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R-17

Code: 7P2B51

M.C.A. V Semester Regular Examinations November 2019

Mobile Application Development

Max. Marks: 60

Time: 3 Hours

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

UNIT-I

1. a) List and explain steps for starting and using the Android Studio. 6M
- b) With neat diagram, show the major components of Android Stack. 6M

OR

2. a) What are the challenges faced in Android app development. 6M
- b) Explain the Android development tools. 6M

UNIT-II

3. a) Describe the anatomy of an Android application. 6M
- b) Explain the Android application life cycle. 6M

OR

4. Explain in detail the various types of Android fragments. 12M

UNIT-III

5. a) What is SQLite? Explain it using a program for deleting the data. 6M
- b) How to create the content provider's database. 6M

OR

6. a) Explain the insertion and deletion of data from database created by using SQLite. 6M
- b) Why to use native android content providers in SQLite. 6M

UNIT-IV

7. a) How to create scalable graphics assets? 6M
- b) How to creating the animations? Explain it. 6M

OR

8. a) Differentiate between finding sensors and monitoring sensors. 6M
- b) Determining orientation using the deprecated orientation sensor. 6M

UNIT-V

9. a) How to using the emulator with location-based services? Explain. 6M
- b) How to create map-based activities? Explain it. 6M

OR

10. a) How to prepare video for play back? Explain it. 6M
- b) Explain in detail the configuring the video recorder. 6M

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| R-17 |
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Code: 7P2B52

M.C.A. V Semester Regular Examinations November 2019

.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 |
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1. a) Describe the components of the .NET Framework and also explain the features of each component. 6M
- b) Briefly explain about Assemblies and Manifests. 6M

OR

2. a) Differentiate between managed and unmanaged code. 6M
- b) Explain the working of JIT and IL 6M

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| UNIT-II |
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3. a) Mention the syntax and purpose of all class-modifiers in C# in detail. 6M
- b) List the important collection interfaces. State the purpose of each. 6M

OR

4. a) How will you handle nested Try-Catch-Finally Block to handle exceptions? Explain with a suitable example. 6M
- b) Define delegate. Explain various types of delegates. 6M

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| UNIT-III |
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5. a) Describe the disconnected architecture of ADO. NET's data access model. 6M
- b) What are the data providers in ADO.NET framework? Explain. 6M

OR

6. a) Explain Connection and Command object in ADO.NET with an example. 6M
- b) Describe the role of the Dataset, Data Reader objects in ADO.NET. 6M

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| UNIT-IV |
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7. a) Mention the advantages and drawbacks of using Cookies? Explain how server sets a cookie and retrieves it. 6M
- b) What is authentication and authorization in ASP.NET? Explain 6M

OR

8. a) Explain all the steps to create a Login form with validation controls 6M
- b) Differentiate between client-side and server-side controls in Web pages. 6M

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| UNIT-V |
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9. a) Write short notes on 6M
 - (i) WSDL
 - (ii) UDDI
- b) Explain the steps involved in creation of a simple web service. 6M

OR

10. a) What is the purpose of AJAX? Elaborate with an example 6M
- b) Define Web method. Also create a simple web service application with a user defined web method. 6M

Code: 7P2B53

M.C.A. V Semester Regular Examinations November 2019

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)

UNIT-I

1. Discuss the building blocks of UML with an example 12M
- OR**
2. a) Explain the importance of UML 6M
b) What are behavioral things? Explain. 6M

UNIT-II

3. a) Draw the object diagram for ATM transaction 6M
b) Illustrate the concept of aggregation and composition with examples in UML. How do we identify aggregation? 6M

OR

4. Library Information needs to be developed to provide the following services:
Opening an Account
Borrowing a book from the library
Returning a book to the library
Calculate fine for defaulters
Draw a class diagram for the above situation 12M

UNIT-III

5. Develop an activity diagram based on the following narrative.
If you need to make assumptions you can do, also note them. The purchasing department handles purchase requests from other departments in the company. People in the company who initiate the original purchase request are the "customers" of the purchasing department. A case worker within the purchasing department receives that request and monitors it until it is ordered and received. Case workers process request for the purchase of products under \$1,500, write a purchase order, and then send it to the approved vendor. Purchase requests over \$1,500 must first be sent out for bid from the vendor that supplies the product. When the bids return, the case worker selects one bid. Then, he or she writes a purchase order and sends it to the vendor 12M

OR

6. a) Explain in detail about interaction diagrams 6M
b) Explain about use cases and actors and use cases and flow of events. 6M

UNIT-IV

7. Explain about common modeling techniques 12M
- OR**
8. a) Write a short notes on processes and threads 6M
b) List the primary steps for developing state chart. 6M

