Total No. of Questions : 8]

P1311

SEAT No. :

[Total No. of Pages : 2

[4858] - 1041

T.E. (E&Tc) (End Semester)

SYSTEM PROGRAMMING & OPERATING SYSTEMS

(2012 Pattern)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Assume suitable data if necessary.***

Q1) a) Describe the design of Pass 1 of two pass assembler. **[7]**

b) Mention different data structures used for language processing. Explain any one data structure in detail. **[7]**

c) What do you mean by translated origin, linked origin and load origin? Explain with examples. **[6]**

OR

Q2) a) Explain the advance macro facilities **[7]**

i) Alteration of flow of control during expansion

ii) Expansion time variables

iii) Attributes of parameters

b) What are loaders? List the different type of loader schemes. Explain Compile and Go-loader scheme. **[7]**

c) Explain the different phases of language processing. **[6]**

Q3) a) What is CPU scheduling? Explain 2 different scheduling algorithms with examples. **[6]**

b) State the conditions for deadlock. **[6]**

c) Explain process and threads in detail. **[6]**

P.T.O.

OR

Q4) a) Write short notes on: **[6]**

i) System Call

ii) Inter process communication

b) Banker's algorithm is used for Deadlock avoidance. Explain. **[6]**

c) What is Real time operating system? Compare hard Real time system and Soft real time system. **[6]**

Q5) a) Explain the difference between Internal and External fragmentation. Which one occurs in paging systems? **[6]**

b) Explain in brief the memory allocation algorithms with examples. **[6]**

c) List the page replacement algorithms and explain any one. **[4]**

OR

Q6) a) Explain demand paging. Also explain hardware support required to support demand paging. **[6]**

b) Explain differents methods/ways in which memory allocation can be done. **[6]**

c) Explain the concept of segmentation. **[4]**

Q7) a) Write short notes on: **[6]**

i) Directory structure

ii) File management system

b) Explain Linux Ext 3 file system with diagram. **[6]**

c) Write short note on RAID disk. **[4]**

OR

Q8) a) Write short note on file management under UNIX. **[6]**

b) Explain file directories and directory operations. **[6]**

c) Explain various file operations. **[4]**