

T.E. IT. sem VI (Rev) N10 - 2

SUB: - DBT.

2nd Half-12 mina-(c)-90

Con. 8267-12.

KR-8882

(3 Hours)

[Total Marks : 100

- N. B. :** (1) Question No. 1 is **compulsory**.  
(2) Attempt any **four** questions out of the remaining **six** questions.

1. (a) Explain Replication in distributed database. 5  
(b) Explain BCNF with suitable example. 5  
(c) Compare Data Mart and Data Warehouse. 5  
(d) Explain Nested Relation. 5
  
2. (a) Suppose that we decompose the Schema 10  
 $R = (A, B, C, D, E)$  into  $(A, B, C)$   
 $(A, D, E)$   
Show that this decomposition is lossless join decomposition if the following set  
F of functional dependencies holds :—  
 $A \rightarrow BC$   
 $CD \rightarrow E$   
 $B \rightarrow D$   
 $E \rightarrow A$
  
- (b) What are the main architectures used for building parallel databases ? 10  
Give advantages and disadvantages of each.
  
3. (a) Explain security and authorization in SQL. 10  
(b) Given a relation with eight attributes Proj\_no, Proj\_name, Emp\_no, Emp\_name, 10  
Job\_class, charge\_hrs, Hrs\_billed and Tot\_charges.  
Normalize it upto 3<sup>rd</sup> Normal form.
  
4. (a) Explain design and implementation issues in mobile database. 10  
(b) What is fragmentation ? Explain different types of fragmentation in distributed 10  
database.
  
5. (a) Explain object identity and type constructors with example. 10  
(b) Define data warehouse. Explain the architecture of data warehouse with suitable 10  
block diagram.
  
6. (a) Consider a data warehouse for hospital, where there are three dimensions :— 10  
(i) Doctor (ii) Patient (iii) Time  
and two measures —  
(i) Count and (ii) Charge  
Where charges is the fee that doctor charges a patient for visit.  
Using the above example describe the following **OLAP Operations** :—  
(i) Slice (ii) Dice (iii) Rollup (iv) Drilldown
  
- (b) Explain various extended features of ER diagram such as aggregation, 10  
specialization and generalization with suitable examples.

VIT  
Software Engineering

04/12/12

47 : 2nd half.12-AM(h)

Con. 8192-12.

KR-9008

(3 Hours)

[Total Marks : 100

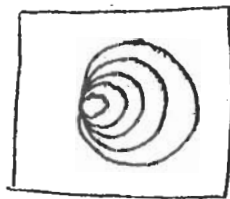
**N.B. :** (1) Question No. **1** is **compulsory**.

(2) Attempt any **four** questions out of remaining **six** questions.

1. (a) What are the different tasks of Software Configuration Management (SCM) ? **10**  
Discuss each in brief.
- (b) What do you understand by Quality Assurance ? Explain the Levels of Quality Assurance. **10**
2. (a) What is Feasibility Study ? Explain its type, contents and purpose. **10**
- (b) What do you understand by metrics ? List and explain Process and Project metrics. **10**
3. (a) Compare and contrast coupling and cohesion. **10**
- (b) Explain the user interface Design Process. **10**
4. (a) Explain the difference between White Box and Black Box testing. **10**
- (b) What are the advantages of Object Oriented Software Engineering ? **10**
5. (a) Give a Software Requirement Specification (SRS) for developing a Software for Hospital Management System. **10**
- (b) Describe Project Scheduling and tracking with any suitable example. **10**
6. (a) Explain agile methodology using SCROM. **10**
- (b) Explain requirement engineering. **10**
7. Write short notes on any **four** of the following :— **20**
  - (a) Software Tools for Analysis
  - (b) Re-engineering
  - (c) Architectural Styles
  - (d) Software Project Planning
  - (e) RAD and Spiral Models.

- N. B. :** (1) Question No. 1 is **compulsory**.  
(2) Attempt any **four** questions from **remaining** questions.  
(3) Assume **appropriate** data wherever **necessary**.

1. (a) With appropriate diagram, explain the life cycle of a midlet. 10  
(b) What are JDBC drivers ? Describe each type in short. 10
2. (a) Write a note on MVC Architecture. 10  
(b) Write a note on command class. With an example explain the implementation of Command Listener. 10
3. (a) What is event handling ? Elaborate its types in J2ME. 10  
(b) Write a note on : 10
  - (i) Bluetooth architecture
  - (ii) Profiles in J2ME.
4. (a) Write a note on :- 10
  - (i) Obfuscator
  - (ii) EJB centric Web Application.
- (b) With proper diagram, explain servlet life cycle. 10
5. (a) Explain the Enterprise Architecture types. 10  
(b) Design a Canvas based MIDP application to generate circles that increase from smallest to largest every 1 second. 10



6. Differentiate between : 20
  - (a) CLDC 1.0 and CLDC 1.1
  - (b) Mutable and Immutable Images
  - (c) Text Box and Text Field
  - (d) High Level API and Low Level API
  - (e) Applet and MIDlet

7. (a) Write a MIDP application to accept registration details as mentioned below – 10

- (i) First Name
- (ii) Last Name
- (iii) Date of Birth
- (iv) Areas of Interest
- (v) Telephone No.

Perform validation on each information entered on click of a submit button. If successful, display a success message in an alert.

(b) Write a note on :-

10

- (i) Game API
  - (ii) Struts.
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