

MCA (SEM-V)
SOFTWARE TESTING
(MAY-2018)

Q.P. Code: 22698

Duration: 3 hours

Total Marks: 100

- N.B.** (1) Question No.1 is compulsory
(2) Answer any 4 of the remaining questions
(3) Figures to the right indicate full marks

- Q.1 A) What are the differences between functional testing and Non-functional testing? Explain load, stress and performance testing in brief. 10
- B) Explain the difference between verification and validation. Explain how these activities play role in v- model? 10
- Q.2 A) What is static testing and dynamic testing? Explain. What are the test tools for static and dynamic testing? 10
- B) Write are the different steps involved in the review process. 10
- Q.3 A) Compare black box testing and white box testing. Explain with the help of an example. 10
- B) Explain the test objectives, test environment and test strategies for unit testing. 10
- Q.4 A) Explain cost and economy aspects of testing. 10
- B) What is State Transition Testing Technique? Draw the transition tree for a Stack. 10
- Q.5 A) What is Incident Management? Explain Incident reporting and Incident Status Model in detail. 10
- B) Explain General principles of testing. What is the psychology of testing? 10
- Q.6 A) Why test cases are prioritized? What are the criteria for prioritizing the test cases? 10
- B) Describe criteria for selection and introduction of test tools. 10
- Q.7 Write short notes on any four: 20
- (a) Integration Testing
 - (b) Intuitive and Experience Based Testing
 - (c) OO testing
 - (d) Software Quality
 - (e) Test exit criteria

MCA (SEM-V)
WIRELESS TECHNOLOGY
(MAY-2018)

Q. P. Code: 40268

Total Marks: 100

(3 Hours)

- N.B. :**
- 1) Question No.1 is **compulsory**.
 - 2) Attempt any **four** from the remaining **six** questions.
 - 3) Figures to the right indicate full marks.

- Q1. (a) What is spread spectrum? What are its advantages? Explain any one spread spectrum technique with suitable illustration. [10]
- (b) What is Handoff? Explain different types & strategies of Handoff in cellular Networks? [10]
- Q2. (a) What are piconet and scatternet? Explain various protocols supported by Bluetooth protocol architecture. [10]
- (b) Explain IEEE 802.11 architecture and the services provided by the system. [10]
- Q3. (a) What does (n, k, K) mean in convolution code? Explain (2, 1, 3) convolution code with example. [10]
- (b) What is CDMA? Compare CDMA with TDMA and FDMA Techniques. [10]
- Q4. (a) What are the advantages and disadvantages of wireless LAN over wired LAN? Explain why CSMA/CD cannot be implemented in wireless LAN. [10]
- (b) Describe the WAE architecture and WAP protocol stack in brief [10]
- Q5. (a) What is WML and WML Script? In brief, describe WTLS security services. [10]
- (b) Describe Symbian OS features. [10]
- Q6. (a) What is WIMAX? Describe WIMAX network reference model along with its features. [10]
- (b) Explain the basic components of GSM architecture. What is the role of Mobile switching center in roaming? [10]
- Q7. Write short notes on the following (Attempt any **Four**) [20]
- (a) Mobile IP
 - (b) WPA
 - (c) Antenna
 - (d) Multiplexing
 - (e) Impairments In Wireless Transmission

MCA (SEM-V)

DISTRIBUTED COMPUTING

(MAY-2018)

(3 hours)

Q. P. Code: 34869

[Total Marks: 100]

- N.B.:** 1) Question 1 is compulsory
2) Answer any **four** of the remaining **six** questions
3) All questions carry **equal** marks

- Q1. A. Explain the differences between load balancing and load sharing approach (10)
B. What are election algorithms? Explain with the help of a diagram (10)
- Q2. A. Explain group communication in message passing (10)
B. What is a critical section? Explain mutual exclusion (10)
- Q3. A. Explain RPC mechanism (10)
B. What are the desirable features of a good process migration mechanism? (10)
- Q4. A. What are the desirable features of a good message system? (10)
B. Discuss the issues in design of Distributed Systems (10)
- Q5. A. What is DSM? Explain the advantages of DSM (10)
B. What are the desirable features of a good naming system? (10)
- Q6. A. Discuss different file models (10)
B. Explain the difference between workstation and workstation server model (10)
- Q7. Write short note on the following (**any four**) (20)
- A. Process migration
B. Clock drift
C. Thread model
D. Middleware

MCA (SEM-V)
ADVANCED WEB TECHNOLOGIES
(MAY- 2018)

QP Code : 25677
Total Marks: 100

(3 Hours)

- N.B. :**
- 1) Question No.1 is **compulsory**.
 - 2) Attempt any **four** from the remaining **six** questions.
 - 3) All questions carry equal marks.

