

MCA (SEM-V)
SOFTWARE TESTING
(DEC- 2019)

(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) Explain the role of testing in SDLC. Explain System testing and its importance. 10
 B) Which are fundamental test processes? 10
- Q.2 A) Why test cases are prioritized? What are the criteria for prioritizing the test cases? 10
 B) What is review? What are the positive effects of review? Explain work steps involved in review process. 10
- Q.3 A) Explain the difference between verification and validation. Explain how these activities play role in V- model? 10
 B) Describe criteria for selection and introduction of test tools. 10
- Q.4 A) Explain cost and economy aspects of testing. 10
 B) What is decision table testing? Draw decision table for a triangle problem; i.e. three sides of triangle a, b, c respectively forms a triangle or not. Write test cases for the same. 10
- Q.5 A) What is Incident Management? Explain Incident reporting and Incident Status Model in detail. 10
 B) What are the differences between functional testing and Non-functional testing? Explain load, stress and performance testing in brief. 10
- Q.6 A) What is static testing and dynamic testing? Explain. What are test tools for static and dynamic testing? 10
 B) Explain the test objectives, test environment and test strategies for unit testing. 10
- Q.7 Write short notes on any four: 20
 (a) Use case testing
 (b) Test exit criteria
 (b) Intuitive and Experience Based Testing
 (c) Software Quality
 (d) Gray box testing

MCA (SEM-V)
WIRELESS TECHNOLOGY
(DEC- 2019)

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) Explain GSM architecture in detail. [10]
 (b) List the benefits of spread spectrum? Describe Direct Sequence spread spectrum technique with suitable illustration. [10]
- Q2. (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) Explain the various impairments that can affect wireless communication [10]
- Q3. (a) What are convolution codes? Draw an encoder with value $k=1, n=2, K=3$. Give example of its usage. [10]
 (b) In Bluetooth what is piconet and scatternet? Discuss the inquiry and paging procedure of Bluetooth. [10]
- Q4. (a) Explain the term fading. How the different types of fading affect the mobile environment. [10]
 (b) Explain architecture and services provided by IEEE 802.16 [10]
- Q5. (a) What is GPRS. Explain the architecture and component in detail. [10]
 (b) Describe J2ME architecture with respect to various configuration and profiles. List various states of midlet life cycle. [10]
- Q6. (a) Describe WAP programming model in detail. [10]
 (b) Explain the use of WPA and WPA2 in implementing WiFi Security [10]
- Q7. Write short notes on the following (Attempt any **Four**) [20]
 (a) WML and WML Script
 (b) WCDMA
 (c) Antennas
 (d) Digital Modulation Techniques(ASK,FSK,PSK)
 (e) Frequency reuse

MCA (SEM-V)
DISTRIBUTED COMPUTING
(DEC-2019)

(3 hours)

[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 different distributed computing models (10)
B. Discuss desirable features of Distributed File System (10)
- Q2. A. What is Distributed Shared Memory? Explain its architecture (10)
B. Explain group communication in message passing (10)
- Q3. A. What are the desirable features of a good process migration mechanism? (10)
B. What is critical Section? How to implement Mutual Exclusion algorithm? (10)
- Q4. A. Explain various clock synchronization algorithms used in a distributed system. (10)
B. Explain the RPC mechanism (10)
- Q5. A. Explain the load sharing approach in distributed systems (10)
B. What are the desirable features of a good naming system? (10)
- Q6. A. Discuss the advantages and disadvantages of the various data locating mechanisms in a distributed shared memory system that uses Non-Replicated Migrating Blocks (NRMB) strategy (10)
B. Explain different File models? (10)
- Q7. Write short note on the following (any four) (20)
- A. Load balancing
B. Network Operating System
C. Ring algorithm
D. Thread Model

MCA (SEM-V)
ADVANCE WEB TECHNIQUES
(DEC- 2019)

Q.P.Code: 40333

(3 Hours)

[Total Marks: 100]

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

1. (a) Explain DTD and XML schema in detail. (10)
- (b) What is session tracking? How is it achieved in servlets (10)
2. (a) What is the role of CLR and CTS in the .Net Framework? (10)
- (b) What are the various access modifiers in C#. (10)
3. (a) Explain any 5 File handling classes. (10)
- (b) How is Inheritance achieved in C#? (10)
4. (a) What are the various tags in JSP? (10)
- (b) What is the flow of page events in ASP.Net page? (10)
5. (a) Briefly explain the various Server controls. (10)
- (b) With a suitable example explain ADO.Net. (10)
6. (a) List out the steps to create and consume a Web service with an example (10)
- (b) Differentiate between Java and .Net (10)
7. Write Short Notes on :- (any 4) (20)
 - a) Request dispatching
 - b) Semantic Web
 - c) Http sessions
 - d) SEO
 - e) SOA

MCA (SEM-V)

- ELECTIVE -

LOGISTICS & SUPPLY CHAIN MANAGEMENT

(DEC- 2019)

Q. P. Code: 37569

Total Marks: 100

Time: 3 Hrs

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) Explain role of IT in Forecasting in detail **10**
(B) Explain various elements in SCM **10**
2. (A) Explain briefly benchmarking in supply chain. **10**
(B) Explain what is JIT & vendor managed inventory **10**
3. (A) Explain Demand planning & Forecasting in detail **10**
(B) Explain the terms packing, Repacking & forwarding in Logistics Management **10**
4. (A) Explain the process of Private Fleet Management **10**
(B) Describe cycle view of supply chain **10**
5. (A) What is Role of Distribution. Explain Distribution network in Supply chain **10**
(B) Explain use of Data mining tools in SCM **10**
6. (A) Explain Transportation modes and formats in detail **10**
(B) Explain role of IT in network Design decisions in supply chain **10**
7. Attempt any four **20**
(A) classical inventory Management
(B) Routing Decisions
(C) Role of internet in SCM
(D) elements of logistics
(E) Trends in packaging

MCA (SEM-V)

- ELECTIVE -

CYBER LAWS & INTERNET LEGISLATURE

(DEC- 2019)

Total Marks: 100

(3 Hours)

- N.B. (1) Question No. 1 is compulsory.**
(2) Attempt any four questions from Q.2 to Q.7.
(3) Answers to questions should be grouped and written together.
(4) Figures and diagrams to right indicate marks.

