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Sardar Patel University  
 M. Sc. Information Technology (Integrated) Examination  
 Semester: - I (CBCS) (NC)  
 PS01CIIT03: Problem Solving Methodology and Programming in 'C'  
 27<sup>th</sup> April, Monday, 2015

Time: 10:30am to 01:30pm

Total Marks: 70

Q-1 Select an appropriate option. 10

1. \_\_\_\_\_ is a step by step approach to solve any problem.  
 (a) Process (b) Programming Language (c) Algorithm (d) Compiler
2. \_\_\_\_\_ is a pictorial representation of an algorithm.  
 (a) Data Diagram (b) Flow Chart (c) Pie Chart (d) Program
3. What is the standard decision symbol for a flowchart?  
 (a) circle (b) lozenge (c) diamond (d) square
4. In which section consists of Header files?  
 (a) Main() (b) Definition (c) Documentation (d) Link Section
5. The range of int data type is \_\_\_\_\_ bytes.  
 (a) 2 (b) 4 (c) 8 (d) 16
6. \_\_\_\_\_ format specifier used for integer data type.  
 (a) %d (b) %f (c) %c (d) %e
7. For Initialization of array list of value separated by \_\_\_\_\_.  
 (a) Question marks.( ? ) (b) Commas ( , )  
 (c) Exclamatory marks (!) (d) None of these
8. '\0' is \_\_\_\_\_.  
 (a) Null Character (b) Character value  
 (c) Escape sequence (d) Symbolic Constant
9. \_\_\_\_\_ is use to print the double quote in the string.  
 (a) Back slash (b) Forward slash  
 (c) Tab (d) None of these
10. The function putchar ( ) requires \_\_\_\_\_ parameter.  
 (a) One (b) Two (c) Three (d) Four

Q-2 Answer the following questions. (Any **TEN**) 20

1. What is an algorithm? List Characteristics of an algorithm.
2. What is flowchart? List Symbols used in flowchart.
3. List Rules to draw flow chart.

4. Explain ternary operator with example.
5. Explain short hand operator in brief.
6. Write difference between pre-increment and post- increment operator.
7. Explain break and continue statement in C.
8. Write difference between exit and entry controlled loop.
9. Explain the pow ( ) function.
10. What is string? List out the operation perform on the string.
11. What is user – defined function? Give one example of user define function.
12. Write the advantages of function.

Q-3

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|-----|---|----|
| (a) | Write advantages and disadvantages of an algorithm. | 05 |
| (b) | Write advantages and disadvantages of flowchart.    | 05 |

**OR**

Q-3

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|-----|--|----|
| (a) | Write difference between Interpreter and Compiler. | 05 |
| (b) | Write a note on Language Generation.               | 05 |

Q-4

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|-----|---|----|
| (a) | Explain Basic Structure of C program.                       | 05 |
| (b) | What is operator? Explain different operators with example. | 05 |

**OR**

Q-4

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|-----|---|----|
| (a) | Explain switch statement with syntax and example. | 05 |
| (b) | Explain input and output statement with example.  | 05 |

Q-5

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|-----|--|----|
| (a) | Write difference between do-while, while and for loop.                             | 05 |
| (b) | Define array? Also explain declaration of 1D and 2D array with syntax and example. | 05 |

**OR**

Q-5

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|-----|---|----|
| (a) | Explain gets() and puts() function with syntax and example.   | 05 |
| (b) | Explain following function with syntax and example.<br>(i) abs ( ) (ii) isalpha ( ) (iii) clrscr ( ) (iv) isupper ( ) | 05 |

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| Q-6 | Define function. Explain function definition with syntax. Also explain formal parameter and actual parameter with examples. | 10 |
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**OR**

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|-----|--|----|
| Q-6 | Explain the following categories of function with example.<br>(i) no argument & no return value (ii) with argument & no return value<br>(iii) no argument & with return value (iv) with argument & with return value | 10 |
|-----|--|----|

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