Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov/Dec – 2018**

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| **Code : 18EI3020** |  | **Duration :** | **3hrs** |
| **Sub. Name : ADVANCED COURSE IN EMBEDDED C** |  | **Max. marks :** | **100** |

**ANSWER ANY FIVE QUESTIONS (5 x 16 = 80 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Create C program to find the factorial of a number. | CO1 | 8 |
| b. | Develop C program to print the following pattern  A  B B  C C C  D D D D  E E E E E | CO1 | 8 |
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| 2. | a. | Distinguish between user defined functions and standard library functions. | CO2 | 8 |
| b. | **Create C program to pass an array containing age of person to a function such that the function should find average age and display the average age in main function.** | CO2 | 8 |
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| 3. | a. | Develop C programming to store the information like Name, Roll Number and marks of 10 students using structures. | CO3 | 8 |
| b. | Find the largest element of 10 numbers using Dynamic Memory Allocation in C. | CO3 | 8 |
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| 4. | a. | **Justify the significance of pointer, write program to swap two numbers in cyclic order** using pointers. | CO4 | 8 |
| b. | What are dynamic memory management? Discuss various library functions defined for dynamic memory allocation. | CO4 | 8 |
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| 5. | a. | What is a preprocessor? Discuss various operators in C preprocessor | CO5 | 8 |
| b. | Outline the need of file handling system in c and develop a program to find the Size of any File. | CO5 | 8 |
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| 6. | a. | Discuss various data types in C. | CO1 | 8 |
| b. | Discuss various types of decision making statement in C programming. | CO1 | 8 |
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| 7. | a. | Summarize the significance of array in C and write a program to access element of an array in C. | CO2 | 8 |
| b. | Elaborate how to pass an entire array to a function as an argument with example. | CO2 | 8 |
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| **COMPULSORY QUESTION (1 x 20 = 20 Marks)** | | | | |
| 8. | a. | Create Embedded C program to interface seven segment display with controller. | CO6 | 10 |
| b. | Discuss various Embedded Systems Software Development Tools. | CO6 | 10 |