

Total No. of Questions : 4]

SEAT No. :

P-5027

[Total No. of Pages : 2

[6187]-427

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

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) *Attempt Q.No. 1 or Q.No. 2, and Q.No. 3 or Q.No. 4.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data, if necessary.*

Q1) a) What is purpose of Assembler pass 1? Draw and explain overview of Assembler pass 1 flow chart [8]

b) Compare system softwares with Application softwares? Explain benefits of Assembly Language. [7]

OR

Q2) a) Discuss need of intermediate code of assembly program. Generate intermediate code for an assembly language program given in Question 2b using any one variant of intermediate code. [8]

b) Explain the output of pass-I of two pass Assembler with respect to the given program: [7]

```
START      600
READ A
READ B
LOOP  MOVER  AREG, A
      MOVER  CREG, B
      SUB AREG,='1'
      BC  GT,LOOP
      STOP
A      DS   1
B      DS   2
      END
```

P.T.O.

Q3) a) What is Macro? Explain Macro definition, Macro Call and Macro Expansion with an example. [8]

b) Differentiate [7]

i) Macro and subroutine

ii) Compiler and Interpreter

OR

Q4) a) Explain various phases of the Compiler for the expression $x = I + R * 60$ where the data type of R is float. [8]

b) Explain briefly the algorithm of pass 1 of two pass macro processor?[7]

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