

(3 Hours)

[Total Marks : 60

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

1. (a) Define Metrics. Describe process and project metrics. 5
(b) What is Agility ? Define the principal to achieve agility. 5
(c) What is functional and non-functional requirement of SRS ? 5
(d) What are the advantages of test driven development ? 5
2. (a) Explain incremental process model with suitable example. 10
(b) Explain change control in detail along with software configuration items and baseline. 10
3. (a) Explain different steps in requirement engineering. 10
(b) Discuss and compare coupling and cohesion in brief. 10
4. (a) What test is carried during verification and validation ? Explain with example. 10
(b) List and explain the fundamental concepts for software design. 10
5. (a) Explain different types of maintenance with suitable example. 10
(b) What is quality Assurance ? What are different parameters of Quality ? 10
6. (a) What are the risks associated with software projects ? How do project managers manage such risks ? 10
(b) List down and explain the activities of scheduling and tracking for Library management system. 10
7. Write a short notes on any **two** :— 20
 - (a) Re-engineering.
 - (b) Security Engineering.
 - (c) White Box and Black Box Testing.
 - (d) CMM and Key Process Areas.

QP Code : 15043

(3 Hours)

[Total Marks : 100

- N.B :** (1) Question No.1 is **compulsory**.
(2) Attempt any **four** out of remaining **six** questions
(3) **Assume** suitable data if **necessary** and state the assumptions clearly.

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|----|--------------------------------------------------------------------------|----|
| 1. | (a) What are the key principles of security. Explain with example? | 5 |
| | (b) Explain Digital Signature in short. | 5 |
| | (c) Explain Digital Certificate. | 5 |
| | (d) Explain ARP Spoofing. | 5 |
| 2. | (a) Explain DES in detail. What is double DES and Triple DES. | 10 |
| | (b) Explain Secure E-Mail system with the example. | 10 |
| 3. | (a) What is a salami attack? list the controls against it. | 5 |
| | (b) Explain CAPTCHA | 5 |
| | (c) Explain Covert Channel | 5 |
| | (d) Explain authentication in detail. | 5 |
| 4. | (a) Explain Kerberos in detail. | 10 |
| | (b) Explain IDS, its types and their limitation? Why we need Hybrid IDS? | 10 |
| 5. | (a) Explain Knapsack Cryptosystem. | 10 |
| | (b) Explain Risk analysis in detail. | 10 |
| 6. | (a) Explain firewall and its types with examples. | 10 |
| | (b) Explain RSA crypto System in detail. | 10 |
| 7. | Write short notes on the following. | |
| | (a) Network Layer Attacks | 5 |
| | (b) Stream cipher and Block Cipher | 5 |
| | (c) Web server Vulnerabilities | 5 |
| | (d) Tiger Hash. | 5 |
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TE | IT | VI (REV)

DBT

25/11/14.

QP Code :15089

(3 Hours)

[Total Marks : 100

- N.B.** (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions of remaining **six** questions.
(3) Assume suitable **data** if **required**.
(4) **Figures at right hand side** indicates **full** marks.

1. Write a short note on the following :—
 - (a) Object ID and type constructor 5
 - (b) Weak entity set in ER diagram. 5
 - (c) Data mart and datawarehouse. 5
 - (d) Triggers in SQL. 5

2. (a) $R = (A, B, C, D, E)$ 10
This relation R is decomposed into
 $R_1 = (A, B, C)$
 $R_2 = (A, D, E)$
Show that the decomposition is loss-less join decomposition if following functional dependencies hold
 $FD = \{ A \rightarrow BC, CD \rightarrow E, B \rightarrow D, E \rightarrow A \}$
- (b) Explain parallel databases with advantages and dis-advantages. 10

3. (a) Write a short note on constraints on database. 10
(b) Define primary key, super key, candidate key and functional dependencies. 10

4. (a) Describe design and implementation issues in mobile databases. 10
(b) Explain fragmentation in distributed database with proper example. 10

5. (a) Differentiate between OLTP and OLAP. 10
(b) Explain rules of mapping ER diagram to relational model. 10

6. (a) Nested relations in ORDBMS. 10
(b) Differentiate RDBMS, ORDBMS, OODBMS. 10

7. Write short notes on the following :— 20
 - (a) Temporal Database
 - (b) Specialization and generalization
 - (c) Replication in distributed database
 - (d) BCNF.

T.E. I.T. Sem VI (R).
Middleware &
Enterprise Int. Tech.

5/12/14,

QP Code :15171

(3 Hours)

[Total Marks : 100

N.B : (1) Question No.1 is **compulsory**.
(2) Answer any **four** questions of the remaining questions.

1. (a) Compare between RPC and MOM. 5
(b) Describe the steps involved in EJB deployment. 5
(c) What are the goals of CORBA? 5
(d) What are advantages and disadvantages of SOA. 5
 2. (a) Explain CORBA component model architecture and its advantages. 10
(b) What are objectives and design features of .NET framework. 10
 3. (a) Explain different types of COM threading models? 10
(b) What are the types of enterprise beans? Explain stateless and stateful session beans? 10
 4. (a) Explain 2-tier and multitier client server architecture in detail? 10
(b) Describe XML schema definition (XSD) with an example. 10
 5. (a) What is the purpose of WSDL? Explain WSDL document structure using a block diagram? 10
(b) Explain lifecycle of entity bean and message driven Bean? 10
 6. (a) Explain in detail the architecture and working of MOM. 10
(b) What is Marshalling? Explain standard marshalling? 10
 7. Write short notes on (any two) 20
 - (a) WS- standards
 - (b) DCOM
 - (c) Distributed object value
 - (d) Server Types.
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LM-Con.:10067-14.

TE (IT) SEM VI (REV)

Programming for mobile & Remote computers.

11/12/2014

QP Code :15213

(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 event handling and its type in J2ME, write a program to demonstrate keyPress Event for a form in J2ME. 10
(b) Give Differences with reference to J2ME. 10
 - (i) Interactive Gauge Vs non Interactive Gauge
 - (ii) Textbox Vs text field
 - (iii) List box Vs. choiceGroup
 - (iv) Command Listner vs Item state
 - (v) Mutable image Vs Immutable image.
2. (a) Write a MIDP application to translate a filled curve of height 30, width 50, start angle 180 degree, arc angle 180 degree from position 0,0 on mobile screen by 45, 45 using a low level API. 10
(b) State the need for JAD file. Manifest file and jar file in J2ME environment. 5
(c) Justify the need of Paint and repaint methods. 5
3. (a) What is the record management in J2ME ? How do you handle records in j2ME. 5
(b) How do you program for multimedia in J2ME. 5
(c) What is CLDC?How do you program for CLDS ? 5
(d) What is J2ME MIDP. 5
4. (a) Explain MIDlet lifecycle and states ? 10
(b) What are different security considerations in J2ME ? 5
(c) What are the differences between J2ME and other flavors of java for example J2SE or j2EE ? 5
5. (a) Write a note on MVC architecture. 10
(b) What are JDBC drivers, state its types and elaborate each of them ? 10
6. (a) Explain life cycle of servlet. 10
(b) Write a note on web centric approach and EJB centric approach of creating web applications. 10
7. (a) Explain various classes in Games API. 10
(b) Write a note on :- 10
 - (i) Obfuscator
 - (ii) Bluetooth Architecture.
