

FACULTY OF INFORMATICS

MCA III - Year I - Semester (Main) (Backlog) Examination, Jan. / Feb. 2015

Subject : Mobile Computing (Elective-III)

Time : 3 Hours

Max. Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit-I

- 1 (a) What is spread spectrum ? Explain.
(b) Discuss in detail about FDMA and CDMA.

OR

- 2 (a) Write note on Signal propagation.
(b) Explain about ASK, FSK and PSK.

Unit-II

- 3 (a) What are the reasons to perform hand over in GSM? Discuss the possible scenario's of handover in GSM.
(b) Briefly explain about GPRS architecture reference model.

OR

- 4 (a) Write note on satellite systems.
(b) Explain the multimedia object transfer protocol for data transfer in Digital audio broadcasting.

Unit-III

- 5 (a) Explain phases of the HIPERLAN I EY-NPMA access scheme.
(b) Differentiate between infrared and radio transmission.

OR

- 6 (a) Explain handover (in wireless ATM) with reference to
(i) reference model
(ii) requirements
(iii) different types of handovers
(b) Describe location management requirements of wireless ATM.

Unit-IV

- 7 Discuss in detail about tunneling and encapsulation.

OR

- 8 (a) Explain about DSDV routing protocol of mobile Ad-hoc networks.
(b) What are the advantages of I-TCP and what are the problems due to segmentation in I-TCP?

Unit-V

- 9 (a) Describe the basic objectives of WAP solutions.
(b) Briefly explain the components and interfaces of WAP architecture.

OR

- 10 (a) Write notes on WWW.
(b) Describe the features of windows CE.

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MCA III - Year I - Semester (Old) Examination, Jan. / Feb. 2015

Subject: Information Security (Elective-III)

Time: 3 Hours

Max. Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit-I

- 1 (a) Briefly explain the history of Information Systems.
(b) What are the critical characteristics of Information?

OR

- 2 (a) Explain about Espionage of Trespass.
(b) Explain the attacks – Span and spoofing.

Unit-II

- 3 (a) Explain about Ethics across cultures.
(b) What is FOIA? Explain.

OR

- 4 Explain in detail about Risk Assessment.

Unit-III

- 5 (a) Write about SETA.
(b) What are the standards and practices in planning for security ?

OR

- 6 Explain the selection, configuration and implementation of Firewalls.

Unit-IV

- 7 Explain the Deployment and implementation of IDPs.

OR

- 8 (a) What are the protocols for secure communication?
(b) Explain any one cipher method.

Unit-V

- 9 Explain about Information Security Project Management.

OR

- 10 (a) Explain about Digital Forensics methodology.
(b) Discuss about Digital Signatures.

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M.C.A. III Year I – Semester (Main & Backlog) Examination, Jan. / Feb. 2015

**Subject: System Administration
(Elective – III)**

Time: 3 Hours

Max.Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit – I

- 1 a) Explain the features of awk command.
b) Write about different kinds of processes in Unix.
- OR**
- 2 a) Write about Unix system boot process.
b) Explain the causes of system crash.

Unit – II

- 3 a) Explain user authentication techniques.
b) Write about access control lists.
- OR**
- 4 a) Explain how to monitor CPU usage.
b) What is process priority? Explain how to change it.

Unit – III

- 5 a) Explain the process of adding a disk to a Unix System.
b) Explain mounting of CD-ROM on various Unix Systems.
- OR**
- 6 a) Write about the different backup strategies.
b) What are the factors to be considered in developing a backup plan.

Unit – IV

- 7 a) Explain the procedure to add a new host to TCP/IP network.
b) Describe NFS in detail.
- OR**
- 8 a) Explain net stat command with its options and sample output.
b) How do you configure e-mail account on Linux System?

Unit – V

- 9 a) Explain windows 2003 server configuration.
b) Write about user accounts in Windows 2003.
- OR**
- 10 a) Explain how Windows 2003 server provide security to file system.
b) Write about task manager in detail.

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M.C.A. III Year I – Semester (Main & Backlog) Examination, Jan. / Feb. 2015

**Subject: Rich Internet Applications
(Elective – III)**

Time: 3 Hours

Max.Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit – I

- 1 a) Write the need of Social Networking.
b) What are Folksonomies? Explain.
- OR**
- 2 a) Write the importance of software as a service in Web 2.0.
b) Discuss the applications of ANT.

Unit – II

- 3 a) Explain control statements in Java Script.
b) Write a Java Script code to find biggest of three numbers.
- OR**
- 4 Explain in detail about DOM and SAX Parsers.

