

Total No. of Questions : 10]

SEAT No. :

P3556

[Total No. of Pages : 3

[4959] - 1156

B.E. (Computer Engg.) (Semester - I)
C : Advanced Computer Programming
(2012Pattern) (Elective - I)

Time : 2 1/2 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8., Q.9 or Q.10.*
- 2) *Figures to the right indicate full marks.*
- 3) *Assume suitable data, if necessary.*

Q1) a) What are Locks? Explain Distributed Lock services using Timestamps. **[5]**

b) What is JAVA RMI? How do we create Java RMI? What is the similarity between JAVA RMI and web service? **[5]**

OR

Q2) a) Explain with examples a single-copy and Multi-copy distributed shared memory. **[5]**

b) Define Service oriented architecture. List any four SOA characteristics. **[5]**

Q3) a) What is reflections in JAVA? Is JAVA reflection slow and/or expensive? What are some drawbacks of reflection in JAVA? **[5]**

b) What is the difference between Collection and Collections? Which collection classes are synchronized or thread-safe? Name the core collection interfaces. **[5]**

OR

Q4) a) How does SOA address the issues that arise in Client-Server architecture? **[5]**

P.T.O.

- b) Explain the following with servlet. [5]
- i) How can we create deadlock condition on our servlet?
 - ii) For initializing a servlet can we use constructor in place of init ()? Why?
 - iii) How can you get the information about one servlet context in another servlet?

- Q5)** a) Write short notes on: [9]
- i) JSP Architecture.
 - ii) MVC architecture Model.
 - iii) JDBC.
- b) Write and odd-even merge sort algorithm. Explain with a suitable example. [8]

OR

- Q6)** a) Explain Web architecture models. What are the advantages of JSP over Servlets? [9]
- b) Explain the following JDBC API components. [8]
- Driver Manager, SQL Exception, Connection, Statement, ResultSet.

- Q7)** a) What are the best features of Hadoop? What are the advantages of Hadoop over traditional RDBMS? [8]
- b) Write short notes on: [8]
- i) MongoDB.
 - ii) AJAX.

OR

Q8) a) What do you mean by Hadoop YARN? What are the failure handlings in YARN? [8]

b) What is Hadoop Ecosystem? How HDFS differs with NFS? [8]

Q9) a) What is the use of Combiner and Partitioner in the Hadoop framework? [8]

b) Explain the following execution modes of Pig: [9]

i) Local mode.

ii) MapReduce mode.

OR

Q10) a) What is pig? When should pig used? Explain pig and MapReduce in detail. [9]

b) Explain word-count implementation via Hadoop framework. [8]

