

Total No. of Questions : 10]

SEAT No. :

**P3109**

**[5154]-676**

[Total No. of Pages : 2

**B.E.(Computer Engineering)**  
**ADVANCED COMPUTER PROGRAMMING**  
**(2012 Pattern) (Semester-I) (Elective-I)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) All questions are compulsory.*
- 2) Neat diagram should be drawn wherever necessary.*
- 3) Figure to the right indicate full marks.*
- 4) Assume suitable data, if necessary.*

- Q1)** a) Explain with examples distributed lock using Timestamp. **[5]**  
b) What is concurrency? What are the basic approaches to achieve concurrency. **[5]**

OR

- Q2)** a) Explain with examples single copy and multi copy distributed shared memory. **[5]**  
b) What is JVM? Why Java is called platform independent programming languages? What is the difference between JDK and JRE? **[5]**

- Q3)** a) What is thread? Describe the complete life cycles of thread. **[5]**  
b) Explain following Java collection framework. **[5]**  
i) Hashmap  
ii) Treemap  
iii) Iterators.

OR

- Q4)** a) What are the main benefits of SOA? How to achieve loose-coupling in SOA? **[5]**  
b) What is Reflection in Java? What are its drawbacks and practical usages? **[5]**

**P.T.O.**

- Q5) a)** What are advantages of JSP over Java servlets? Also explain WSDL. **[8]**  
**b)** What is cloud computing? Explain its framework model in detail. **[9]**

OR

- Q6) a)** What is Ajax? What are Ajaxes applications? What are the advantages and disadvantages of Ajax? Also write difference between Ajax and Javascript. **[8]**  
**b)** What is the real difference between HTML and HTML5? Write short notes on JSP architecture. **[9]**

- Q7) a)** What are the column oriented databases? Compare column oriented databases with relational databases. **[8]**  
**b)** What are the best features of Hadoop? What are the advantages of Hadoop over traditional RDBMS? **[8]**

OR

- Q8) a)** Explain with examples. **[8]**  
i) HDFS Daemons  
ii) Hadoop YARN  
iii) Word Count Program.  
**b)** What are document oriented databases? Give mongoDB database examples for Hotel database application. **[8]**

- Q9) a)** Draw a diagram for Map Reduce system showing different phases/stages like input-split, shuffle, sort, combine etc. **[8]**  
**b)** Explain with examples data types and complex data types in pig. **[9]**

OR

- Q10) a)** Explain word count implementation via Hadoop framework. **[8]**  
**b)** Explain the functionalities of: **[9]**  
i) Mapper  
ii) Combiner.  
iii) Reducer

