

TE-VI | I.T/S/W Engg/VI/CBGS | 16-05-2017

Software Engg

Q. P. Code: 13499

Time 3 hours

Note: Question No. 1 is Compulsory
Attempt any 3 questions from the remaining questions.



Marks 80

Q.1

- Explain software process framework
- Explain Aspect oriented development
- Elaborate on principles that guide process and practice
- What is metric? Explain project and process metrics.

20

Q.2

- What is evolutionary model? Compare prototype and spiral model
- Explain agility principles. Explain XP agile development process

10

10

Q.3

- What is the need of creating models? Explain modeling principles
- Explain requirements engineering activities. In which requirements engineering activity you will consider stakeholders.

10

10

Q.4

- Explain design concepts. What is coupling and cohesion? What is expected more? Why
- What is quality? Explain McCall's Quality Factors. List six quality attributes for ISO 9126

10

10

Q.5

- Differentiate between
i. Validation and Verification ii. White box and Black box iii. Alpha and Beta
- Draw control flow graph, find independent paths, cyclomatic complexity and design test cases for the following PDL

10

10

```
if(c1 or c2)
  while(c3) s1;
else
  do s2; while(c4);
s3;
```

Turn Over



Q. P. Code: 13499

2

Q.6.

- a) Identify three risks associated with your final year project. Perform risk assessment and prepare RMMM plan. 10
- b) List any five configuration items produced during SDLC. Explain change control process. 10



TE-SEM: V. (CBGS) - IT

Q.P. Code :13053

[Time: 3 Hours]

[Marks: 80]

Please check whether you have got the right question paper.

- N.B:
1. Question no 1 is compulsory
 2. Attempt any three questions out of remaining five.
 3. Figures to the right indicate full marks.
 4. Assume suitable data wherever necessary.

- Q.1 a) What is CORBA? Explain types of method invocation in CORBA. 05
- b) Explain various kind of message buffering techniques used in IPC. 05
- c) Explain Cristian's algorithm for distributed clock synchronization. 05
- d) Explain Stateful and stateless server implementation with an example. 05
- Q.2 a) Explain various transparencies in distributed system. 10
- b) What is code migration? Explain various approaches to code migration. 10
- Q.3 a) What are characteristics of SOA? Explain SOA life cycle. 10
- b) What is dead lock? Explain methods for deadlock avoidance. 10
- Q.4 a) What is Mutual Exclusion? Explain Distributed Mutual Exclusion algorithm. 10
- b) Explain client-centric consistency models in distributed system. 10
- Q.5 a) How is sequential consistency model implemented if Replicated Migrating Blocks are used in distributed shared memory implementation. 10
- b) Why should we use EJB? Explain the life cycle of different types of beans with proper diagram. 10
- Q.6 White short note on the following: 20
- a) Different forms of RPC call semantics
 - b) Different distributed deadlock detection algorithms with example.
 - c) The .NET architecture with diagram
 - d) Process migration in heterogeneous system.

T.E. SEM VI / IT/ CBGS / MAY 2017



Q.P. Code: 18254

Duration: 03 hrs

Marks:80



Note: 1) Question 1 is compulsory.

2) Solve any 3 questions from remaining questions.

1. a) Consider an Online Shopping Site identify vulnerability, threat and attack. (5)
- b) Explain CIA security goals. (5)
- c) Describe TCP Syn Flood attack. (5)
- d) What are types of Malicious codes? (5)

2. a) Explain the types of Non-Malicious Codes – Buffer Overflow, Incomplete Mediation & Race Conditions with an example. (10)
- b) Explain Transport mode and Tunnel mode of IPSec and mention under which scenarios both modes can be used. (10)

3. a) What is Denial of Service attack? List and explain different techniques to perform DOS attack. Explain defence mechanism against DOS. (10)
- b) How the single sign on is achieved in Kerberos protocol? What is the concept of ticket in this protocol? (10)

4. a) Explain the need of Intrusion Detection System (IDS)? Differentiate between signature based and anomaly based IDS. State advantages and disadvantages of each. (10)
- b) What is Token Based Authentication? Explain its types. (10)

5. a) What is Digital Signature? Explain how it is created by sender and verified by receiver. (10)
- b) Explain steps of RSA algorithm with an example and list real time applications where RSA can be used. (10)

6. Write short notes on: (any four) (20)
 - a) Federated Identity Management
 - b) Covert Channel
 - c) SQL Injection attack with example
 - d) Biometric authentication
 - e) Honey pots

I.T. / T.E / Sem V / CBGS / May 17 / 02 / 06 / 12

T3326 / T0907 DATA MINING AND BUSINESS INTELLIGENCE

Q.P. Code :13464

(3 Hours)

Total Marks:80



N.B. : (1) Question No. 1 is compulsory
(2) Attempt any three questions out of remaining.

- Q.1 a Explain multilevel association rules with example. 10
b Explain business intelligence issues. 10
- Q.2 a Explain BIRCH algorithm with example. 10
b Explain data mining steps in KDD. Explain its architecture. 10
- Q3 a Explain different visualization techniques that can be used in data mining. 10
b Explain classifier accuracy evaluation techniques. 10
- Q4 a Define classification, its issues and explain ID3 algorithm. 10
b Explain K-mean clustering with suitable example. 10
- Q5 a Design a BI system for fraud detection. Explain All steps from data collection to decision making. 10
b Explain box plot summary with example. 10
- Q6 a Explain data preprocessing phase for data mining. 10
b Explain outlier analysis. 10

Q.P. Code : 595101

(3 Hours)

[Total Marks :80

- N.B. : (1) Question 1 is compulsory.
(2) Attempt any **three** from remaining Questions.
(3) Assume suitable data wherever necessary.
(4) **Figure** indicates marks.

1. (A) Create a web page to displays border effects by using transition effects in CSS3. Assume suitable parameters if required. 10
(B) Explain in detail JSON Mashup with neat diagram. 10
2. (A) Explain in detail Responsive Web Design with an example. 10
(B) Define Media Query? Explain Media Query with an example. 10
3. (A) Explain in detail AJAX web application model with neat diagram. 10
(B) Explain in detail Pseudo-Classes and Pseudo-Elements in CSS3 with example. 10
4. (A) Define XML sitemaps? List out the different types of sitemaps. Also explain in detail the main benefits of using XML sitemaps. 10
(B) Explain Query Selector with an example. 10
5. (A) Discuss in detail HTML 5 various web communication techniques. 10
(B) Discuss the strategic Goals of a SEO Practitioner. 10
6. (A) Discuss the strengths and weaknesses of SWOT analysis. 10
(B) Explain in detail REST and WS. 10