Total No. of Questions : 12]

SEAT No. :

P2968

[Total No. of Pages : 3

[5354]-182

B.E. (Computer Engineering)

DISTRIBUTED OPERATING SYSTEM

(2008 Pattern)

Time : 3 Hours] *[Max. Marks :100*

Instructions to the candidates:

1) ***Answer any three questions from each section.***
2) ***Answers to the two sections should be written in separate answer-books.***
3) ***Figures to the right indicate full marks.***
4) ***Neat diagrams must be drawn wherever necessary.***
5) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) Explain Multicomputers operating system, network operating system and distributed operating system. **[6]**

b) What is Distributed System? Describe Evolution of Distributed Computing System. **[10]**

OR

Q2) a) What is Distributing Operating System? Explain features of Distributing Operating System in detail. **[6]**

b) Write a note on CORBA. What is Remote Method Invocation? Explain modules in RMI? **[10]**

Q3) a) Write short note on Middleware Communication Networks. **[6]**

b) Why Lamport logic clock is required? What are the conditions satisfied by logical clocks? Discuss the limitation of Lamport's clock how do overcome those. **[10]**

OR

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Q4) a) Discuss Inherent Limitations of a Distributed System. **[6]**

b) Why election algorithm is required in distributed operation system? Explain it with any one election algorithm. **[10]**

Q5) a) What are mutual exclusion algorithms? Classify them. **[8]**

b) What are the different issues in deadlock detection and resolution? Explain Suzuki Kasami's broadcast algorithm. **[10]**

OR

Q6) a) Show that Byzantine agreement cannot always be reached among four processor if two processor are faulty. **[8]**

b) Explain Ricart Agrawala algorithm. **[10]**

SECTION - II

Q7) a) Write a short note on Distributed File System. **[8]**

b) Discuss distributed shared memory system with architecture. What is Memory Coherence? **[8]**

OR

Q8) a) Explain Components of load distributing algorithms. **[8]**

b) How to select a suitable load sharing algorithm? What are the Requirements for load distributing? **[8]**

Q9) a) Discuss the types of failures in distributed systems. **[8]**

b) What is Rollback? How does it help in recovery mechanism? Explain in details the rollback recovery algorithm **[8]**

OR

Q10)a) Write note on: **[8]**

i) Recovery in concurrent system.

ii) Synchronous and Asynchronous check pointing and recovery

b) Explain access matrix model for security. **[8]**

Q11)a) How Grid Computing works? **[8]**

b) What are web services? How do you compare it to components? And then Compare between service oriented architecture and component based architecture. **[10]**

OR

Q12)a) Explain the relation of the following system with distribution system. **[8]**

i) Cluster computing

ii) Cloud computing

iii) Service oriented architecture

b) Explain Service oriented architecture. **[10]**