Seat No.	

B.E. (CSE) (Part - IV) (Semester - VII) (Revised)
Examination, November - 2017
DISTRIBUTED SYSTEMS
Sub. Code : 67542

Day and Date : Monday, 13-11-2017   **Total Marks : 100**
Time : 2.30 p.m. to 5.30 p.m.

Instructions :   1)   Question 4 and question 8 are compulsory, attempt any two questions from que.1 to 3 from section I and que. 5 to 7 from section II.
          2)   Figures to the right indicate full marks.

SECTION - I

Q1) a) Explain the process of binding a client to a server in DCE RPC.   **[8]**

    b) What are different scaling techniques can be applied to achieve scalability in distributed system?   **[8]**

Q2) a) Explain token ring mutual exclusion algorithm in detail.   **[8]**

    b) Define the terms error and fault. Classify and explain the faults.   **[8]**

Q3) a) Explain UNIX semantics, Session Semantics and Immutable files semantics of file sharing.   **[8]**

    b) Explain the server replication mechanism used in CODA.   **[8]**

Q4) Attempt any three   **[18]**

    a)   Sensor networks.

    b)   Berkeley Algorithm.

    c)   Collaborative distributed systems.

    d)   Compound procedures used in ONC RPC in NFS v4.

P.T.O.

SECTION-II

Q5) a) Describe implementation level of virtualization in Cloud Computing? **[8]**

b) What is the benefits using virtualization in Cloud Computing? **[8]**

Q6) a) Explain virtualization at Application level? **[8]**

b) Explain Database as a Service (DBaaS) in Cloud Computing? **[8]**

Q7) a) What are different threats on Data stored in cloud? **[8]**

b) What are the advantages of "Platform as a Service" (PaaS)? **[8]**

Q8) Write note on **[18]**

a) Advantages of Using cloud storage gateways (CSG).

b) Cloud Firewall.

c) Virtual Firewall.

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Seat
No.

B.E. (CSE) (Part-IV) (Semester-VII) (Revised)
Examination, November - 2017
ADVANCED DATABASE SYSTEMS
Sub. Code : 67543

Day and Date : Wednesday, 15-11-2017   **Total Marks : 100**
Time : 2.30 p.m. to 5.30 p.m.

Instructions :   1)   Attempt any three questions from each section.
                  2)   Figures to the right indicate full marks.
                  3)   Assume suitable data wherever necessary.

SECTION-I

Q1) a)   What do you mean by replication and fragmentation w.r.t. distributed
database? Briefly explain the advantages and disadvantages to replication.
[8]

b)   What are transaction-server systems? For data server systems, explain
the following   **[8]**
i)   Locking
ii)   Data caching
iii)   Lock caching

Q2) a)   What is an Object Identity? Explain the system-generated OID and the
immutability Property of an object.   **[8]**

b)   What is Persistent object? Explain the approaches to make the Object
Persistent?   **[8]**

Q3) a)   State some of the object database features that have been included in
SQL. Also give an example of UDTS in SQL to create complex structured
object.   **[8]**

b)   With the help of an appropriate figure of the database life cycle, explain
in detail database initial study phase.   **[8]**

P.T.O.

Q4) Write short notes on any three: [18]

     a)   2-phase commit

     b)   ODL

     c)   Persistence

     d)   top-down versus bottom-up design

SECTION-II

Q5) a)   Explain the intuition behind the two rules in the Bell-LaPadula model for manadatory access control. [4]

     b)   Give an example of how covert channels can be used to defeat the Bell-LaPadula model. [4]

     c)   Explain the statistical database security. [8]

Q6) a)   Explain document type definition. Describe a DTD with suitable example for an XML. [8]

     b)   Write the applications of XML. [4]

     c)   What is Xquery? Explain FLOWR expression with example? [4]

Q7) a)   What is data warehouse? What is the difference between data warehouse and operational database system? [6]

     b)   Explain Following [4]

         i)   Data cube

         ii)   OLAP

     c)   With neat schematic explain business intelligence architectural components? [6]

Q8) Write a short note on(any three) [18]

     a)   Polyinstantiation

     b)   XML schema

     c)   Classification algorithm

     d)   Grant and Revoke with example.

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B.E. (Computer Science and Engineering) (Semester-VII) Examination, November - 2017
MOBILE APPLICATIONS (El. - 1)
Sub. Code : 67546

Day and Date : Tuesday, 21 - 11 - 2017   Total Marks : 100
Time : 2.30 p.m to 5.30 p.m.

Instructions :   1)   Figures to the right indicates full marks.
                   2)   Question no 4 and 8 are compulsory
                   3)   Attempt any two questions from remaining questions in each section

SECTION - I

Q1) a)   What are mobile website navigatation techniques   [6]

       b)   What is native app, hybrid app and web app in mobile app technology
            stack.   [6]

       c)   Explain about standard OMA.   [4]

Q2) a)   Write a note on HTML 5.   [6]

       b)   Explain in detail about WAP 1.0   [6]

       c)   Write short note on Web Services   [4]

Q3) a)   Explain the difference between XML and JSON   [6]

       b)   What are the best practices while designing a mobile website?   [6]

       c)   Explain in detail about Fallback mechanism.   [4]

P.T.O.

