

**CS - 8401**  
**B.E. VIII Semester**  
Examination, June 2013  
**Advance Computing Paradigm**  
**(Elective-IV)**

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks :35*

*Note:* All questions carry equal marks.

**Unit 1**

1. a) Discuss the major trends in computing that have led to the emergence of cluster computing. 10
- b) Describe the design issues and the architecture of duster computing systems. 10

OR

2. a) What are the key destinations between cluster and grid computing? Discuss two commercial applications of clusters and grids. 10
- b) Discuss the design issues of grid resource management system. 10

**Unit 2**

3. a) Explain the potential and power of quantum computing. 10
- b) What is quantum gates and circuits? Explain briefly. 10

OR

4. a) Discuss the history of molecular electronics? 10
- b) Explain quantum algorithm briefly. 10

**Unit 3**

5. a) Explain the four generations of nano technology development. 10  
b) Differentiate between general purpose technology and dual use technology of nano technology. 10

OR

6. a) Explain the concept of Nano-information processing. 10  
b) Discuss the ethical issues and analysis of nano technology and also discuss its potential benefits and dangers. 10

**Unit 4**

7. a) Explain the three-tier architecture of mobile computing. 10  
b) What is mobility management and adaptability? Explain briefly. 10

OR

8. a) Explain the features of mobile application in WWW. 10  
b) Define the following terms : 10  
i) Session mobility ii) Service mobility  
iii) Network mobility iv) RFID v) WIMAX

**Unit 5**

9. a) Discuss the application of cloud computing. 08  
b) Explain Saas, Paas, and Iaas briefly 12

OR

10. a) Compare cloud computing with other computing technologies. 08  
b) Write brief notes on the following 12  
i) Hardware and infrastructure requirement of cloud computing.  
ii) Cloud storage.

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