B.E. (Information Technology) Seventh Semester (CBS)

Elective-II : Cluster & Grid Computing

P. Pages : 2 **AHK/KW/19/2354**

Time : Three Hours * 1700 * 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) Explain cluster architecture with the help of proper diagram. **6**

b) Elaborate the various protocols for clustering & list out the various networking techniques in which the clusters are used. **7**

OR

2. a) Compare the cluster and grid computing? **6**

b) Describe the working of high throughput computing. **7**

3. a) State & illustrate the performance models and simulation techniques used in cluster technology. **7**

b) Elaborate Beowulf case study of cluster system. **6**

OR

4. a) Elaborate PARAM case study of cluster system. **6**

b) Discuss how the load sharing and load balancing process exist using clustering method. **7**

5. a) What is grid computing? Discuss about different topologies. components of gird. **7**

b) Draw the grid architecture & describe the functioning of each part. **7**

OR

6. a) List out the characterization of grid & Elaborate it in details. **7**

b) Briefly describe how the grid related standard bodies work on grid computing. **7**

7. a) What is distributed computing? Spell out the traditional paradigms for distributed computing. **7**

b) Elaborate WSRF architecture & its goals as grid standards. **6**

OR

8. a) Write short notes on. **6**
i) Globus toolkit 3

b) Discuss working of web services architecture with the help of neat diagram. **7**

9. a) What is autonomic computing? State all the different semantic grid activities. **7**

b) Describe the layered structure of semantic grid. **6**

OR

10. Write short notes on. **13**

i) Autonomic computing.

ii) Semantic web services.

iii) Summarization of ontology Languages.

11. a) Classify different system securities for grid resources & elaborate it. **7**

b) Explain grid scheduling and resources management system in details. **7**

OR

12. Write short note on **any two**. **14**

i) Possible vulnerabilities in grid.

ii) Grid monitoring architecture.

iii) Autopilot architecture.

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