

Total No. of Questions : 8]

SEAT No. :

P807

[Total No. of Pages : 2

[5870]-1127

T.E. (Computer Engineering)

SYSTEMS PROGRAMMING AND OPERATING SYSTEM

(2019 Pattern) (Semester - I) (310243)

Time : 2½ 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 indicate full marks.*
- 4) *Assume suitable data if necessary.*

- Q1)** a) Explain Differences between static link library and dynamic link library.[8]
b) What are the different types of Loaders? Explain compile and Go loader in detail. [9]

OR

- Q2)** a) List and explain different loader schemes in detail. [9]
b) Explain Design of Direct linking loaders and explain required data structures. [8]

- Q3)** a) Compare Compilers and Interpreters. [8]
b) What is LEX? Explain working of LEX with suitable diagram. [9]

OR

- Q4)** a) Define token, pattern, lexemes & lexical error. [8]
b) What is a compiler? Explain any two phases of compiler with suitable diagram. [9]

- Q5)** a) What is the need of Process synchronization? Explain Semaphore in detail. [9]
b) What is Operating System? Explain various operating system services in detail. [9]

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OR

- Q6)** a) Explain preemptive and Non preemptive scheduling in detail. [9]
b) Explain any two scheduling algorithm with suitable example. [9]

- Q7)** a) What is virtual memory management? Explain address translation in paging system. [9]
b) Write proper examples and explain memory allocation strategies first fit, best fit and worst fit. Also explain their advantages and disadvantages.[9]

OR

- Q8)** a) Explain any two page replacement strategies in detail. [9]
b) What is TLB? Explain the paging system with the use of TLB? What are the advantages of TLB? [9]

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