Total No. of Questions : 12] [Total No. of Pages : 2

P1080

[4066] - 301

S.Y. M.C.A. (Engineering Faculty)

OPERATING SYSTEMS

(2008 Pattern) (Sem. - III) (610901)

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

Instructions to the candidates:-

1) ***Answer any three questions from each section.***
2) ***Answers to the two sections should be written in separate answer books.***
3) ***Neat diagrams must be drawn wherever necessary***
4) ***Figures to the right indicate full marks.***
5) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) What is the use of stack in Macro-Processor? Give Example. **[6]**

b) Explain the components of system software in detail. **[6]**

OR

Q2) a) What features of assembly language makes it mandatory to design a two pass assembler? Explain with suitable example. **[6]**

b) State various activities of language processing. **[6]**

Q3) a) Explain the relocating loader with its advantages and disadvantages. **[6]**

b) Compare top-down and bottom-up parser. **[6]**

OR

Q4) a) List various phases of compiler. Explain optimization in detail. **[6]**

b) Define the following terms. **[6]**

i) Cross compiler

ii) Optimizing compiler

iii) Bootstrap compiler

P.T.O.

Q5) a) Explain the following [5]

i) Real Time operating system

ii) Time sharing operating system.

b) What is process? What is process control block(PCB)? Explain in detail [6]

OR

Q6) a) Write algorithm for non-preemptive priority job scheduling algorithm. [6]

b) Comment on "one can view the operating system as resource allocator". [5]

SECTION - II

Q7) a) Explain the following term: [4]

i) Fixed partitioned allocation

ii) Variable partitioned allocation

b) What is paging? Explain any two page replacement algorithm. [8]

OR

Q8) a) Explain the concept of segmentation? What is paged segmentation? What are different types of segment? [6]

b) What is difference between paging and segmentation. [6]

Q9) a) List the contents of file directory entry. [4]

b) What are the different issues related to disk performance? Explain any one disk scheduling algorithm with suitable example. [8]

OR

Q10) a) What are the advantages and disadvantages of C-SCAN scheduling algorithm? [6]

b) Explain two level and tree structured directory. [6]

Q11) a) Draw and explain the basic structure of Linux file system. [5]

b) State and explain fork, wait, exec process management system calls. [6]

OR

Q12) a) What are the components of Linux operating system? Explain. [6]

b) Explain Inode assignment to new file [5]

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