

Total No. of Questions : 12]

SEAT No. : 

P1386

[Total No. of Pages : 3

[4858] - 147

T.E. (E &amp; TC) (Semester - II)

System Programming and Operating System  
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 100

*Instructions to the candidates:*

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Assume suitable data, if necessary.*

**SECTION - I**

- Q1)** a) Define Language Processor Also explain various language processing tools. [8]
- b) Enlist different types of errors that are handled by PASS I and PASS II of a two pass assembler [4]
- c) Explain LEX & YACC. [4]

OR

- Q2)** a) Explain different phases of language processing. [4]
- b) Explain top down parsing in detail. What type of grammar is required by this parser. [6]
- c) Describe the different phases of compiler in detail. [6]

- Q3)** a) What are different language processing activities & explain in detail. [6]
- b) Draw a neat flowchart for macro-processor to handle nested macro definitions. [5]
- c) Compare compilers and Interpreters. [5]

OR

**P.T.O.**

- Q4)** a) What are the advantages and disadvantages of single pass compilers. [8]
- b) Explain the terms. [8]
- i) Macro definition.
  - ii) Macro call
  - iii) Macro Expansion
  - iv) Nested Macro calls

- Q5)** a) Write a note on MS-DOS linker. [8]
- b) Explain the five different types of editor with their applications? [10]

OR

- Q6)** a) What is a Linker? In case of a Direct Linking Loader, what is the information required to be passed by a translator to the loader. [8]
- b) Explain the design of an absolute loader. [10]

### SECTION - II

- Q7)** a) What is Process? Explain various states of process with state diagram for five state process model. [8]
- b) What is Operating System? Explain any three types of Operating system. [8]

OR

- Q8)** a) What is scheduling? What are different types of scheduling? Explain any one in detail. [8]
- b) What is deadlock? Explain Bankers algorithm for dead lock avoidance with suitable example. [8]

- Q9)** a) Explain Paging with Address Translation Mechanism. [8]
- b) Given the memory partitions of size 100k, 500k, 200k, 300k, 600k (in order). How would each of First Fit, Best Fit, Worst Fit algorithms place the process of 212k, 417k, 112k and 426k? Which algorithm makes most efficient of memory. [8]

OR

- Q10)** a) List various page replacement algorithms. Explain any one with example. [8]
- b) Explain Virtual Memory management with suitable diagram. [8]

**Q11)** Write short notes on : [18]

- a) File Operations.
- b) Graphical User Interface.
- c) Network Terminal.

OR

**Q12)** Write short notes on : [18]

- a) Directory Structure. www.sppuonline.com
- b) Secondary Storage Management.
- c) Clock Software.