Unit – III

- 5 a) Describe SOAP and WSDL.
b) Discuss about REST Services.
- OR**
- 6 Write short notes on:
a) Ajax b) XML

Unit – IV

- 7 a) How Flash Player is useful in building Rich Internet Applications?
b) What are Tree Controls? Explain.
- OR**
- 8 Give the overview of Action Script.

Unit – V

- 9 a) Explain how mashup is carried out using Flex and Ajax.
b) Discuss the Web services in Flex.
- OR**
- 10 Write briefly about the following:
a) Web Ontology Language
b) Semantic Web (Web 3.0).

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M.C.A. III Year I - Semester (Main & Backlog) Examination, Jan. / Feb. 2015

Subject: Software Project Management (Elective – III)

Time: 3 Hours

Max.Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit – I

- 1 (a) Discuss briefly about cost-benefit evaluation techniques.
(b) Discuss how to estimate effort for each activity in a project plan.

OR

- 2 Discuss about the following activities of stepwise planning.
i) Analyse project characteristics ii) Identify activity risks.

Unit – II

- 3 Discuss briefly about different process models.

OR

- 4 (a) Briefly explain Boehm's COCOMO model.
(b) Differentiate between precedence networks and CPM network.

Unit – III

- 5 (a) Explain briefly about risk identification and risk analysis.
(b) Discuss various categories of resources.

OR

- 6 (a) Discuss the strategies to consider when drawing up plans to bring a project back on target.
(b) What is software configuration management? How can it be managed? Why is SCM crucial to the success of large software development projects? Explain.

Unit – IV

7. (a) Enlist the main stages in contract placement.
(b) Explain the importance of team work.

OR

- 8 (a) Discuss the various terms of a contract.
(b) What is the approach that must be taken to select the right person for the job?

Unit – V

- 9 (a) What is software quality? Explain the importance of software quality.
(b) Explain the PRINCE 2 PLANNING TECHNIQUE.

OR

- 10 (a) Discuss the SEI CMM and CMMI process capability models.
(b) Discuss the software quality characteristics identified by ISO 9126.

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M.C.A. III Year I – Semester (New) (Main) Examination, Jan. / Feb. 2015

Subject: Research Methodology (Elective – III)

Time: 3 Hours

Max.Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit – I

- 1 What is the significance of research? Explain various research types and its benefits.
- OR**
- 2 Define a research problem. Explain the various techniques involved in it.

Unit – II

- 3 Elaborate the importance and source of literature survey in a good research.
- OR**
- 4 Explain the need of literature review and some guidelines for it.

Unit – III

- 5 What is research design? Describe the concepts relating to research design.
- OR**
- 6 How do you develop a research plan? Explain the use of standards and codes in it.

Unit – IV

- 7 Write a brief note on different types of analysis of data and also point out the significance of each.
- OR**
- 8 Explain how statistical software is used in the analysis of the research data.

Unit – V

- 9 Explain the style of writing a research report and the importance of references / bibliography in it.
- OR**
- 10 How do you write a research grant proposal? Explain.
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M.C.A. III Year I – Semester (New) (Main) Examination, Jan. / Feb. 2015

Subject: Software Testing (Elective – III)

Time: 3 Hours

Max.Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit – I

- 1 a) Explain Robustness and Worst case testing with reference to boundary value testing.
b) Explain the use of Decision-table based testing with an example.
- OR**
- 2 a) List and explain the limitations of boundary value analysis.
b) Write about Functional Testing explaining its significance.

Unit – II

- 3 a) Explain the approach of DD paths for path testing of triangle problem.
b) What is meant by slice-based testing? Explain with an example.
- OR**
- 4 a) Discuss briefly about gaps and redundancies analysis taking a suitable example.
b) Explain Dataflow Testing with an example.

Unit – III

- 5 a) Discuss about functional strategies which are useful for thread testing done as a part of system testing.
b) Explain briefly Interaction Testing.
- OR**
- 6 a) Explain the static interactions in single and multiple processors.
b) Differentiate between Progression Testing and Regression Testing.

Unit – IV

- 7 a) What are the implications of inheritance and polymorphism on object-oriented testing?
b) Discuss the issues in Object Oriented Testing.
- OR**
- 8 Explain briefly Integration Testing with respect to Object-Oriented Testing.

Unit – V

- 9 Describe Exploratory Testing with a suitable example.
- OR**
- 10 Write short notes on:
 - a) All Pairs Testing
 - b) Model-Based Testing