Q4) Write short note on (Any Three)   [18]

    a)   Android emulator

    b)   W3C

    c)   RESS

    d)   Tools for Mobile Web Development

SECTION - II

Q5) a)   Explain the role of responsive images in mobile application development How we can use Sencha. IO to create responsive images   [6]

    b)   Explain various problems mobile application developer face regarding feature support on a particular platform. Briefly describe their solutions.   [6]

    c)   Describe how we can use HTTP header for device detection at server side   [4]

Q6) a)   Explain in detail JavaScript APIs for handling touch and gesture events in mobile application   [6]

    b)   Compare Zepto.js with jQmobi.   [6]

    c)   What is J2ME? How are the tools available for J2ME programming? [4]

Q7) a)   Describe how W3C Geolocation API is used for getting a location as well as tracking a particular location.   [6]

    b)   Compare Native App And Mobile Web App.   [6]

    c)   List various JavaScript mobile UI patterns. Explain ANY one.   [4]

Q8) Write a short note on (any three)   [3×6=18]

    a)   Web Sockets.

    b)   Device Interaction.

    c)   GSMA One API.

    d)   HTTP Sniffing.

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Seat
No.

**B.E. (Computer Science & Engg.) (Semester - VIII) (Revised)
Examination, November - 2017
DATA ANALYTICS
Sub. Code : 67824**

Day and Date : Wednesday, 01 - 11 - 2017   Total Marks : 100
Time : 10.00 a.m. to 1.00 p.m.

Instructions :   1)   **Figures to the right indicate full marks.**
                 2)   **Q.4 & Q.8 are compulsory.**
                 3)   **Attempt any two questions from Q.1, to Q.3 and from Q.5 to Q.7.**

Q1) a)   Explain the phases in the developments of Business Intelligence System
             with the help of neat diagram?   **[8]**

       b)   Explain Star Schema, Snowflake Schema, Galaxy Schema with proper
             example?   **[8]**

Q2) a)   Explain different categories of mathematical models for decision making?
                                                                         [8]
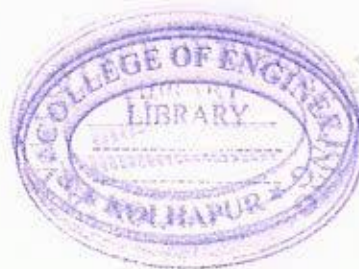
       b)   Explain in detail process of univariate analysis?   **[8]**

Q3) a)   Explain HDFS Architecture and the working of Hadoop Heartbeat
             message in HDFS with proper figure?   **[8]**

       b)   Explain data validation process in data preparation.   **[8]**

Q4) Write a note on (Attempt Any Three) :   **[18]**

       a)   Data Warehouse Architecture.

       b)   Hive, HBase, Pig & Pig Latin.

       c)   Multivariate Analysis.

       d)   Data mining tasks.

P.T.O.

Q5) a) Explain simple linear regression model and structure of regression model. **[8]**

b) Discuss the structure and phases of the learning process for a classification with a neat diagram. **[8]**

Q6) a) Explain in detail any one algorithm used for partition methods. **[8]**

b) Explain the general association rules that is useful for range of applications. **[8]**

Q7) a) List and explain the different functions to handle the data in R workspace with an example. **[8]**

b) List and explain the various types of R commands to import data. **[8]**

Q8) Write a short note on (Any Three) : **[18]**

a) Bayesian methods.

b) Exporting data from R.

c) Hierarchical clustering methods.

d) Apriori algorithm.

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Seat
No.

B.E. (Computer Science) (Semester - VIII) (Revised) Examination, November - 2017
REAL-TIME OPERATING SYSTEM
Sub. Code:67826

Day and Date :Friday, 03 - 11 - 2017   **Total Marks : 100**
Time :10.00 a.m. to 1.00 p.m.

Instructions :   1)   Solve Any Three Questions from each section.

2)   Figures to right indicate full marks.

SECTION-I

Q1) a)   What is Real-Time System? Explain Real-time system examples.   **[8]**

b)   Explain following terminologies related to hardware interfacing: **[8]**

i)   Latching

ii)   Edge vs Level Triggered

iii)   Tristate logic

iv)   IEEE 1394 Firewire

Q2) a)   Explain memory-mapped I/O with suitable diagram.   **[8]**

b)   Explain operation of mailboxes? How critical section problem can be handled using mailboxes?   **[8]**

Q3) a)   What is priority inversion ? Explain priority ceiling protocol.   **[8]**

b)   Explain task control block model in detail.   **[8]**

P.T.O.

