## Bachelor of Arts (FYUP) 2nd Semester

### (2055)

## COMPUTER SCIENCE

### Paper : Programming in C

**Time Allowed : Three Hours]**  **[Maximum Marks : 45**

**Note :—** Attempt **one** question each from Sections A, B, C and D. Question No. 9 (Section E) is compulsory question.

## SECTION—A

1.  What do you understand by constants and variables in C language ? Discuss rules for constructing Constants and Variables in detail. 9

2.  What are various types of operators in C language ? Discuss each in detail. 9

## SECTION—B

3.  What are various loop control statements in C language ? Discuss structure of each. Write a program in C language to find sum of first N prime numbers. 9

4.  What are various methods of passing the parameters to functions ? Discuss each with example of a program in C language to print factorial of a given number. 9

# SECTION—C

5. Consider the following statements and indicate which of them is/are correct ? Also give example to prove your answer :

   (i) Comparing two pointers is a valid operation.

   (ii) Adding a pointer with a positive or negative number is a valid operation.

   (iii) Adding two pointers is a valid operation.                    9

6. Discuss the differences between a one-dimensional array and a two-dimensional array in C language. Write a program in C language to multiply two matrices.                    9

# SECTION—D

7. What are differences between character array and strings ? Discus the meaning and working of any four string handling functions with example.                    9

8. What is a structure variable ? Write a structure specification in C language called "cricketer" that has the following information :

   *Player name, age, team name, batting average and bowling average.*

   Now write a program in C language to enter data for 11 players and calculate average age of players.                    9

# SECTION—E

## (Compulsory Question)

9.  (a)  Write a short note on Testing and Debugging.        2

    (b)  What are rules of using Switch statement ?        2

    (c)  Write a short note on Array of Pointers.        2

    (d)  Write a short note on Register storage class in C language.        3