Question Paper Code : 86345

M.E/M.Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Second Semester

Digital Signal Processing

CP 7204 ADVANCED OPERATING SYSTEMS

(Common to M.E. Computer Science and Engineering M.E. Electronics and
Communication Engineering, M.E. Mobile Pervasive Computing)

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. State the principle of hardware used in solving the critical section problem.

2. What are the various ways of establishing interprocess communication ?

3. List the design issues for the distributed applications.

4. Write the significant role of communication primitives in distributed systems.

5. Define Path Pushing.

6. Give two examples for process failure and system failure.

7. State the characteristics of Real time systems.

8. Compare the behaviour of mobile operating system with that of the traditional operating system.

9. How are threads referred in Linux ? How is thread creation performed in this ?

10. What are blocked and non-blocked message exchange ?

PART – B (5 × 13 = 65 Marks)

11. (a) (i) Some CPUs provide for more than two modes of operation. What are two possible uses of these multiple modes ? **(7)**

    (ii) Distinguish between the client-server and peer-to-peer models of distributed system. **(6)**

OR

    (b) Explain in detail the concept of thread and thread management along with their significance. **(13)**

12. (a) How are the Classification of Mutual Exclusion Algorithms done ? Explain any two algorithms in detail. **(13)**

OR

    (b) Discuss the components in a load distributing algorithm. **(13)**

13. (a) How are distributed shared memory useful ? State the algorithm used to implement the same and describe the Read-Replication algorithm with its benefits. **(13)**

OR

    (b) Explain fault tolerant and state if one phase and two phase commit are fault tolerant with necessary sketch. **(13)**

14. (a) Discuss in detail the micro kernel design and their use in real time systems. **(13)**

OR

    (b) Elaborate on memory management in real time and mobile operating systems. **(13)**

15. (a) Write short notes on :

    (i) Block and Character Devices **(7)**

    (ii) Interprocess communication **(6)**

OR

    (b) Explain with a neat sketch the architecture Android and write all features related to the operating system. **(13)**

PART – C (1 × 15 = 15 Marks)

16. (a) Consider a case study to design the Linux OS to suite the application of transferring marks of students to parents and guardian, who have the rights to view in their mobile without making modifications No other rights except to view). Give an appropriate design suitable to view in iOS and Android mobile phones. Illustrate with their architecture. (15)

OR

(b) Compare the process management and file system management in Linux and windows and list the performance of both operating system. Suggest the suitable operating system for real time applications. (15)

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