

B.E. (Information Technology) Semester Seventh (C.B.S.)
Elective - II : Cluster & Grid Computing

P. Pages : 2

Time : Three Hours



KNT/KW/16/7506

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What are the key distinctions between cluster and grid computing? **6**
b) Discuss in details the architecture of grid computing system. **7**
OR
2. a) What is cluster computing? What functionality a cluster can offer? **6**
b) What is grid middleware? Give an overview. **7**
3. a) What is a single system Image? Describe different SSI layers. **8**
b) Explain compass in detail. **6**
OR
4. a) Explain load sharing and load balancing. **8**
b) Discuss Beowulf cluster system. **6**
5. a) Write characterization of grid in detail. **7**
b) What are the types of grid? Discuss in detail. **6**
OR
6. a) Describe the topologies of grid. **6**
b) What are the grid related standard bodies? **7**
7. Elaborate on OGSA and WSRF. **14**

8. a) What is semantic web service? Explain layered structure of the semantic grid. 7
b) What is distributed computing? Explain traditional paradigms for distributed computing. 7
9. a) What is autonomic computing? write all the semantic grid activities. 7
b) What are the different web services? 6

OR

10. Write short note on. 13
i) Metadata
ii) Ontology.
iii) Summarization of ontology languages.
11. a) Describe grid security infrastructure in detail. 7
b) What is grid monitoring architecture? Give an brief account of Grid ICE. 6

OR

12. a) Write short notes on.
i) Scheduling and resource management useful for grid security. 6
ii) Working principles of scheduling system. 7
