

II B. Tech II Semester Regular Examinations, August/September - 2021**OPERATING SYSTEMS**

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions each Question from each unitAll Questions carry **Equal** Marks

- 1 a) Explain in detail about clustered systems. [8M]
b) Describe examples of Windows and UNIX system calls. [7M]
- Or
- 2 a) What is dual-mode operation? Explain in detail. [8M]
b) Discuss about layered approach of operating systems. [7M]
- 3 a) Explain about shared-memory systems. [8M]
b) Explain the concept of race conditions that occur in Inter process communication. [7M]
- Or
- 4 a) Describe CPU-I/O burst cycle and preemptive scheduling with an example. [8M]
b) Explain about the producer-consumer problem using threads. [7M]
- 5 a) What is address binding? Explain with a neat diagram. [8M]
b) Describe the basic mechanism of memory-mapped files. [7M]
- Or
- 6 a) Discuss in detail about memory allocation. [7M]
b) Explain about LRU-approximation page replacement. Algorithm. [8M]
- 7 a) Describe disk space management in detail. [8M]
b) Discuss about deadlock detection with one resource of each type. [7M]
- Or
- 8 a) Explain about an example program using file-system calls. [8M]
b) Discuss in detail about stable storage implementation. [7M]
- 9 a) What are design principles of the Linux system? Explain. [8M]
b) Explain about implementing security defenses. [7M]
- Or
- 10 a) Discuss about networking in Windows XP system. [8M]
b) What are goals of protection? What are principles of protection? [7M]

