T. E. (Computer) – VI
S. P. C. C.

12/5/2015

QP Code : **5061**

(3 Hours) [Total Marks : 80

N.B. 1. Q.1 is Compulsory.
    2. Solve any THREE from Q.2 to Q.6
    3. Assume suitable data whenever necessary, with justification.

Q.1 A) Differentiate between application program and system program.   5
    B) State the reason for assembler to be multipass program.   5
    C) Explain Functions of loader.   5
    D) What is flow graph? State its significance in code generation.   5

Q.2 (A) For following code what will be output generated by Pass-I and Pass-II for two pass   10
    assembler. Explain with database.

ABC	Start	0
	USING	*,15
	L	1,FIVE
	A	1,FOUR
	ST	1,TEMP
FOUR	DC	F'4'
FIVE	DC	F'5'
TEMP	DS	1F
	END	

  (B) Explain operator precedence parser along with example.   10

Q.3 (A) Generate three address code for following code.   10

    While (a<b)   do
      If (c<d)   then
          x=y+2
      else
          x=y-2

  (B) Discus with example quadruple, triple and indirect triple.   10

Q.4 (A) Construct predictive parsing table for following grammar.   10
    S→ A
    A→ aB| Ad
    B→ bBC | f
    C→ g

  (B) Explain loop optimization with example.   10

Q.5 (A) What are different issues in code Generation, expalin in detail,   10
    (B) Explain run time storage organization in details.   10

Q. 6 Write short notes   20
    (A) Code motion
    (B) LEX and YACC
    (C) Software tools
    (D) Left recursion and left factoring removal technique