- 1 (a) What is polymorphism? Explain Compile and Run time polymorphism. (10)
(b) Write a program in .NET to count no of user online. (10)
 - 2 (a) Explain implicit objects of JSP. (10)
(b) What are web Services ? Explain SOAP and WSDL. (10)
 - 3 (a) What is state management technique ? Explain Server side state management technique (10)
(b) What is ASP.net? Explain ASP.net Page Life cycle. (10)
 - 4 (a) Explain Web search engine and web crawling. (10)
(b) Difference between ASP .net and JAVA. (10)
 - 5 (a) What is c# Exception handling? Explain with the help of example. (10)
(b) Explain c# data types in detail. (10)
 - 6 (a) What is ADO .net disconnected architecture? Explain steps to connect database. (10)
(b) What is ASP .net compilation process? Explain CLR in detail. (10)
 - 7 Short Notes. (Any four) (20)
 - a) Servlet .
 - b) CTS.
 - c) Semantic Web.
 - d) Silverlight.
 - e) Update panel control.
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NOTE:

- I. Question No. 1 is **Compulsory**.
- II. Attempt any four out of remaining six
- III. Elaborate each answer with the help of an **example**

1. (A) What do you mean by Demand forecasting? What are types of demand and the characteristics of a forecast? **10**
(B) Define and Differentiate between JIT and VMI. **10**
2. (A) Explain the role of IT in demand forecasting in SCM. **10**
(B) Explain traditional and modern approaches to SCM. **10**
3. (A) Explain warehousing in detail and its types used significantly in SCM industries. **10**
(B) Explain push-pull model in detail with one real time market example. **10**
4. (A) Explain how Information Technology and Internet plays important role in SCM, explain with example. **10**
(B) State different parties involved in the supply chain and by giving appropriate examples explain the role of each party involved. **10**
5. (A) What are different transport formats and different modes of transportation? **10**
(B) Explain in detail cycle view of supply chain? Give one real time example of any current business model. **10**
6. (A) Explain Customer Life cycle in detail. **10**
(B) Explain risk management forecasting in detail. **10**
7. Explain any four of the following terms : **20**
(A) E.O.Q
(B) Benchmarking
(C) Classical inventory management
(D) Trends in IT relevant to SCM
(E) Role of Packaging in SCM.

MCA (SEM-V)
ELECTIVE – 2
SERVICE ORIENTED ARCHITECTURE
(MAY- 2018)

Q.P. Code :02855

[Marks:100]

Please check whether you have got the right question paper.

- N.B:**
1. **Q. 1 is compulsory.**
 2. **Attempt any four questions from Q. 2 to Q.7.**
 3. **Figures to right indicate marks.**

- | | | |
|------------|---|-----------|
| Q.1 | Write short notes on any 4 | 20 |
| | a. Service Orchestration | |
| | b. Service Life Cycle | |
| | c. Drivers of SOA | |
| | d. Contemporary SOA | |
| | e. SOA Governance | |
| Q.2 | a) Design Business and client Process Services for “Mail Order”. | 10 |
| | b) Define SOA. What are the promises and challenges of SOA? | 10 |
| Q.3 | a) Explain Service Component Architecture. | 10 |
| | b) Write about Principles of Service Design? How are client services designed? | 10 |
| Q.4 | a) Explain how service principles inter related with each other. | 10 |
| | b) Explain different messaging pattern used in SOA with relation SOAP, WSDL. | 10 |
| Q.5 | a) Differentiate between service orientation and object orientation in SOA. | 10 |
| | b) What is the Due Diligence Strategy? Explain in detail. | 10 |
| Q.6 | a) Explain the importance of Documents in Business Process Model. | 10 |
| | b) Explain orchestration and choreography operation performed using web services. | 10 |
| Q.7 | a) How SOA reference model is related to | 10 |
| | 1. Minimum term 2. 9 month 3. 18 months 4. Long term. | |
| | b) Explain different messaging pattern used in SOA with relation SOAP, WSDL. | 10 |

MCA (SEM-V)

ELECTIVE – 2

CYBER LAWS & INTERNET LEGISLATURE

(MAY-2018)

Q.P.Code:01513

(3 Hours)

Total Marks: 100

N.B.: (1) Q. No. 1 is compulsory.

(2) Attempt any four from Q.2 to Q.7.

(3) Figures and diagrams to right indicate marks.

(4) All sub questions should be grouped and answered together.