Q4) Write a note on- (Any Three)   [18]

    a)   Polled loop

    b)   Test-and-Set-Instruction

    c)   Watchdog timers

    d)   Ring Buffers

SECTION -II

Q5) a)   Explain requirement engineering process in desing of real time systems.

                                                                                   [8]

    b)   What are formal methods in software specification? State its limitations.

                                                                                    [8]

Q6) a)   Explain how to organize the requirements document.   [8]

    b)   What is COCOMO? Explain COCOMO-II in detail.   [8]

Q7) a)   Explain real-time features of C# and Java.   [8]

    b)   Explain semaphore and mutex management in RTLinux.   [8]

Q8) Write a note on-(Any Three)   [18]

    a)   Mc Cabe's Metric

    b)   Function points

    c)   RTLinux

    d)   Assembly language

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Seat No.

B.E. (Computer Science and Engg.) (Semester-VIII) (Revised) Examination, November - 2017
SOFTWARE TESTING AND QUALITY ASSURANCE
(Elective-II)
Sub. Code : 67828

Day and Date : Monday, 06-11-2017

Time : 10.00 a.m. to 1.00 p.m.

Total Marks : 100

Instructions :
1) Q. 4 and Q. 8 are Compulsory.
2) Attempt any two questions from Q. 1 to Q. 3.
3) Attempt any two questions from Q. 5 to Q. 7.

SECTION-I

Q1) a) What is software testing? Why should we test? **[8]**

b) Explain V shaped software lifecycle model. **[8]**

Q2) a) What are different software verification methods? **[8]**

b) What do you mean by software project audit? Explain in brief project audit and review checklist. **[8]**

Q3) a) Explain use cases and use case diagram in detail? **[8]**

b) What is regression testing? **[8]**

Q4) Write a note on (Any two): **[18]**

a) Software failures with example.

b) SRS document verification.

c) Risk analysis.

P.T.O.

SECTION-II

Q5) a) Which are broad categories of software metrics? Explain in detail. **[8]**

b) Compare client server application and web based application. **[8]**

Q6) a) What should we measure during testing? **[8]**

b) Write a note on user interface testing. **[8]**

Q7) a) Which are the several problems with the function points measure? **[8]**

b) What is automated test data generation.? **[8]**

Q8) Write a note on (Any two): **[18]**

a) Measurement in software engineering.

b) Albretch's approach.

c) Security testing.

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Seat
No.

B.E. (Computer Science & Engg.) (Semester - VIII) (Pre-revised)
(Old) Examination, November - 2017
GRID TECHNOLOGY
Sub. Code : 49447

Day and Date : Wednesday, 01 - 11 - 2017   Total Marks : 100
Time : 10.00 a.m. to 1.00 p.m.

Instructions :   1)   Q.4 & Q.8 are compulsory.
                   2)   Attempt any two questions from Q.1, Q.2, Q.3.
                   3)   Attempt any two questions from Q.5, Q.6, Q.7.
                   4)   Figures to the right indicate full marks.

SECTION - I

Q1) a)   With schematic explain basic structure of GT3 and their base services.
                                                                              [8]

   b)   What is grid computing? What are the types of grid computing? Explain
         different topologies of grid computing?   **[8]**

Q2) a)   Explain semantic workflow enactment in geodise.   **[8]**

   b)   What is autonomic computing? Explain the features of autonomic
         computing?   **[8]**

Q3) a)   What is RDF? Why RDF is essential in GRID? Explain RDF data model.
                                                                              [8]

   b)   Define web service and explain the structure of soap and wsdl.   **[8]**

Q4) Write a short note on (Any Three) :   **[18]**

   a)   Grid related standard bodies.

   b)   Portal Lab.

   c)   RPC.

   d)   OGSA and OGSI.
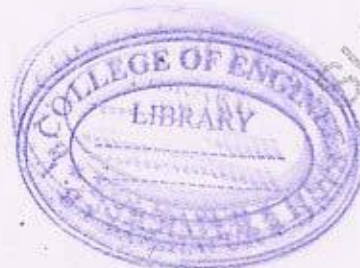
P.T.O.

SECTION - II

Q5) a) Explain the role of directory service, producer and consumer in GMA? **[8]**

b) With neat schematic explain different daemons in condor pool. **[8]**

Q6) a) Explain cloud deployement models? Discuss about pros and cons cloud computing? **[8]**

b) What is virtualization? What are the characteristics of virtualization? Explain foundational issues of virtualization. **[8]**

Q7) a) What is storage as a service provider? Explain different aspects of data security. **[8]**

b) Explain Job life cycle and Job Management in Codor. **[8]**

Q8) Write a short note on (Any Three) : **[18]**

a) SOA.

b) Credential delegation & single sign-on.

c) Client Desktop.

d) Scheduling Paradigms.

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