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, 7or 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]**