

Code No: **RT41191****R13****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February/March - 2018****SYSTEMS PROGRAMMING****(Electronics and Computer Engineering)****Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B************PART-A (22 Marks)**

1. a) Define language processor? Explain why is it used? [4]
- b) State and explain any three looping statements in assembly language? [3]
- c) How the Assembler gives Program Relocation Information to the Loader? [4]
- d) Give an example to show to generate unique labels in macros? [4]
- e) State and explain the basic functions of a loader? [4]
- f) State and explain the use of debug monitor? [3]

PART-B (3x16 = 48 Marks)

2. a) Explain the Lexical analysis phase of a language processor? [6]
- b) Discuss briefly about pass 2 of a compiler in detail? [10]
3. a) Write an assembly language code to find the factorial of a given number? [10]
- b) Write an assembly code to find greatest of a given numbers? [6]
4. a) Explain the data structures used by Two pass assembler? [8]
- b) Describe how the program blocks are assembled? [8]
5. a) Explain in detail the expansion processing of nested macro calls? [8]
- b) List the data structures used by a macro processor? Explain. [8]
6. a) With an example program explain how linking and loading is done by a loader? [8]
- b) Explain the design of machine independent loaders? [8]
7. a) Explain in detail about the concept of interactive debugging system? [8]
- b) What are the phases in editing process? Explain [8]