

(6 pages)

Reg. No. :

Code No. : 6440

Sub. Code : HCSE 11

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2014.

First Semester

Computer Science

Elective – DISTRIBUTED OPERATING SYSTEM

(For those who joined in July 2012 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is a vendor independent computing environment.
(a) open source foundation
(b) open system foundation
(c) open software foundation
(d) open system inconnectivity

2. In a multithreaded environment
(a) each thread is allocated with new memory from main memory
(b) main thread terminates after termination of child threads
(c) every process can have only one thread
(d) none of the above
3. Which of the following is an implicit addressing
(a) process addressing
(b) tagged addressing
(c) functional addressing
(d) primitive addressing
4. RPC stands for
(a) remote process communication
(b) read process control
(c) remote procedure cell
(d) read process call
5. The Kernal keeps track of the state of each task, by using a data structure called
(a) process control block
(b) user control block
(c) memory control block
(d) none of the above

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6. The mechanical or algorithmic defect that may generate an error is
 (a) bug (b) error
 (c) fault (d) system overflow
7. The running state has
 (a) only the process which has control of processor
 (b) all the processes waiting for I/O to be completed
 (c) all the processes waiting for processor
 (d) none of the above
8. The problem that occurs when data block moves from one node to another
 (a) replacement (b) replication
 (c) granularity (d) thrashing
9. The binary semaphore that is in locked or unlocked state
 (a) thread variable
 (b) mutex variable
 (c) empty variable
 (d) environment variable
10. Processor pool model is followed by
 (a) Amoeba (b) V system
 (c) Mach (d) Chorus

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
 Each answer should not exceed 250 words.

11. (a) Explain client server model in detail.
 Or
 (b) What is RPC? Write short notes on parameter passing in RPC.
12. (a) Describe code migration in detail.
 Or
 (b) Explain various alternatives of network operating system.
13. (a) Explain limitations of Lamport's clock.
 Or
 (b) Explain Berkeley algorithm in brief.
14. (a) Explain blocking commit protocol.
 Or
 (b) Explain principle of primary back-up protocol.
15. (a) Briefly describe about fault tolerance.
 Or
 (b) Explain JINI in detail.

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PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Discuss issues in designing a distributed operating system.

Or

- (b) Explain the features of good message passing system.

17. (a) Describe transparency in detail.

Or

- (b) Describe Deadlock modeling.

18. (a) Explain the desirable features of good global scheduling algorithm.

Or

- (b) Explain mechanisms of process migration.

19. (a) Explain load sharing algorithms.

Or

- (b) Explain blocking commit protocol in detail.

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20. (a) Describe Andrew file system in brief.

Or

- (b) Describe CORBA components in detail.
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