Reg. No. :

Question Paper Code: 41203

M.E. DEGREE EXAMINATION, DECEMBER 2014.

First Semester

Computer Science and Engineering

(Common to Computer Science and Engineering [with specialization in networks] branches)

14PNE101 – ADVANCED OPERATING SYSTEM

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions.

PART A - (5 x 1 = 5 Marks)

1. A process can be terminated due to

   (a) normal exit   (b) fatal error   (c) killed by another process   (d) All of the above

2. If one site fails in distributed system

   (a) the remaining sites can continue operating   (b) all the sites will stop working

   (c) directly connected sites will stop working   (d) both (b) and (c)

3. Which of the following is not possible in distributed file system.

   (a) File replication   (b) Migration   (c) Client interface   (d) Remote access

4. Which one of the following is a real time operating system?

   (a) RTLinux   (b) VxWorks   (c) windows CE   (d) all

5. Linux is popular for

   (a) single user, single tasking   (b) single user, multitasking

   (c) multiuser, single tasking   (d) multiuser, multitasking

PART - B (5 x 3 = 15 Marks)

6. Draw a state transition diagram of a process.

7. Differentiate synchronous and asynchronous primitives.

8. What is the difference between deadlock and livelock?

9. List the characteristics of real time systems.

10. Mention the features of Linux file system.

PART - C (5 x 16 = 80 Marks)

11. (a) With necessary examples, discuss in details about common synchronization problem.

(16)

Or

(b) Summarize the various techniques used in memory management. (16)

12. (a) Explain in detail about the issues in distributed operating system. (16)

Or

(b) Discuss the various communication models that provide communication primitives.

(16)

13. (a) What is distributed shared memory. Explain the algorithms that are developed for implementing distributed shared memory. (16)

Or

(b) Explain asynchronous check pointing recovery method and give an example where the recovery algorithm will need to execute for [N] iterations where [n] is the number of processors in the system. (16)

14. (a) Describe the basic model of real time systems. (16)

Or

(b) Explain in detail about mobile operating Systems. (16)

15. (a) Describe process scheduling in Linux system. (16)

Or

(b) Elucidate the Interprocess Communication (IPR) with suitable examples. (16)

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