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**R-15**

**Code: 5P2B5A**

M.C.A V Semester Regular & Supplementary Examinations November 2018

# Big Data

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit ( 5 x 14 = 70 Marks )

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**UNIT–I**

1. Describe the different characteristics of Big Data? 12M

**OR**

2. What is the importance of Big Data Analytics? 12M

**UNIT–II**

3. Construct the Inter and Trans Firewall Analytics with neat diagram. 12M

**OR**

4. Illustrate the basic building blocks of Hadoop. 12M

**UNIT–III**

5. Describe different data transformation phases for Hadoop Map Reduce. 12M

**OR**

6. Explain the integrating of different data stores to Hadoop Map Reduce. 12M

**UNIT–IV**

7. Explain the basic building blocks of Hadoop Map Reduce. 12M

**OR**

8. Explain the Hadoop Distributed File System 12M

**UNIT–V**

9. Describe the Big Data Analytic maturity model. 12M

**OR**

10. Outline the implementation of Big Data Analytics. 12M

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| Hall Ticket Number : | | | | | | | | | | |
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**R-15**

**Code: 5P2B52**

M.C.A. V Semester Regular & Supplementary Examinations November 2018

# .Net Technologies

Max. Marks: 60 Time: 3 Hours

Answer *all five* units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT–I**

1. a) Describe in detail the role of Common Language Runtime (CLR) in .NET Framework. 6M
   b) Explain the Salient features of Languages supported by .NET Framework. 6M

**OR**

2. a) Write about Assemblies and Executables in .NET 6M
   b) What is Name space? Explain about different namespaces in .NET Framework. 6M

**UNIT–II**

3. a) Mention the differences between classes and interfaces? Give examples. 6M
   b) What is Polymorphism? Explain Polymorphism with a Console application. 6M

**OR**

4. a) Explain the purpose of sealed class. 6M
   b) Write short notes on:
      (i) Exception handling
      (ii) MSIL Programming 6M

**UNIT–III**

5. a) How does ADO.NET connected and disconnected models differ from each other? Explain 6M
   b) What are the namespaces used in ADO.Net to connect to a database? List 6M

**OR**

6. a) Describe the steps to implement a database connectivity program using ADO.NET 6M
   b) Discuss about various properties of Data Column. 6M

**UNIT–IV**

7. a) Illustrate an ASP.NET Web application to display a Registration form using different controls. 6M
   b) What is Authentication? Explain all the authentication modes. 6M

**OR**

8. a) Briefly discuss about the Page life cycle events in ASP.NET, 6M
   b) State the advantages and disadvantages of Crystal Reports. 6M

**UNIT–V**

9. a) What is Web Service? Describe about Web Services Protocols. 6M
   b) Explain the steps and code to create and consume web service. 6M

**OR**

10. a) How do you call Web service from a Browser? Discuss. 6M
    b) Analyse the concept of AJAX technology with an example. 6M

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| Hall Ticket Number : | | | | | | | | | | |
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**R-15**

**Code: 5P2B53**

M.C.A. V Semester Regular & Supplementary Examinations November 2018

# Object Oriented Modeling and Design with UML

Max. Marks: 60 Time: 3 Hours

Answer *all five* units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT–I**

1. a) What is UML? Where can the UML be used? 6M
   b) What are the principles of Modeling? Explain? 6M

**OR**

2. Draw the architecture of a software-intensive system and explain? 12M

**UNIT–II**

3. a) Explain any three kinds of relationships? 6M
   b) Draw a class diagram, including minimum and maximum multiplicity for the following. The system stores information about two things: cars and owners. A car has attributes for make, model and year. The owner has attributes for name and address. Assume that a car must be owned by one owner and an owner can own many cars but that an owner might not own any cars (perhaps she just sold them all, but you still want a record of her in the system) 6M

**OR**

4. a) Describe interfaces, types and roles with examples. 6M
   b) What are the important aspects to be considered to model the vocabulary of a system 6M

**UNIT–III**

5. Explain the process of mapping designs to code. Take any example of interaction diagram and the process of creating methods from interaction diagrams. 12M

**OR**

6. a) Explain the significance of collaboration diagram. 6M
   b) Explain with example the include relationship and extend relationship in Use Cases 6M

**UNIT–IV**

7. a) What is a state chart diagram? Explain with an example? 6M
   b) How to build a thread safe abstractions? 6M

**OR**

8. a) Explain how to model the life time of an object 6M
   b) Write a short notes on events and signals 6M

**UNIT–V**

9. Explain the common modeling techniques related to component diagram 12M

**OR**

10. What does deployment diagram specify? Draw with example. 12M

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| Hall Ticket Number : | | | | | | | | | | |
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**R-15**

