

I B. Tech I Semester Supplementary Examinations, Nov/Dec - 2017
C PROGRAMMING
 (Com. to All Branches)

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions
 All Questions carry **Equal** Marks
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1. a) Define a variable and a constant. How a variable is different from a constant? Explain various types of constants in C. (5M)
- b) Explain different steps in creating and running a C program. (4M)
- c) Illustrate pre - increment and decrement, post - increment and decrement operators with examples. (6M)
2. a) Discuss about various bitwise operators with examples. (7M)
- b) What are the advantages of switch statement over if-else statement? Give the syntax of these statements and explain. (4M)
- c) Write a program to swap the integer values between two variables using bitwise operators. (4M)
3. a) Write a C program to check whether given string is palindrome or not without using string handling functions. (5M)
- b) Give a comparison between the statements for, while and do-while loops. (5M)
- c) What is a string? How to initialize a string? Explain about various string handling functions. (5M)
4. a) What is an array? Explain about initialization, accessing, and printing the array elements. (8M)
- b) Write a C program to multiply two given matrices. (7M)
5. a) Describe categories of functions based on arguments and return type. (7M)
- b) Explain the following terms: (8M)  
 (i) User defined functions (ii) library functions (iii) header files (iv) C pre-processor
6. a) What is dynamic memory allocation? Explain different dynamic memory management functions available in C. (6M)
- b) What is a pointer? Explain how the pointer variable declared and initialized. (4M)
- c) Give the usage of command line arguments with example. (5M)
7. a) How to declare and access elements of a union in C? Explain with an example. (5M)
- b) What is a nested structure? When is it useful? Give its syntax. (5M)
- c) Briefly discuss about self referential structures with example. (5M)
8. Explain about the following functions: (i) fopen() (ii) fclose() (iii) fread() (iv) fwrite() (v) rewind() (vi) fprintf() (vii) fscanf() (viii) feof(). (15M)