

Code: 9A05505

B.Tech III Year I Semester (R09) Supplementary Examinations June 2017

**OPERATING SYSTEMS**  
(Common to CSE, IT & ECC)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Write the operating system services that helpful to the user? Explain.  
(b) What is the main function of a microkernel? What are its benefits?
- 2 (a) Explain two fundamental models for inter process communication.  
(b) Explain evaluation of CPU schedulers by simulation.
- 3 (a) Give solution to the critical section problem using locks.  
(b) Explain the use of adaptive mutex and turnstile in solaris.
- 4 (a) What is the purpose of swapping? Explain the variants of swapping.  
(b) Explain optimal page replacement algorithm with an example.
- 5 Discuss in detail the two deadlock avoidance algorithms with examples.
- 6 What is mounting of a file system, how mounting takes place in different operating systems? Explain with examples.
- 7 (a) What is the disadvantage of programmed I/O? Suggest a solution to overcome it.  
(b) What is stable storage? Explain how it is implemented.
- 8 (a) What is port scanning? What are the problems with port scanning? How port scanning is performed?  
(b) What is denial of service? What are the problems with denial of service?

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