.** This Question paper comprises of **three Sections -A, B, & C.** It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.**2.** Maximum marks for each question are indicated on right -hand side of each question.**3.** Illustrate your answers with neat sketches wherever necessary.**4.** Assume suitable data if necessary.**5.** Preferably, write the answers in sequential order.**6.** No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.**SECTION A****20****1. Attempt all parts:-**

- 1-a. Programmers write the programs in which language? (CO1) 1
- (a) Low-level Language
 - (b) High-Level Language
 - (c) Decimal-Format
 - (d) Middle-Level Language
- 1-b. What is the correct syntax to declare a variable in C? (CO1) 1
- (a) Data_type Variable_name;
 - (b) Data_type as Variable_name;
 - (c) Variable_name as Data_type;
 - (d) Variable_name Data_type;
- 1-c. Two different operators would always have different Associativity. (CO2) 1
- (a) Yes
 - (b) No
 - (c) May Be

- (d) Not Clear
- 1-d. Choose a correct statement about a C Switch Construct. (CO2) 1
- (a) Default case is optional inside switch.
 - (b) Break; causes the control to exit the switch immediately and avoid fall down to other CASE statements.
 - (c) You can not use duplicate CASE Constants inside a Switch construct.
 - (d) All the above.
- 1-e. Which of the following is not a storage class specifier in C? (CO3) 1
- (a) Volatile
 - (b) Extern
 - (c) Auto
 - (d) Register
- 1-f. What is the scope of extern class specifier? (CO3) 1
- (a) Within block
 - (b) Within Program
 - (c) Global Multiple files
 - (d) None of the above
- 1-g. Presence of code like "s.t.b = 10" indicates _____ (CO4) 1
- (a) Syntax Error
 - (b) Structure
 - (c) Double data type
 - (d) An ordinary variable name
- 1-h. It is not possible to create an array of pointer to structures. (CO4) 1
- (a) TRUE
 - (b) FALSE
 - (c) May Be
 - (d) Can not Say
- 1-i. Which function is used to delete the allocated memory space? (CO5) 1
- (a) Dealloc()
 - (b) Free()
 - (c) Both
 - (d) None of the above
- 1-j. A mode which is used to open an existing file for both reading and writing 1

____ (CO5)

- (a) "W"
- (b) "W+"
- (c) "R+"
- (d) "A+"

2. Attempt all parts:-

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|------|--|---|
| 2.a. | Draw a flowchart to calculate simple interest. (CO1) | 2 |
| 2.b. | Explain operator precedence in C. (CO2) | 2 |
| 2.c. | Define sub programming concept? (CO3) | 2 |
| 2.d. | Explain puts() function with suitable example. (CO4) | 2 |
| 2.e. | Explain #include function with suitable example? (CO5) | 2 |

SECTION B

30

3. Answer any five of the following:-

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|------|---|---|
| 3-a. | Define flowchart with its symbols and also give one example. (CO1) | 6 |
| 3-b. | Explain error. Write down any two errors with example.(CO1) | 6 |
| 3-c. | Demonstrate how can we pass an array in function as a parameter. (CO2) | 6 |
| 3-d. | Differentiate between conditional and looping statement in C. (CO2) | 6 |
| 3.e. | Define Function prototyping. Differentiate between formal and actual parameter. (CO3) | 6 |
| 3.f. | Describe how to initialize a string and how to access a string using a loop. (CO4) | 6 |
| 3.g. | Define Macro in C with the help of suitable example. (CO5) | 6 |

SECTION C

50

4. Answer any one of the following:-

- | | | |
|------|--|----|
| 4-a. | Write down the steps of transition from algorithm to program with the help of suitable example (CO1) | 10 |
| 4-b. | Explain the flow of execution process of "C" program. (CO1) | 10 |

5. Answer any one of the following:-

- | | | |
|------|---|----|
| 5-a. | Describe nesting of following control statements with example: 1. While loop 2. For loop. (CO2) | 10 |
| 5-b. | Explain following operator: 1. logical operator 2. sizeof() operator 3. reference & dereference operator 4. ternary operator. (CO2) | 10 |

6. Answer any one of the following:-

- 6-a. Explain function and its types with suitable example.(CO3) 10
- 6-b. Explain pointer with suitable example. Describe referencing and dereferencing (CO3) 10

7. Answer any one of the following:-

- 7-a. Write a program in C to count total number of alphabets, digits and special characters in a string. (CO4) 10
- 7-b. Write a program in C to store information of 3 students using structure. (CO4) 10

8. Answer any one of the following:-

- 8-a. Explain different categories of pre-processor directives used in C. (CO5) 10
- 8-b. Write a program to append the contents of stored file. (CO5) 10

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