Registration No :

Total Number of Page : 01   **B.Tech.**
PCCS4203

4th Semester Back Examination 2017-18
SYSTEM PROGRAMMING
BRANCH : CSE, IT, ITE
Time : 3 Hours
Max Marks : 70
Q.CODE : C1138
Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.

Q1   **Answer the following questions :**   **(2 x 10)**

  a) What are the features of System Programming?

  b) Represent the number 357 using packed decimal format.

  c) Differentiate between pseudo op and machine op.

  d) What is the function of two pass assembler?

  e) Differentiate between controlled storage and based storage.

  f) What are terminals and non terminals of a grammer?

  g) List out advantages and disadvantages of absolute loader.

  h) Define look ahead operator.

  i) Explain the role of macro processor.

  j) What is the difference between parse tree and syntax tree?

Q2 **a)** Explain lexical analysis of a language processor.   **(5)**
     b) Explain left recursion and left factoring with suitable example.   **(5)**

Q3 **a)** Write algorithm for operator precedence parsing and explain with example.   **(5)**
     b) Explain Design of Macro Preprocessor.   **(5)**

Q4 **a)** Explain assembly scheme with suitable example   **(5)**
     b) Explain dynamic linking. Draw the flaw chart for dynamic linking.   **(5)**

Q5 **a)** Explain linking and loading in MS DOS   **(5)**
     b) Define forward references. How it can be solved using back-patching? Explain with example.   **(5)**

Q6 **a)** Explain design of a linker by addressing issues of relocation and linking   **(5)**
     b) Explain various phases of compiler in detail.   **(5)**

Q7   Describe different code optimization techniques.   **(10)**

Q8   **Write short answer on any TWO :**   **(5 x 2)**
  a) Recursive descent parsing algorithm
  b) MS-DOS Linker
  c) Dynamic debugging
  d) YACC