UNIT-V

9. Differentiate the following:
i) Components and classes 6M
ii) Nodes and components. 6M
- OR**
10. Explain about the deployment diagram and how it is useful in the modeling of an embedded system 12M

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Code: 7P2B5A

M.C.A. V Semester Regular Examinations November 2019

Business Analytics

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 |
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1. Explain Data Preparation Phase of Data Analytics Lifecycle. Why ELT approach is followed using the Analytic Sandbox approach with respect to Data Preparation Phase? 12M

OR

2. List out the various steps involved in understanding data exploration and explain how to detect and remove outliers 12M

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| UNIT-II |
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3. a) Derive Mean and Variance of the Binomial Distribution 6M
b) Write about Null Hypothesis and Testing of Null Hypothesis 6M

OR

4. a) Find the mean and variance of normal Distribution 6M
b) In a shop there are two computers for carrying out the job work. The average time per job and the average arrival rate is 2 jobs per hour. Assume the job times to be distributed exponentially. If the maximum number of jobs accepted on a day be 6. Find:
i) The expected number of jobs waiting for computer
ii) The total time lost per day 6M

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| UNIT-III |
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5. Explain any three types of regression techniques. Also explain how to select the right regression model. 12M

OR

6. Classify the types of Discrete Choice models along with few applications of it. 12M

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| UNIT-IV |
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7. a) What is Survival Analysis?
Define the terms: i) Event ii) Time iii) Censoring 6M
b) Define Time Series and list out various Techniques & Applications of it. 6M

OR

8. Explain any two models which can be used to represent Time Series Data 12M

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| UNIT-V |
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9. a) Explain clustering based outlier analysis 6M
b) Tabulate the Advantages & Disadvantages of the following Classification Techniques: Decision Tree, SVM & Naïve Bayes 6M

OR

10. Write Apriori algorithm for finding frequent item sets and explain. 12M

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R-17

Code: 7P2B54

M.C.A. V Semester Regular Examinations November 2019

Big Data

Max. Marks: 60

Time: 3 Hours

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

UNIT-I

1. a) What is big data? Explain the pinnacle stages in the evolution of data systems.
b) Outline the competitive strategies in the analytic applications.

OR

2. a) Explain structured, semi structured and unstructured data in terms of big data analytics.
b) Explain different characteristics of Big Data?

UNIT-II

3. a) What are the critical components of Hadoop? How are they designed to continue to work in the face of system failures?
b) What are the reasons that stand out for the success of Omniture of handling big data?

OR

4. Construct the Inter and Trans Firewall Analytics with neat diagram

UNIT-III

5. a) What characteristics are needed to be a good data scientist?
b) Discuss the key principles that are adopted in using deep math, science and computer science in Big Data.

OR

6. a) Organizations are limited by fear of collaboration and overreliance on proprietary information. Explain it.
b) Explain the different forms of organizational structure that best suited to the analytical needs of the organization.

UNIT-IV

7. Write in detail about Big Data Governance.

OR

8. Discuss the real time architecture for conversations.

UNIT-V

9. Explain the basic building blocks of Hadoop Map Reduce.

OR

10. Explain the Hadoop Distributed File System

Code: 7P2B5F

M.C.A. V Semester Regular Examinations November 2019

Internet of Things

Max. Marks: 60

Time: 3 Hours

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

UNIT-I

1. a) Define Internet of Things. Elaborate on the different applications of IoT. 6M
 b) Explain in detail on the block diagram of IoT 6M

OR

2. a) List out the different issues relevant to IoT 6M
 b) Discuss in detail on different applications and Domains relevant to IoT 6M

UNIT-II

3. a) Discuss in detail on the Things in IoT 6M
 b) Elaborate on different IoT enabling technologies 6M

OR

4. a) Discuss in detail on the link layer protocols of IoT 6M
 b) Describe how IoT is enabled by Wireless Sensor Networks 6M

UNIT-III

5. a) Discuss with two examples as to how IoT can be used in Home Automation 6M
 b) Elaborate on the applications of IoT in agriculture 6M

OR

6. a) How can IoT be used in Cities through Smart parking and structural health monitoring 6M
 b) Explain in detail how environment be controlled using IoT 6M

UNIT-IV

7. List out the functional groups involved in Functional View Specification and discuss 12M

OR

8. a) Explain in detail about Service specifications step and IoT level specification followed in design methodology of IoT devices 6M
 b) Describe domain model specification in detail with respect to weather monitoring using IoT 6M

UNIT-V

9. a) Write short notes on microcontrollers and how they can be used in IoT 6M
 b) Discuss in brief on Raspberry pi in detail 6M

OR

10. a) Elaborate on MapReduce Programming model in IoT 6M
 b) Explain with example how SIP can be used in IoT 6M
