Hall Ticket Number :										

R-15

Code: 5P2B52

M.C.A. V Semester Regular Examinations Nov/Dec 2017

.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. What is .NET Framework and explain design goals of .NET frame work. 12M

OR

2. Explain CLR, CLS and CTS under .NET frame work? 12M

UNIT–II

3. a) Write short notes on Enumeration. 5M
   b) Explain about polymorphism with example. 7M

OR

4. a) Write short notes on Interfaces. 5M
   b) Discuss about MSIL Programming. 7M

UNIT–III

5. a) Explain the features of ADO.NET 6M
   b) What is Data Adapter? And discuss its uses. 6M

OR

6. a) Explain the steps involved to access database using ADO.NET. 6M
   b) Differentiate Data Adapter and Data Set. 6M

UNIT–IV

7. a) What is session object? Describe in detail. 6M
   b) Explain in detail about Authentication and Authorization in ASP.NET. 6M

OR

8. a) Explain about Data Caching in ASP.NET. 6M
   b) Describe in detail about Web Config File. 6M

UNIT–V

9. a) Explain briefly about Web Service Protocols and Standards. 6M
   b) What is WSDL? Write the features of WSDL. 6M

OR

10. a) What is Web Service? Write the advantages of Web Services. 6M
    b) What is AJAX? How it is implemented. 6M

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Hall Ticket Number :										

R-15

Code: 5P2B54

M.C.A. V Semester Regular Examinations Nov/Dec 2017

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) Explain the principle of open source software. 6M
   b) Explain the need of open source software 6M

OR

2. a) Explain briefly about Analytical Framework 6M
   b) What are the advantages of using open source software 6M

UNIT–II

3. a) Explain about PC-Based Mail Systems 6M
   b) Write short notes on Complex Web Publishing 6M

OR

4. a) What are Linux Distribution Vendors? Explain 6M
   b) Describe International Alternatives 6M

UNIT–III

5. a) Explain about Infrastructure Services 6M
   b) Explain various types of databases 6M

OR

6. a) What are the types Web Browsers? Explain briefly 6M
   b) What is use of Personal Software? Explain briefly 6M

UNIT–IV

7. a) What are the Cross-Platform Applications? 6M
   b) Briefly explain about C, C++, Perl, and Python? 6M

OR

8. a) What is Interoperability? Explain 6M
   b) Explain briefly about Tiered Design? 6M

UNIT–V

9. a) What is the Open Source Impact on Team Issues? Explain 6M
   b) What are the Implementation Principles? 6M

OR

10. a) Explain about Total Cost of Ownership 6M
    b) What is Mixing Open and Closed Code? Explain 6M

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Hall Ticket Number :										

Code: 5P2B51

R-15

M.C.A. V Semester Regular Examinations Nov/Dec 2017

Research Methodology

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. You are the administrative assistant for a division chief in a large holding company that owns several hotels and theme parks. You and the division chief have just come from the CEO's office, where you were informed that the guest complaints related to housekeeping and employee attitude are increasing. Your on-site managers have mentioned some tension among the workers but have not considered it unusual. The CEO and your division chief instruct you to investigate. Suggest at least three different types of research that might be appropriate in this situation

OR

2. Researchers seek causal relationships by either experimental or ex post facto research designs.
   a) In what ways are these two approaches similar?
   b) In what ways are they different?

UNIT–II

3. You have data from a corporation on the annual salary of each of its 200 employees.
   a. Illustrate how the data can be presented as ratio, interval, ordinal and nominal data.
   b. Describe the successive loss of information as the presentation changes from ratio to nominal

OR

4. You have been asked by the head of marketing to design an instrument by which your private, for-profit school can evaluate the quality and value of its various curricula and courses. How might you try to ensure that your instrument has:
   a. Stability?
   b. Equivalence?
   c. Internal consistency?
   d. Content validity?
   e. Predictive validity?
   f. Construct validity?

UNIT–III

5. Design a questionnaire to study the impulse buying behavior of consumers in a grocery stores.

OR

6. Give the classification of Sampling methods

UNIT–IV

7 What type of multivariate method do you recommend in each of the following cases and why?
   a) You want to develop an estimating equation that will be used to predict which applicants will come to your university as students?
   b) You would like to predict family income using such variables as education and stage in family life cycle.
   c) You wish to estimate standard labor costs for manufacturing a new dress design
   d) You have been studying a group of successful sales people. You have given them a number of psychological tests. You want to bring meaning out of these test results.

OR

8. Define cluster analysis. What are the areas of applications of cluster analysis? Illustrate the concept of cluster analysis using scattered diagram.

UNIT–V

9. A quality presentation of research findings can have an inordinate effect on a readers or a listener's perception of a studies quality. Recognition of this fact should prompt a researcher to make a special effort to communicate skillfully and clearly.

