

GANPAT UNIVERSITY
M. TECH SEM- I (CE) REGULAR EXAMINATION DEC 2014 – JAN 2015
3CE104: Distributed Computing

MAX. TIME: 3 HRS

MAX. MARKS: 60

- Instructions:** (1) This Question paper has two sections. Attempt each section in separate answer book.
(2) Figures on right indicate marks.
(3) Be precise and to the point in answering the descriptive questions.

SECTION: I

Q.1 Answer the following.

- (A) Define the following terms: [5]
(i) Distributed Computing.
(ii) Middleware.
- (B) Discuss the architecture of DCE RPC and SUN RPC in brief. [5]

OR

Q.1 Answer the following.

- (A) Discuss the role of Port mapper and RMI registry with an appropriate diagram. [5]
(B) Explain the role of IDL and Stub in RPC programming. [5]

Q.2 Answer the following.

- (A) Compare CORBA architecture with Java RMI architecture in brief. [5]
(B) Write various steps to implement Remote message service using Java RMI. [5]

OR

Q.2 Answer the following.

- (A) Why Process migration is required? Define various models for Code Migration. [5]
(B) Describe the steps for developing a CORBA application. [5]

Q.3 Answer the following.

- (A) Describe the role of Virtualization in distributed systems. How we can achieve it? [5]
(B) Explain different methods of Code mobility in distributed systems. [5]

[P.T.O]

SECTION: II

Q.4 Answer the following.

- (A) Explain Lamport's Clock Synchronization algorithm for logical clock. [5]
- (B) Discuss design principles of Coda file system. [5]

OR

Q.4 Answer the following.

- (A) Compare various Election algorithms of Distributed systems in brief. [5]
- (B) Define Clock Synchronization principles and explain Cristian's algorithm. [5]

Q.5 Answer the following.

- (A) Explain REST-based Web services in detail. [5]
- (B) Define Network File System (NFS) and explain the basic NFS architecture for UNIX system. [5]

OR

Q.5 Answer the following.

- (A) Describe the steps required to implement SOAP-based Web services. [5]
- (B) Compare various Mutual Exclusion algorithms of Distributed systems. [5]

Q.6 Answer the following.

- (A) Discuss design principles of Google File system. [5]
- (B) Explain Web Service Architecture model in detail. [5]

-----END OF PAPER-----