NOV - 2016

Total No. of Questions : 10]

SEAT No. :

P1756

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[5058]-396

T.E.(Computer Engineering)

PRINCIPLES OF CONCURRENT AND DISTRIBUTED PROGRAMMING

(2012 Course)(Semester-II) (End Semster)(310249)

Time :2½Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) *Answer Q1 or Q2,Q3or Q4, Q5 or Q6 , Q 7 or Q 8, and Q 9 or Q10.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data if necessary.*

Q1) a) Write short note on basic user interface elements in GUI model. **[6]**

b) Explain shared-state concurrent model. **[4]**

OR

Q2) a) What are the dependency relationships between two tasks? **[6]**

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

Q3) a) Write short note on shared memory. **[6]**

b) Explain various types of parallelism. **[4]**

OR

Q4) a) Write a note on Handler's classification. **[6]**

b) Define speed up with respect to parallel algorithms. **[4]**

Q5) a) What is DCE? Explain it along with its components. **[10]**

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

i) System image.

ii) Autonomy

iii) Fault Tolerance Capability.

OR

P.T.O.

Q6) a) What are various models used in distributed computing environment? **[10]**

b) Why is scalability an important feature in the design of a Distributed OS? Discuss the guiding principles for design scalable distributed system. **[8]**

Q7) a) What is Virtualization? Explain types of virtualization. **[8]**

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

OR

Q8) a) What is Xen domain? Also explain hypervisor. **[8]**

b) What are the hardware-related issues that should be considered while specifying the physical systems that will host the virtual machines? **[8]**

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

b) How CPUs and GPUs are different? **[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 notes on: **[4]**

- CUDA grids
- CUDA Kernels