

Total No. of Questions : 4]

PB299

SEAT No. :

[Total No. of Pages : 2

[6270]-90

B.E. (Information Technology) (Insem)

DISTRIBUTED SYSTEMS

(2019 Pattern) (Semester - VIII) (414450)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Figures to right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Assume suitable data, if necessary.

Q1) a) Explain the concept of Heterogeneity in Distributed System. How it deals with Heterogeneity? **[5]**

b) Enlist the main challenges while designing the Distributed System. Explain the role of mobile code and virtual machine in handling the design challenge of heterogeneity. **[5]**

c) What are the two architectural styles stemming from the role of individual processes? Discuss in brief, the placement strategies in Peer-to-Peer architecture. **[5]**

OR

Q2) a) Explain what is meant by distribution transparency and give examples of different types of transparency. **[5]**

b) Explain in brief, various system models to capture the properties and design issues of distributed systems. **[5]**

c) What are the entities that are communicating in the distributed system? Discuss in brief, how do they communicate using communication paradigm? **[5]**

P.T.O.

- Q3)** a) What is the concept of middleware? Explain in brief, Message Oriented and Content Centric Middleware. [5]
- b) What is CORBA? Give a brief description of the marshalling operation in CORBA with suitable example. [5]
- c) What is DCE? Discuss in brief, the various components of DCE. [5]

OR

- Q4)** a) What is External Data Representation (XDR)? Explain in brief, three alternative approaches to external data representation. [5]
- b) Discuss the following middleware objects in RMI: [5]
- i) Proxy
 - ii) Dispatcher
- c) What is serialization and deserialization in Java? Discuss in brief, the use of reflection with respect to Java language. [5]

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