Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

MCA (2013 and 2014 Batch) (Sem.–4)

ADVANCED OPERATING SYSTEMS

Subject Code : MCA-404

Paper ID : [A2558]

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. **SECTIONS-A, B, C & D contains TWO questions each carrying TWENTY marks each and students has 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. How are Load Balancing and Resource Sharing achieved in Distributed Operating systems? Give suitable examples along with your answer.

2. Explain the concepts of Inter-Process Communication, Mutual Exclusion and Distributed File System in Multi-processor Operating systems.

SECTION-B

3. What do you mean by Energy Aware CPU Scheduling concept? How is it different from traditional CPU scheduling?

4. What are the different types of Scheduling in Real-time and Embedded Operating systems? What are the characteristics of each of these?

SECTION-C

5. What is Grid Computing concept? What are its applications? How and where does it perform better as compared to other operating system architectures?

6. How is the Grid Monitoring and Scheduling done in Grid Computing environment?

SECTION-D

7. What is Cloud computing? What are the various building blocks of Cloud computing?

8. Differentiate between various Mobile Operating systems on the basis of their features and platforms.

SECTION-E

9. Write short notes on :

a) MOSIX OS.

b) Monolithic kernel model.

c) Hardware & Software Virtualization in Cloud.

d) Load Balancing.

e) Features of IOS.

f) Cloud Service Models.

g) Grid Monitoring Process.

h) Inter-Process Communication.

i) Mutual Exclusion.

j) Applications of Cluster Computing.