Roll No.

Total No. of Questions : 09

Total No. of Pages : 02

MCA (2015 Batch)   (Sem.–4)
ADVANCED OPERATING SYSTEM
Subject Code : MCA-404
Paper ID : [74122]

Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :
1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**
3. **Use of non-programmable scientific calculator is allowed.**

SECTION-A

1. Explain different features of distributed file system. Give two examples of distributed file system. (10)

2. Discuss the features and differences between Multiprocessor and Distributed Operating Systems. (10)

SECTION-B

3. Discuss the following :

   a. Real time *vs* Embedded OS (5)

   b. Energy Aware Scheduling. (5)

4. Compare and Contrast Nano, Microkernel and Monolithic kernel. (10)

SECTION-C

5. What is Grid Computing and why name is given Grid? How Grid computing is different form the distributed computing? (10)

6. Explain the following :

   a. High performance Computing (HPC) *vs* High Throughput Computing (HTC) (5)

   b. What are the applications of the Grid that one explains to a naive person? (5)

SECTION-D

7. Explain different models for deployment of cloud computing. (10)

8. Explain features and limitations of mobile computing. (10)

SECTION-E

9. **Write briefly :**

   a. Define Load Balancing.

   b. List major advantages of using cloud computing.

   c. What is PaaS?

   d. Mention the name of some large cloud providers and databases.

   e. What is a mobile agent?

   f. What is Storage Area Network?

   g. Define Clock Synchronization.

   h. Define Virtualization.

   i. What are Periodic and Aperiodic tasks?

   j. Define Fault Tolerance.