- Q.1 A Explain what is cyber squatting and typo squatting. Write any two cases related to cyber squatting. 10
B What is a patent? Explain the patent duration and patent fees. 10
- Q.2 A Explain cyber terrorism and cyber defamation. Write any two cases related to cyber defamation. 10
B Explain the ITA 2000 act and ITA 2008 act in detail. 10
- Q.3 A Explain the contract law. Explain in detail the essential elements of contract with illustrations. 10
B What is a copyright? What are the requirements for obtaining copyright? 10
- Q.4 A What is a trademark? Explain the different types of marks. Explain what is trademark distinctiveness continuum? 10
B Explain in detail electronic signature and digital signature. 10
- Q.5 A Explain the provisional patents and international patents. 10
B Explain Children's Internet protection act with two case studies 10
- Q.6 A Explain various crimes against computers and computer systems. 10
B. What is data diddling? Explain with any two cases. 10
- Q.7 Write Short notes on(any four): 20
a) Consumer protection act.
b) Salami attack with case study.
c) Anti-spam laws.
d) Contracts for IP protection.
e) Internet Filtering Encryption.

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

- Q.1 A) Why- Business Process Re-engineering is needed? 10
B) Explain with diagram of Organizational Network Analysis? 10
- Q.2 A) Explain the procedure for designing the KM team. 10
B) Discuss different Organizational Knowledge Management. 10
- Q.3 A) Explain the. Life cycle of KM system. 10
B) Describe Global Knowledge Economy and its benefits? 10
- Q.4 A) Define legacy development methods and result driven incremental methodologies. 10
B) What is Nonka's model of Knowledge Creation? Draw the architecture. 10
- Q.5 A) Discuss Legacy development methods. 10
B) What are intangible assets monitor? 10
- Q.6 A) Discuss the various stages involved in an organizational knowledge management frame work. 10
B) Write the implementation strategies used to design, develop and deploy an effective KM system. 10
- Q.7 Write short note on any four: 20
i. KM framework
ii. Concept mapping
iii. Knowledge indexing
iv. K-Role classification and organization
v. RDI methodology

MCA (SEM-V)**- ELECTIVE -****MULTIMEDIA****(DEC- 2019)**

Marks: 100

Time: 3 Hrs.

- 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 is ALPHA Development and BETA development? Explain **10**
 (B) Discuss the types of audio file formats used in multimedia with their limitations? **10**
2. (A) Explain primary stages in a multimedia project **10**
 (B) Discuss the important role of Planning and Costing in Multimedia? **10**
3. (A) Explain various Image file formats? **10**
 (B) Explain different Types Of Multimedia Structures **10**
4. (A) What is CBT? Explain the uses of multimedia in CBT? **10**
 (B) Explain types of graphics. Differentiate between vector image and bitmap image. **10**
5. (A) Explain Multimedia Authoring Tools And Its Different Types In Details? **10**
 (B) Explain in details various types of animation **10**
6. (A) Explain MPEG audio and video compression **10**
 (B) List & Explain Analog Display Standards And Digital Display Standard? **10**
7. Explain Any Four Of The Following Terms : **20**
 - (A) MIDI
 - (B) Digital sound Sampling.
 - (C) Designing the user interfaces
 - (D) Hypermedia
 - (E) Hot Spots, Hyperlinks and buttons

MCA (SEM-V)**- ELECTIVE -****SERVICE ORIENTED ARCHITECTURE****(DEC- 2019)**

(3HOURS)

[TOTAL MARKS: 100]

N.B: (1) Q.1 is compulsory.

(2) Answer any four questions from Q2 to Q7

(3) Figures to the right indicate marks.

(4) Assume any additional information but justify the same

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|-----|---|----|
| Q1. | a) What are SOAP and WSDL standards? Explain how messaging is performed using SOAP. | 10 |
| | b) What is a business process modeling? Explain in detail with suitable example. | 10 |
| Q2. | a) Describe three Service Layer Abstractions in SOA in detail. | 10 |
| | b) Explain the concept of metadata exchange; describe the specifications of web service metadata exchange suitable example. | 10 |
| Q3. | a) Explain the distributed Internet Architecture with suitable illustration. | 10 |
| | b) Explain different components of SOA and their Functionalities with neat diagram. | 10 |
| Q4. | a) What are the features of SOA governance and explain the challenges faced in using SOA governance? | 10 |
| | b) What are common pitfalls for adoption of SOA? Explain with appropriate example. | 10 |
| Q5. | a) Describe SO life Cycle and its components along with Security specifications used in SOA. | 10 |
| | b) Explain Difference between Corba, RPC, RMI. | 10 |
| Q6. | a) What is atomic transaction? Explain with web services and SOA activity management. | 10 |
| | b) Demonstrate the Web service framework characteristics in detail. | 10 |
| Q7. | Write a short note on Any Four | 20 |
| | a) Orchestrations in SOA | |
| | b) Web services-Addressing | |
| | c) Reliable messaging in web Service | |
| | d) Choreography performed in Web Services. | |
| | e) Service Infrastructure | |