1. A. ICICI bank customers received an e-mail from someone who posed as an official of the bank and asked for sensitive information like the account holder's Internet login name and password and directed them to a web page that resembled the bank's official site. The e-mail seemed so genuine that some users even clicked on the URL given in the mail to a web page that very closely resembled the official site. (10)
- Some customers wrote in to find out what the e-mail was about. The bank officials registered a complaint with the police.
- The scam was finally discovered when an assistant manager of ICICI Bank' received e-mails by the bank's customers seeking to crosscheck the validity of the e-mails with the bank.
- a) Under what type of cyber crime does the above case fall? Which Section can the criminals be booked for the above crime? Name the Sub-section. What penalty would the criminals face under ITA 2000 Act?
- b) What precautions must the owners of the website take to avoid such incidents?
- B. Explain the ITA 2000 act in detail. (10)
2. A. Explain cyber terrorism and cyber defamation. Write any two cases related to cyber defamation. (10)
- B. What is a patent? Explain the provisional patents and international patents. (10)

[TURN OVER]

3. A. What is data diddling? Explain with any two cases. (10)
B. Explain various crimes against computers and computer systems. (10)
4. A. Explain in detail the contracting and licensing softwares. (10)
B. What is a copyright? What are the requirements for obtaining copyright? (10)
5. A. Explain Children's Internet protection act with two case studies. (10)
B. Explain the concepts of Intellectual Property Rights. Explain the need to protect intellectual property. (10)
6. A. Discuss patent. What do you mean by domain name and disputes in domain name. (10)
B. Explain in detail digital signature and digital identity. (10)
7. Write Short notes on(any four): (20)
1. Consumer Protection Act.
 2. Salami attack with case study.
 3. Anti spam laws
 4. Contracts for IP protection.
 5. Internet Filtering Encryption.
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MCA (SEM-V)
ELECTIVE - 2
KNOWLEDGE MANAGEMENT
(MAY-2018)

[Time: 3 hours]

Q.P. Code: 38596

[Total Marks: 100]

Please check whether you have the right question paper

- Note:
- Question 1 is compulsory
 - Attempt any 4 from Question No. 2 to Question No.7

- Q1 a) What is Knowledge Management? State the various Knowledge Management Strategies. [10]
b) Explain in detail the balanced score card management system [10]
- Q2 a) Explain the significance of knowledge as a strategic asset in an organization. [10]
b) Who are Knowledge workers? Explain their role in the learning organization [10]
- Q3 a) Describe the different types of knowledge management infrastructure and evaluate their effectiveness in knowledge [10]
b) Explain the Life Cycle of Knowledge Management System. [10]
- Q4 a) Elaborate on the knowledge acquisition process with suitable examples [10]
b) Explain components of knowledge culture. How do you bring effective knowledge culture? [10]
- Q5 a) Explain the drivers of Organizational Knowledge Management [10]
b) Explain how technology can be an enabler of knowledge management. [10]
- Q6 a) Briefly enumerate the ways in which knowledge can impact an organization. [10]
b) Discuss some knowledge management applications and its uses in real time environment. [10]
- Q7 Write short note on any four of the following: [20]
a. Knowledge management tools and techniques
b. Smart Network.
c. Users versus Knowledge Workers
d. Knowledge audit
e. Infrastructure of Knowledge Management.
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- N.B.** (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** from the remaining **six** questions.
(3) Illustrate answers with neat sketches wherever required.
(4) Answers to questions should be **grouped** and written **together**.
- Q. 1 (a) What is Multimedia? Explain in detail the importance of Multimedia in real world. **10**
(b) Given a string, GLOBE. Characters G, L, O, B, and E have the following probability of occurrence:
 $p(G) = 0.16$
 $p(L) = 0.51$
 $p(O) = 0.09$
 $p(B) = 0.13$
 $p(E) = 0.11$
Generate Huffman code tree? Show weight order and how many bits are required to transmit the complete string GLOBE. **10**
- Q.2 (a) Explain various principles of Animation? **10**
(b) List and Explain the skills required in designing Multimedia Application. **10**
- Q. 3 (a) Differentiate between Vector drawn objects and bitmaps? **10**
(b) List and Explain various Multimedia Authoring tools in detail. **10**
- Q. 4 (a) What is MIDI? Explain the advantages and disadvantages of MIDI audio over digital audio. **10**
(b) What is Compression? Explain why lossy data compression is sometimes preferred over lossless? **10**
- Q. 5 (a) Explain various considerations involved in preparing a product for distribution and delivery? **10**
(b) Discuss the important role of Planning and Costing in Multimedia? **10**
- Q. 6 (a) Explain MPEG audio compression process in detail. **10**
(b) Explain analog display standards and digital display standards in detail. **10**
- Q. 7 Write short notes on **any four** **20**
(a) Entropy Encoding Run Length
(b) Image File Formats
(c) Hypertext and Hypermedia
(d) Video Recording and Tape Formats
(e) User Interface Design
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