TYBBA(CA) 2024-25 (2)

Exam. Seat No. [ ]

Total No. of Questions: 5 **Total No. of Pages: 2**

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
T. Y. BBA (C.A.)
Semester - V
UBCA351: Android Application Programming
(Fresh) (2022 Pattern)

Time: 02.00 Hours **(No.of.Credit:03)** **Max. Marks: 60**

Instructions to the candidates:

i. All Questions are Compulsory.
ii. Figures to the right indicate full marks.
iii. Draw neat diagrams if necessary.

Q.1 (A) Attempt each of the following **(1 Marks each)**

i) What is the role of DVM in Android Architecture?
ii) what is the use of startActivity() method?
iii) Which Android view is used to display a long list of items?
iv) What is the purpose of the SQLiteOpenHelper class in Android?

(B) Attempt each of the following **(2 Marks each)**

i) What is Toast?
ii) Differentiate between Option Menu and Context Menu.
iii) What is View group?
iv) Explain the Android.Manifest file.

Q.2 Attempt any Three of the following. **(4 Marks each)**

i) Explain the steps involved in creating a project to display Google Maps in an application.
ii) Draw a block diagram of Activity Life cycle.
iii) What is Gridview in android? How it is used to display images?
iv) Demonstrate Array Adapter using Listview to display list of five subjects.

Q.3 Attempt any Two of the following. **(6 Marks each)**

i) Design android application in table layout. Write an android code to check login credentials with username = "Admin" and password = "Pass@123". Display appropriate message on Toast to the user.

ii) Write a note on architecture of Android with suitable block diagram.

iii) What is SQLitedatabase? Explain a methods of SQLiteOpenHelper class.

Q.4 Attempt any Two of the following. **(6 Marks each)**

i) What is Fragment? Explain Fragment Life cycle

ii) Explain any two layouts in Android with example

iii) Explain Radio Button View with example.

Q.5 Attempt any One of the following. **(12 Marks each)**

i) Write an Android code to link two activities using intent.

ii) Write an android application using SQLite to create student(R_no, S_name, S_course, S_class) table and insert a record in table and display appropriate message on toast to user.

Exam. Seat No. [ ]

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
T.Y.BBA (C.A.)
Semester- V

UBCA353A: Cloud Computing

(Fresh) (2022 Pattern)
(No.of.Credit:03)

Time: 02.00 Hours **Max. Marks: 60**

Instructions to the candidates:

i. All questions are compulsory.
ii. Draw neat diagrams if necessary.
iii. Figures to right indicate full marks.

Q.1 (A) Attempt each of the following **(1 Marks each)**

i) Define the term virtualization.
ii) What is Cloud Computing?
iii) Name any two public cloud platforms.
iv) What is UDDI?

(B) Attempt each of the following **(2 Marks each)**

i) What is SOA?
ii) What is the role of hypervisor in virtualization?
iii) Describe the basic idea of MapReduce.
iv) What is virtual clusters?

Q.2 Attempt any three of the following. **(4 Marks each)**

i) Explain the characteristics of Cloud Computing.
ii) What are the differences between cloud computing and grid computing?
iii) Write a short note on Data Center Design.
iv) Discuss the advantages and disadvantages of public clouds.

Q.3 Attempt any two of the following. **(6 Marks each)**

i) Describe virtualization and its role in Cloud Computing.
ii) Explain Computer Clusters and Massively Parallel Processing (MPP) architecture.

iii) What is the role of Inter-Cloud resource management in modern cloud architectures?

Q.4 Attempt any <u>two</u> of the following. **(6 Marks each)**

i) Explain the role of Message-Oriented Middleware in Service-Oriented Architecture (SOA).

ii) Explain the terms Google App Engine and Amazon AWS.

iii) How Cloud Security and Trust Management are handled in public cloud platforms.

Q.5 Attempt any <u>one</u> of the following (Long answer questions). **(12 Marks each)**

i) Describe the architectural design of compute and storage clouds.

ii) Elaborate on the different cloud service models (IaaS, PaaS, SaaS) with real-world examples.

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Exam. Seat No. [ ]

Total No. of Questions: 5 Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
T.Y.BBA (C.A.)
Semester -V
UBCA354B: Machine Learning
(Fresh) (2022 Pattern)
(No.of.Credit:03)

Time: 02.00 Hours **Max. Marks: 60**

Instructions to the candidates:

i. Draw the diagrams wherever necessary.
ii. Figures to the right indicate full marks.

Q.1 (A) Attempt each of the following **(1 Marks each)**

i) What is regression?

ii) Define a probabilistic model.

iii) What is unsupervised Machine Learning?

iv) What is descriptive learning?

(B) Attempt each of the following **(2 Marks each)**

i) What is a multiclass classification problem?

ii) What is Supervised Machine Learning? Give an example.

iii) What are features in the context of machine learning?

iv) What are the Support Vectors in Support Vector Machines (SVM).

Q.2 Attempt <u>any three</u> of the following. **(4 Marks each)**

i) Explain any two performance evaluation in machine learning?

ii) What is Linear Classification? Explain it with an example.

iii) Explain any two distance metrics used in Machine learning.

iv) Distinguish between Regression and Classification.

