Total No. of Questions : 10]

SEAT No. :

P2463

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T.E. (Computer Engineering)

Principles of Concurrent and Distributed Programming

(2012 Pattern) (End Semester)

Time : 2 1/2 Hours] *[Max. Marks : 70*

Instructions to the candidates :

1) ***Answer Question 1 or 2, 3 or 4, 5 or 6, 7 or 8, and 9 or 10.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data if necessary.***

Q1) a) Explain in detail Declarative programming model. **[6]**

b) Write Short note on LISP. **[4]**

OR

Q2) a) Explain in detail Functional programming model. **[6]**

b) What is the structure of a LEX file'? **[4]**

Q3) a) Explain **[6]**

- General purpose computer architecture,
- Special purpose computer architecture.

b) Explain Amdahl's law. **[4]**

OR

Q4) a) Explain Message Passing Model in parallel programming. **[6]**

b) Write a note on Fengs classification. **[4]**

Q5) a) Explain reliability and scalability issues in designing distributed operating system. **[10]**

b) Explain the following terms with respect to operating system : **[8]**

i) System image.

ii) Autonomy

iii) Fault Tolerance Capability.

OR

Q6) a) Explain performance issue in designing distributed operating system. **[10]**

b) Write a note on DCE cell. **[8]**

P.T.O.

Q7) a) Explain types of virtualization. **[8]**

b) Explain the common approaches to virtual computer systems. **[8]**

OR

Q8) a) Differentiate between Virtual System and Distributed System. **[8]**

b) Explain DomainO and DomainU Memory Management in Xen? **[8]**

Q9) a) Explain global memory in CUDA. **[8]**

b) Differentiate between Multi-CPU and Multi-GPU systems. **[4]**

c) Write short notes on: **[4]**

- CUDA threads
- CUDA blocks

OR

Q10)a) Explain threads in CUDA. Also explain problem decomposition **[8]**

b) Explain texture memory in CUDA. **[4]**

c) Write short note on CUDA kernels. Also explain Kernel call syntax. **[4]**