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**Code : 1P2B51**

MCA V Semester Regular Examinations, Nov/Dec 2015

**Simulation and Modelling****Time: 3 hours****Max Marks: 60**

*Answer any FIVE of the following  
All questions carry equal marks (12 Marks each)*

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1. a) Distinguish between continuous and discrete systems 6M  
b) Write briefly on the principles used in Modeling 6M
2. a) Explain briefly about Cobweb Models 6M  
b) Use a Cobweb model to investigate a market in which the supply and demand functions are:  
 $D=17.91/p^{1/2} - 4.66$  and  $9S=5.0(p-1)$ . Assume market is always cleared 6M
3. a) Write briefly on continuous system simulation languages 6M  
b) Write a CSMP III program for the automobile wheel suspension problem 6M
4. a) Write briefly on Continuous uniformly distributed random number 6M  
b) Describe Computer generation of random numbers 6M
5. a) Explain about various queuing disciplines 6M  
b) Define the queuing measures:
  - i) Traffic intensity
  - ii) Server utilization
  - iii) mean number of entities in system and
  - iv) mean time spent in waiting 6M
6. a) Explain with a block diagram, the three main tasks to be performed in simulation programming 6M  
b) Draw the flowchart and explain about the steps to be executed in the simulation algorithm 6M
7. Explain about the various blocks used in GPSS programs using the symbols 12M
8. Explain with a block diagram and flowchart the various steps needed for execution of a simulation algorithm in GPSS 12M

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Hall Ticket Number :

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**R11**

**Code : 1P2B52**

MCA V Semester Regular Examinations, Nov/Dec 2015

**.Net Technologies**

**Time: 3 hours**

**Max Marks: 60**

*Answer any FIVE of the following  
All questions carry equal marks (12 Marks each)*

**\* \* \* \* \***

1. a) Explain about common language runtime briefly. 6M  
b) What is just in time compiler explain it. 6M
2. a) Explain the structure of C# class with example. 6M  
b) How can you create delegate methods anonymously? Explain it. 6M
3. a) Explain the properties of array classes and jagged array with example. 6M  
b) Explain the constructs for defining regular expression and regex class. 6M
4. a) What is main function of data adapter? Explain four properties that allow us to control how updates are made to the server. 6M  
b) Describe how to resolve changes to the data in a data set back to the data source. 6M
5. a) How to use session and cookies in ASP .Net using with example. 6M  
b) How create a setup and deployment project by using ASP .net explain it. 6M
6. a) How to writing XML documents using XML text writer with appropriate program. 6M  
b) Explain about XML document object model. 6M
7. a) What are the major components of web services protocol explain it. 6M  
b) Explain about relationship between UDDI and WSDL. 6M
8. a) What are the emulators using mobile application explain it. 6M  
b) Explain about .net mobile selection lists and selection list styles. 6M

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Hall Ticket Number :

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R11

Code : 1P2B5D

MCA V Semester Regular Examinations, Nov/Dec 2015

*Cloud Computing*

Time: 3 hours

Max Marks: 60

*Answer any FIVE of the following  
All questions carry equal marks (12 Marks each)*

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1. a) What is Cloud Computing? Explain the building blocks of Cloud Computing. 5M  
b) Describe various types of Cloud Computing. 7M
2. Elaborate on development of Cloud Computing. 12M
3. a) Briefly explain the essential features any Cloud Computing architecture must have. 4M  
b) Explain the architecture of Cloud Computing. 8M
4. a) How Cloud Computing useful for Community? Explain. 6M  
b) Write a note on Cloud Computing for corporation. 6M
5. Explain Cloud Computing collaboration on:  
(i). Contact Management  
(ii). Schedulers and Task Management  
(iii). Word Processing. 12M
6. Write a detailed note on evaluation of web mail services and instant messaging using cloud computing. 12M
7. a) What is meant by Social Networking? How to create groups on social network? 6M  
b) Explain about evaluation on line groupware. 6M
8. Briefly explain about  
(i). Exploring online book marking services.  
(ii). Exploring photo sharing communities. 12M

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Hall Ticket Number :

R11

Code : 1P2B54

MCA V Semester Regular Examinations, Nov/Dec 2015

**Software Architecture**

Time: 3 hours

Max Marks: 60

*Answer any FIVE of the following  
All questions carry equal marks (12 Marks each)*

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1. a) What is software architecture? And explain its importance. 4M  
b) What are the influential factors of the software architecture? Describe in briefly? 8M
2. Explain about  
a) Software organizational styles and patterns.  
b) Layered systems 12M
3. What is meant by repository? What are the software repositories? Differentiate simple and virtual repositories. 12M
4. a) What is a pattern? How to describe Design Patterns? 6M  
b) Explain about architectural patterns. 6M
5. a) What is the need of Design space? Explain its rules. 6M  
b) What are the Organizational requirement and explain its Quality factors? 6M
6. a) Describe the nature of formal models and its specification. 6M  
b) How to formalize the filters and pipes in architectural styles? 6M
7. Describe the applications of ADL's in system development, explain with suitable Examples. 12M
8. Explain about Organizational Implications of product line. 12M

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**Code : 1P2B5C**

<b>R11</b>
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MCA V Semester Regular Examinations, Nov/Dec 2015

**Software Project Management**

**Time: 3 hours**

**Max Marks: 60**

*Answer any FIVE of the following  
All questions carry equal marks (12 Marks each)*

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- 1. Explain merits and demerits of a waterfall model in detail 12M
  
- 2. a) What constitutes good software cost estimation? 6M  
b) What are the key processes that improved the overall software quality? 6M
  
- 3. a) Explain the principles of modern software management. 6M  
b) Explain about the artifact sets of the process in detail. 6M
  
- 4. Explain about the modern based software architecture using management and technical perspective. 12M
  
- 5. a) Explain about line of business organizations. 6M  
b) What is WBS and how it is helpful for planning in iterative process life cycle. 6M
  
- 6. a) List and explain the quality indicators. 6M  
b) Give brief description about the pragmatic software metrics. 6M
  
- 7. Explain about next generation software economics. 12M
  
- 8. Discuss in detail about the CCPDS – R. 12M

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Code : 1P2B53

R11

MCA V Semester Regular Examinations, Nov/Dec 2015

*UML and Design Patterns*

Time: 3 hours

Max Marks: 60

*Answer any FIVE of the following  
All questions carry equal marks (12 Marks each)*

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1. a) Discuss about the UML Architecture. 6M  
b) Packages are useful for organizing modelling elements into groups, discuss. 6M
2. a) Discuss about Use Case Diagrams. 6M  
b) Discuss about Activity Diagrams. 6M
3. a) Define Event and Signal in the context of State Machines and explain. 6M  
b) Write detailed notes on State chart diagrams. 6M
4. a) Explain the role of Deployment Diagrams in UML. 6M  
b) Explain the role of Component Diagrams in UML. 6M
5. Design patterns solve design problems – discuss. 12
6. a) Write short notes on Builder Pattern. 6M  
b) Write short notes on Factory Method Pattern. 6M
7. a) Write about the motivation and applications of Bridge Pattern. 6M  
b) Draw a typical Composite Structure and explain. 6M
8. a) Write detailed notes on Observer Pattern and its consequences. 6M  
b) Write detailed notes on Template Method, its applicability and consequences. 6M

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