Roll No. | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CSE)/(IT) (2011 Onwards) (Sem.–4)

SYSTEM PROGRAMMING

Subject Code : BTCS-405

Paper ID : [A1187]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. **Write briefly :**
   1. Describe the function of each of the RLD, ESD, card.
   2. What is a device driver?
   3. Give example of a language which uses more than one pass for compiling a program.
   4. What is boot strapping?
   5. What are the various register available in computer?
   6. List advantage and disadvantages of binding at load time over binding at assembly time.
   7. What is a look ahead operator?
   8. What is Dynamic binding?
   9. What is Code optimization?
   10. What is Macro expansion?

SECTION-B

2. What is the difference between (processor, procedure); (procedure, program); (processor, I/O channel); (multiprocessing, multiprogramming); and (open subroutine, closed subroutine)
3. Explain the sequence of hardware operation performed within the instruction interpretor for the add instruction.

4. What are the different components of System software and Application software? Explain the difference between the two.

5. What features of assembly language required us to build a two pass assembler?

6. Explain the following address constants with examples :

   1) absolute

   2) simple relocatable

   3) complex relocatable

SECTION-C

7. Explain the two pass macroprocessor with the help of flowchart.

8. 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.
```

9. Explain the structure of a compiler by taking example from a language of your choice.