Class   B.Tech.   Subject   System Programming   Semester   4th

Max Marks   60   Subject Code   BTCS-405   Time   3 hrs

Note : Attempt four question from section B and two from section C. Section A ic compulsory

Section A

1(i) What is a macro processor

ii)What is difference between line editor and text editor

iii)   What is the page map table

iv) What is a token in lexical analysis

v) what is the difference between system call and library routines

vi). What is a look ahead operator

vii) What is dynamic binding

viii) What is linking. At what point of execution it is performed

ix) How compiler is different from assembler

x) What is a multi window editor

Section B

1. BITS IN MEMORY MAY REPRESENT DATA OR INSTRUCTIONS. HOW DOES THE PROCESSOR KNOW WHEATHER A GIVEN LOCATION REPRESENT AN INSTRUCTION OR A PIECE OF DATA

2) EXPLAIN THE SEQUENCE OF HARDWARE OPERATION PERFORMED WITHIN THE INSTRUCTION INTERPRETOR FOR THE ADD INSTRUCTION

3. WHAT ARE THE VARIOUS FUNCTIONS OF LOADER

4. WHAT FEATURES OF ASSEMBLY LANGUAGE REQUIRES US TO BUILT A TWO PASS ASSEMBLER

5) FOR THE FOLLOWING PROGRAM SHOW THE MDT TABLE AFTER MACRO PROCESSING

```
     MACRO
     XYZ     &A
     ST     1.&A
     MEND
     MACRO
     MIT    &Z
     MACRO
     &Z     &W
     AR     4.&W
     XYZ    ALL
     MEND
     ST     &Z,ALL
     MEND
  PROG START
     USING   *.15
     MIT     HELLO
     ST     2,3
     HELLO   YALE
  YALE EQU    5
  ALL  DC     F'3'
     END
```

Section C

1. EXPLAIN THE STRUCTURE OF A COMPILER BY TAKING EXAMPLE FROM A LANGUAGE OF YOUR CHOICE.

2) AT WHAT POINT OF TIME DO EACH OF THE FOLLOWING LOADER SCHEME PERFORM BINDING
   BSS LOADER
   DIRECT LINKING LOADING
   ABSOLUTE LOADER
   DYNAMIC BINDER
   DYNAMIC LINKING LOADING
   OVERLAY
   LINKING EDITOR

3 WHAT ARE THE VARIOUS DATA BASES REQUIRED IN A TWO PASS ASSEMBLER. EXPLAIN THE FORMAT OF EACH OF THEM.

——————— End ———————