

2012**M.Sc.****1st Semester Examination****COMPUTER SCIENCE****PAPER—COS-103****Full Marks : 50****Time : 2 Hours**

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

All notations have their usual meaning.

Set—1**(Marks : 40)**

Answer any four questions.

1. (a) What does distributed operating system mean? .
(b) What does middleware mean with respect to software & hardware?
(c) What are the differences between distributed operating system and centralized operating system? 3+3+4
2. (a) What are the goals of distributed operating system?
(b) Write down the different forms of transparency with short description.
(c) What is degree of transparency? Explain with an example. 2+5+3

(Turn Over)

3. (a) Make an overview between DOS, NOS and middleware with description and goal in tabular form.
- (b) What are the differences between multiprocessor and multicomputer operating system?
- (c) What is RPC (Remote Procedure Call) in middleware system? 4+3+3
4. (a) Name the different layers, interfacers and protocols in OSI model.
- (b) Differentiate between Lower-level protocols and higher-level protocols.
- (c) What is server stub and client stub?
- (d) Write down the steps involved in a remote computation through RPC. 3+2+2+3
5. (a) What is data stream?
- (b) What is synchronous transmission mode?
- (c) What is quality of service? Explain.
- (d) What is stream synchronization? Explain. 2+2+3+3
6. Write a short note on any two : 2×5
- (a) Openness.
- (b) Scalability problems.
- (c) Heterogeneous multicomputer system.
7. (a) Briefly describe about Bully algorithm.
- (b) Describe the Time Stamp Ordering Scheme for concurrency control in distributed OS. 5+5

[Internal Assessment – 10 marks]