

Total No. of Questions : 10]

SEAT No. :

P3311

[Total No. of Pages : 2

[5353]-186

T.E. (Computer Engineering) (Semester - II)
PRINCIPLES OF CONCURRENT AND DISTRIBUTED
PROGRAMMING
(2012 Pattern)

Time : 2½ 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 how to count task dependency. **[6]**
b) Write a note on MPI Java. **[4]**

OR

- Q2) a)** What are features of lisp? List and explain application of LISP. **[6]**
b) Explain the structure of YACC file. **[4]**

- Q3) a)** Explain following terms related to Concurrency and Synchronization in detail - **[6]**

- i) Critical Section
- ii) Mutual Exclusion
- iii) Dead Lock

- b)** What is GPU? Explain the GPU architecture in detail. **[4]**

OR

- Q4) a)** Write a Java program for creating thread by implementing Runnable interface. **[6]**
b) Explain Neural Networks parallel programming architectures. **[4]**

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- Q5)** a) Explain workstation model and workstation-server model with neat diagram. [8]
b) Explain following issues in design of Distributed Operating System -[8]
i) Performance
ii) Scalability
iii) Heterogeneity
iv) Security

OR

- Q6)** a) Explain various transparencies of a distributed system and how they are different from each other? Explain with example. [8]
b) Explain minicomputer and processor-pool model with neat diagram. [8]
- Q7)** a) Explain desktop virtualization and network virtualization. [8]
b) Explain requirements for paravirtualized Xen guest domains. [8]

OR

- Q8)** a) Explain the Xen virtual environment and hypervisor. [8]
b) Explain server and machine virtualization and storage virtualization. [8]
- Q9)** a) Explain problem decomposition using multi GPU with an example. [8]
b) Write and explain a CUDA program for Odd- Even Sort. [10]

OR

- Q10)** a) Explain various applications of cloud computing. [8]
b) Write and explain a CUDA program for multiplication of two matrices. [10]

