Code No. 6087N   Sub.Code: BCAM15

MCA (CBCS) DEGREE EXAMINATION, NOVEMBER 2020
First Semester
COMPUTER APPLICATIONS
DISTRIBUTED OPERATING SYSTEM
(For those who joined in July 2020 onwards)

Time: Three hours   Max.Marks:75

Part –A (10x1=10 marks)
Answer all questions, Choose the correct answer

1) What are types of distributed operating system?

    a) Network Operating system   b) Zone based Operating system

    c) Level based Operating system   d) All of the above

2) What are parts of network structure?

    a) Workstation   b) Gateway   c) Laptop   d) All of the above

3) Which design features of a communication network are important?

    a) Naming and name resolution   b) Routing strategies

    c) Connection strategies   d) All of the above

4) A global system of interconnected computer networks is known as_____.

    a) Ethernet   b) Intranet   c) Internet   d) Ultra-net

5) RPC connectors and message queues are mechanisms for_____.

    a) Message retrieving   b) Message passing

    c) Message delivering   d) Message Syncing

6) All the resources are shared and integrated within one OS, in the computing paradigm named_____.

    a) Distributed computing   b) Parallel computing

    c) Cloud computing   d) Centralized computing

7) In a distributed system, information is exchanged through_____.

    a) Memory sharing   b) Memory sharing

    c) Message passing   d) Exceptions

8) The only state transition that is initiated by the user process itself is _____.

    a) block   b) wakeup   c) dispatch   d) none of the above

9) Which of the following is used as a strategy to handle deadlocks?

    a) avoidance   b) prevention   c) detection and recovery   d) All of the above

10) _____ algorithms are meant for electing a coordinator process from among the currently running processes in such a manner that at any instance of time there is a single coordinator for all processes in the system.

    a) Deadlock detection   b) Scheduling algorithm   c) Election algorithm d) None of the above.

PART – B (5 X 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11) (a) Explain the issues in designing a distributed operating system.

(or)

(b) Why are distributed computing systems gaining popularity?

12) (a) Write down the issues in IPC by message passing.

(or)

(b) What are the types of buffer strategies? Explain.

13) (a) Explain the parameter passing semantics in RPC.

(or)

(b) Describe the need of exception handling in RPC.

14) (a) Elaborate the clock synchronization algorithms.

(or)

(b) Write a note on deadlock modeling.

15) (a) Describe the file models in distributed file system.

(or)

(b) Summarize the concept of file replication.

PART – C (5 X 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16) (a) Discuss the distributed computing system models.

(or)

(b) Write down the main features of ATM technology.

17) (a) Explain the encoding and decoding of message data.

(or)

(b) Summarize the desirable features of good message passing system.

18) (a) Illustrate the techniques used in light weight remote procedure call.

(or)

(b) What are the communication protocols for RPCs? Discuss.

19) (a) Describe the desirable features of a good process migration mechanism.

(or)

(b) Elaborate the handling deadlocks in distributed systems.

20) (a) What are the file caching schemes? Describe.

(or)

(b) Draw and explain the file accessing models in distributed file system.

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