

Total No. of Questions : 4]

SEAT No. :

PC-27

[Total No. of Pages : 2

[6360]-27

T.E. (Computer Engineering) (Insem)
SYSTEMS PROGRAMMING AND OPERATING SYSTEM
(2019 Pattern) (Semester - I) (310243)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) *Answer Q1 or Q2, Q3 or Q4.*
- 2) *Neat Diagrams must be drawn wherever necessary.*
- 3) *Figure to the right indicate full marks.*
- 4) *Assume suitable data if necessary.*

Q1) a) Draw and explain flowchart of pass I of two pass assembler with example. **[8]**

- b) Differentiate : **[7]**
- i) Literal and Immediate operand.
 - ii) Assembler and Compiler

OR

Q2) a) Consider following Assembly code and show output of pass-I of two pass Assembler with entries in Mnemonic Opcode Table, Pseudo Opcode Table, Symbol Table, Literal Table and Pool Table. **[8]**

```
PROG START 50
USING PROG+2, 15
L1, FIVE
AL, = F '2'
LTORG
ST 1, RES
FIVE DC F '4'
RES DS F '4'
RES DS IF
END
```

- b) Enlist and explain necessity of different data structures used in Pass-I of two pass Assembler? **[7]**

P.T.O.

- Q3)** a) Explain the Phases of Compiler and their output with an example. [8]
b) Define macro. What are the advantages of macro facility? How they are different from function. [7]

OR

- Q4)** a) What is the use of AIF and AGO pseudo-op in macro? Explain macro expansion with positional parameter with the help of suitable example. [8]
b) Explain the concept of single pass Macro processor with example. Give example for macro calls within the macro. [7]
