

Total No. of Questions : 8]

SEAT No. :

PB-3779

[Total No. of Pages : 2

[6262]-37

**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) What is absolute loader? Explain design of absolute loader with suitable example and flowcharts.** [9]

**b) Explain Design of Direct linking loaders.** [8]

**Q3) a) Compare Compilers and Interpreters.** [8]

**b) What is YAAC? Explain working of YAAC 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]

**P.T.O.**

- Q5)** a) Explain Preemptive and Non preemptive scheduling in detail. [9]  
b) What is Operating System ?Explain various operating system services in detail. [9]

OR

- Q6)** a) What is Thread? Explain Thread Lifecycle in detail. [9]  
b) Explain any two scheduling algorithm with suitable example. [9]

- Q7)** a) Explain Paging and segmentation with suitable example in detail. [9]  
b) Explain following placement strategies: First Fit, Best Fit, Next Fit and Worst Fit. [9]

OR

- Q8)** a) Explain any two page replacement algorithms in detail. [9]  
b) Define and Explain  
Virtual Memory  
Translation Lookaside buffer  
Thrashing