

**KURUKSHETRA UNIVERSITY KURUKSHETRA**

**Course: B.Sc. (Hons) IT**

**Semester-IV**

**Paper Code: BSIT -406**

**Nomenclature:- Computer Programming with C – II**

**Max. Marks: 40+10**

**Time: 3hrs.**

**Unit-I**

**Preprocessor Directives:** The Preprocessor, File inclusion directives, Macro substitution directives, compiler control directives, other directives.

**Strings:** Strings and String functions. String I/O functions: gets(), puts().

**Unit-II**

**Functions:** Creating & Using Functions in programs, return statement, Formal & Actual Arguments, Local & Global Variables, Call by value & Call by Reference, Passing arrays to functions, Recursion, command line arguments, Programming examples using functions.

**Unit-III**

**Pointer:** Introduction to Pointers, Pointer Variables, Pointer Operators, Pointer Expressions, Pointers and Arrays. User Defined Data types: Structures, Array of structures, passing Structures to functions, Structure and Pointers, Unions, Enumerated data types, typedef.

**Unit-IV**

**Storage Classes:** auto, extern, register and static Storage classes.

**Files:** Opening and Closing a Data File, File Pointers, Creating a Data File, Processing a Data File, Reading and writing to text and binary files.

**Reference Books:**

- 1 Programming with C, Tata McGraw Hill, by Byron Gottfried.
- 2 Let Us C, BPB publications, by Yashwant Kanetkar.
- 3 C The Complete Reference, Tata McGraw Hill, by Herbert Schildt.
- 4 Programming in ANSI C, Tata McGraw Hill, by E. Balagurusamy.

**Note:**

1. Syllabus in each Theory Paper is divided in 4 units.
  - I. A Student is required to attempt 5 questions in all.
  - II. Question No 1 is compulsory, consisting of short answer type questions based on all the 4 units.
  - III. Two questions will be set from each unit. A student is required to attempt one question from each unit.
  - IV. All questions carry equal marks.
2. Use of simple calculator is permissible.
3. Instructions should be imparted using SI system of units. Familiarity with CGS system of units should also be ensured.
4. Distribution of Marks: 40+10.

\* Each theory question paper will be of 40 marks of 3 hours duration and 10 marks in each theory paper are to be awarded through internal assessment in each semester.