

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]**

P.T.O

- 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]