OR

10. Research reports contained findings, analysis, interpretations, conclusions and sometimes recommendations. They may follow the short, informal format typical of memoranda and letters, or they may be longer and more complex. Long reports are of either a technical or management type. In the former, the problem is presented and followed by the findings, conclusions and recommendations. In the management report, the conclusions and recommendations received the findings. The technical report is targeted at the technically trained reader; the management report is intended for the manager-client.

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Hall Ticket Number :										

Code: 5P2B53

R-15

M.C.A. V Semester Regular Examinations NOV/DEC 2017

Object Oriented Modelling 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) Explain about the importance of Modelling? 6M
   b) Write about the architecture of UML? 6M

OR

2. a) Explain about the conceptual model of UML? 6M
   b) What is UML? What are the principle of modelling ? 6M

UNIT–II

3. a) Define Component ? Write briefly about component in detail. 6M
   b) Write a short note on Instances in UML? 6M

OR

4. a) Explain the terms and concepts of object diagrams? 6M
   b) Explain the concept of advanced classes in structural modelling ? 6M

UNIT–III

5. a) Write briefly about usecase diagrams? 6M
   b) Write a short note on terms and concepts of Interactions? 6M

OR

6. a) Explain briefly about common modelling techniques of Activity Diagrams? 6M
   b) Write a short note on common modelling techniques of Interaction diagrams? 6M

UNIT–IV

7. a) Explain briefly about the concept of Time and Space? 6M
   b) Write briefly about State machines? 6M

OR

8. a) Explain briefly about terms and concepts of Events and Signals? 6M
   b) Write about the common modelling techniques of Processes and threads? 6M

UNIT–V

9. a) Write briefly about the concept of Deployment diagram? 6M
   b) Explain briefly about the common modelling techniques of Component diagrams? 6M

OR

10 a) Explain briefly about terms and conecpts of deployment? 6M
   b) Write briefly about the concept of Component? 6M

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Hall Ticket Number :										

Code: 5P2B5A

R-15

M.C.A. V Semester Regular Examinations Nov/Dec 2017

Big Data

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. Why Big Data is important? Discuss. 12M

OR

2. Explain about the various dimensions of Big Data. 12M

UNIT–II

3. Discuss about any two open source tools for Big Data. 12M

OR

4. What are Explicit and Implicit Crowd Sourcing technologies? Explain. 12M

UNIT–III

5. How to subdivide data for Hadoop MapReduce? Discuss. 12M

OR

6 Discuss about the data transformation phases in Big Data. 12M

UNIT–IV

7. What is fully distributed execution mode in HDFS? Discuss. 12M

OR

8. Explain the Anatomy of MapReduce Job run in detail. 12M

UNIT–V

9. Write a short note on Analytics Business Maturity Model. 12M

OR

10 Write a short note on Advanced Analytic Platform. 12M

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Hall Ticket Number :										

Code: 5P2B5D

R-15

M.C.A. V Semester Regular Examinations Nov/Dec 2017

Information Security

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 are the different RFCs and Internet standards related to security? Logically organize them and explain their contribution. 6M

   b) Consider an Automated Teller Machine (ATM) in which users provide a Personal Identification Number (PIN) and a card for account access. Give examples of confidentiality, integrity, and availability requirements associated with the system and, in each case, indicate the degree of importance of the requirement. 6M

OR

2. a) A bank is performing all its financial transactions over the Internet. What kind of security is required? Illustrate with any example bank. 6M

   b) Give the classification of security attacks. 6M

UNIT–II

3. a) What changes in HMAC are required in order to replace one underlying hash function with another? 6M

   b) Let K = (k0k1k2 ... k55) be a 56-bit DES key. List the 48 bits of each DES sub key K1, K2, ..., K16. Make a table that contains the number of sub keys in which each bit ki is used. Can you design a DES key schedule algorithm in which each key bit is used an equal number of times? 6M

OR

4. a) In what ways can a hash value be used so as to provide messages authentication? Explain. 10M

   b) Make a comparisons between Block & Stream ciphers. 2M

UNIT–III

5. a) How keys are generated in various cryptographic algorithms? Explain. 4M

   b) Mention the significance of each field of X.509 certificate with a neat illustration. 8M

OR

6. a) What problem was Kerberos designed to address? Explain. 6M

   b) In S/MIME, explain how Bob and Alice exchange the secret key for encrypting messages. 6M

UNIT–IV

7. a) Give examples of IP security Applications and its services. 6M

   b) Is it possible in SSL for the receiver to recorder SSL record blocks that arrive out of order? If so, explain how it can be done. If not, why not? 6M

OR

8. a) Explain IP security architecture and also explain basic combinations of security associations with a neat diagram 6M

   b) Give a brief note on encapsulating security payload. 6M

UNIT–V

9. a) Compare the SNMPv1 and SNMPv2. 6M

   b) How does a trusted system defend from Trojan horse attack? Explain 6M

OR

10. a) Consider any commercial hardware firewall and explain it in detail. 6M

    b) Describe the components of a virus code. Explain the purpose of the components of the virus. 6M

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