

[4066] - 301

P1080

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

- 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]