**Code: 5P2B54**

M.C.A. V Semester Regular & Supplementary Examinations November 2018

# Open Source Software

Max. Marks: 60 Time: 3 Hours

Answer *all five* units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT–I**

1. a) Briefly explain history of software? 6M
   b) "Open source is in wide spread successful use" justify your answer? 6M

**OR**

2. Discuss in detail about analytical framework? 12M

**UNIT–II**

3. a) How migration and interoperability is useful in directory services? 6M
   b) Write short notes on E-Mail in open source opportunities? 6M

**OR**

4. Illustrate operating system and its contents with clear examples? 12M

**UNIT–III**

5. Explain in detail about various database servers? 12M

**OR**

6. a) Outline various directory and file services? 6M
   b) Apply windows applications in personal software? 6M

**UNIT–IV**

7. a) Compare open source, closed code and corporate development? 6M
   b) Write short notes on open source development tools? 6M

**OR**

8. What are the languages used to develop open source products? Explain briefly? 12M

**UNIT–V**

9. a) How open source impacts team management? 6M
   b) Recall implementation principles? 6M

**OR**

10. Analyze various cost in open source systems? 12M

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| Hall Ticket Number : | | | | | | | | | | |
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**R-15**

**Code: 5P2B51**

M.C.A V Semester Regular & Supplementary Examinations November 2018

# Research Methology

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit ( 5 x 14 = 70 Marks )

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## UNIT–I

1. a) Evaluate the basic types of research with examples. 6M
   b) Explain the process of conducting research with suitable illustrations. 6M

**OR**

2. a) Highlight the important techniques involved in defining a research problem. 6M
   b) Classify the research design and briefly describe each one of them with examples. 6M

## UNIT–II

3. a) Identify the important concepts relating to research design. 6M
   b) Enumerate the three principles of experimental designs with examples. 6M

**OR**

4. a) How factorial designs contribute to building an effective research design? Explain with suitable examples. 6M
   b) When do you apply randomized block design? Explain its significance. 6M

## UNIT–III

5. a) Identify the important factors that have to be considered while sampling design. Give examples 6M
   b) Evaluate the different categories of sample designs with examples. 6M

**OR**

6. a) Explain the systematic sampling with suitable examples. List its advantages and disadvantages. 6M
   b) Highlight the impact of 'Stratified Sampling'. When do you apply this? Give examples. 6M

## UNIT–IV

7. a) Differentiate the various types of multivariate analysis with suitable examples. 6M
   b) What is the difference between cluster analysis and factor analysis? Illustrate 6M

**OR**

8. a) How can the problem of multi collinearity in regression analysis be solved using factor analysis? 6M
   b) Explain the difference between hierarchical clustering and non- hierarchical clustering. 6M

## UNIT–V

9. a) Write a short note on rewriting and polishing of report and give example. 6M
   b) List and explain the step-by-step procedure in writing a technical report. 6M

**OR**

10. a) What are the different roles and responsibilities of researchers in the society at large? Explain with suitable examples. 6M
    b) Enumerate the mechanics involved in writing a research with suitable example 6M

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| Hall Ticket Number : | | | | | | | | | | |
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**R-15**

**Code: 5P2B5E**

M.C.A V Semester Regular & Supplementary Examinations November 2018

# Software Testing Methodologies

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit ( 5 x 14 = 70 Marks )

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**UNIT–I**

1. State and explain various dichotomies in software testing. 12M

**OR**

2. a) How software testing will ensure the quality of developed software? Explain 6M

   b) Explain the consequences of bug in detail. 6M

**UNIT–II**

3. a) How a program control structure can be represented graphically? Explain with the help of required diagram. 8M

   b) Define basis path testing. 4M

**OR**

4. What are data-flow anomalies? How data flow testing can explore them? 12M

**UNIT–III**

5. What is meant by domain testing? Discuss about Nice and Ugly domains. 12M

**OR**

6. a) Write a short note on Domain Dimensionality. 4M

   b) Explain how one – dimensional domains are tested. 8M

**UNIT–IV**

7. a) What are decision tables? Do you think decision tables as a basis for test case design justify? 8M

   b) Define path and Path product. 4M

**OR**

8. a) Describe in detail about the Regular expression and flow anomaly detection 8M

   b) Define Hardware logic testing 4M

**UNIT–V**

9. a) Write about loops in matrix representation 6M

   b) Write about equivalence relation and partial ordering relation 6M

**OR**

10. a) Write about matrix powers and products. 6M

    b) What are graph matrices and write a short note on their applications? 6M

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