

(i) Printed Pages: 3 Roll No.

(ii) Questions : 9 Sub. Code :

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Exam. Code :

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Bachelor of Computer Application (FYUP) 1st Semester
(2124)

PROBLEM SOLVING THROUGH C

Paper—BCA103

Time Allowed : Three Hours] [Maximum Marks : 45

Note :—Attempt **FIVE** questions in all, selecting **ONE** question each from Units I to IV. Unit V is compulsory.

UNIT—I

1. (a) What is an Algorithm ? Write an algorithm to find all the students who have got less than 60% marks in class 5. Take the marks in various subjects as input. 5
- (b) What is the structure of a C program ? What do you understand by compilation and execution of a program ? 4
2. (a) What are various data types supported in C ? What are the rules to name variables ? 5
- (b) Discuss arithmetic, logical and relational operators with the help of examples. 4

UNIT—II

3. (a) How to use else_if ladder in a program ? Explain the help of example code. 5
- (b) Explain while, do_while and for loops and give differences between them. Give examples. 4
4. (a) Define a function to check whether given number is prime or not. Use this function in a program to print all the prime numbers between 1 and 100. 5
- (b) Explain storage classes in C. 4

UNIT—III

5. (a) Write a program to find 2nd maximum element in an array. 5
- (b) How to pass 2-dimensional array to a function ? Explain with the help of example program. 4
6. (a) Write a program to find maximum element in each row in a two dimensional array. 5
- (b) Discuss pointer to an array and array of pointers with the help of suitable example code. 4

UNIT—IV

7. How to declare and initialize string variables ? Discuss any four string handling functions with the help of syntax and examples. 9
8. How to declare, initialize and use structures in a program ? Explain with the help of example program. Discuss the concept of nested structures as well. 9

UNIT—V

- (a) Explain keywords and constants with the help of suitable examples. 2
- (b) What is the use of goto statement in a program ? Give example. 2
- (c) What is the use of address operator and indirection operator ? 2
- (d) What is a Union ? How is it different from a structure ? 2
- (e) What is the use of *break* statement in a program ? 1