Q.3 Attempt <u>any two</u> of the following. **(6 Marks each)**

i) Explain the differences between geometric models, probabilistic models, and logical models.

ii) Explain the working of Perceptron with a neat labelled diagram.

iii) Explain the structure of a decision tree.

Q.4 Attempt any <u>two</u> of the following. **(6 Marks each)**

i) Describe the nearest neighbor classification method.

ii) Explain hierarchical clustering and its types.

iii) What is meta-learning? Explain it with an example.

Q.5 Attempt any one of the following. **(12 Marks each)**

i) Explain the K-means algorithm for clustering in detail. Also give an example of it.

ii) Explain and Compare bagging and boosting in ensemble learning. Also state their advantages and disadvantages.

Exam. Seat No. [ ]

Total No. of Questions: 5 Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
CLASS-TYBBA(C.A.)
SEMESTER-VI
UBCA361:DATA ANALYTICS USING PYTHON
(Regular) (2022 Pattern)

Time : 02.00 Hours **(No.of.Credit:03)** **Max. Marks: 60**

Instructions :
i) All questions are compulsory
ii) figure to right side indicates full marks
iii) Neat diagram must be drawn whenever necessary
iv) Assume suitable data if necessary

Q.1) A) Answer the following questions **(1 Marks Each)**

i) What is Predictive Analytics?

ii) State any two applications of Machine Learning.

iii) What is Data science?

iv) What is Series?

B) Answer the following questions **(2 Marks Each)**

i) State any two features of Pandas Library.

ii) How to create a Dataframe from Dictionary?

iii) How to create Numpy Array by using array()?

iv) What is the use of isnull() & info() method for Pandas Dataframe?

Q.2) Attempt any Three of the following **(4 Marks Each)**

i) Explain steps involved in data processing with suitable example.

ii) Write a simple program to create simple pandas Dataframe and use *iterrows()* method to show all rows in a Dataframe.

iii) Explain Array broadcasting in Numpy with suitable code.

iv) Create a Line chart for following data using matplotlib

No. of Days	1	2	3	4
Absentees	5	10	15	10

Q.3) Attempt any Two of the following **(6 Marks Each)**

i) Create any two Dataframe and use following methods- a)Join() b)Concat()

ii) How to implement Simple Linear Regression explain with suitable dataset.

iii) Explain different types of visualization provided by matplotlib library.

Q.4) Attempt any Two of the following **(6 Marks Each)**

i) Explain the difference between Array and Series data type in Python.

ii) Write a Pandas program to read dataset (.CSV) of student information and perform both integer based and label based indexing using (.loc &.iloc)

iii) Explain different steps involved in Data Science project creation with block diagram.

Q.5) Attempt any One of the following **(12 Marks Each)**

i) Write a K-Means clustering algorithm for following dataset to organize the data into K=3 clusters.

Age	Gender	Education Level	Job Titie	Years of Experience	Salary
32	Male	Bachelor's	Software Engineer	5	90000
28	Female	Master's	Data Analyst	3	65000
45	Male	PhD	Senior Manager	15	150000
36	Female	Bachelor's	Sales Associate	7	60000
52	Male	Master's	Director	20	200000
29	Male	Bachelor's	Marketing Analyst	2	55000
42	Female	Master's	Product Manager	12	120000

ii) What is Machine learning? Explain Decision Tree Classifier implementation by using scikitlearn library for following dataset to predict the salary of employee is grater than 100K or not.

Company	job	degree	salary_more_then_100k
Google	sales executive	bachelors	0
Google	sales executive	masters	0
Google	business manager	bachelors	1
Google	business manager	masters	1
Google	computer programmer	bachelors	0
Google	computer programmer	masters	1
abc pharma	sales executive	masters	0
abc pharma	computer programmer	bachelors	0
abc pharma	business manager	bachelors	0
facebook	sales executive	bachelors	1
facebook	sales executive	masters	1
facebook	business manager	bachelors	1
facebook	computer programmer	bachelors	1
facebook	computer programmer	masters	1

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Q.4 Attempt any two of the following. **(6 Marks each)**

i) Explain in detail about capped collections.

ii) Explain different insert operators used in insert command of MongoDB.

iii) Explain sparse index with an example.

Q.5 Attempt any one of the following (Long answer questions). **(12 Marks each)**

i) What are the different types of NoSQL databases used in the cloud? Discuss their feature and use cases.

ii) a. Explain the features of NoSQL databases.

b. Create a collection 'Student'. Create a new document in the 'Student' collection having ID = 01.

- Write a command to show the details of 'Student'.
- Display the detail of 'Student' whose course fee is greater than 300000.
- Display ID, Student NAME, FEE, and use 'PRETTY()'.
- Display details of students, who were admitted to the course having a fee of 200000.

Exam. Seat No.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: TYBBA (C.A)
Semester VI
UBCA363A: Big Data
(Fresh) (2022 Pattern)
(No.of.Credit:03)

Time: 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

i. All questions are compulsory.
ii. Figures to the right indicate marks for each question.
iii. Use neat diagrams wherever necessary.

Q.1 (A) Attempt each of the following **(1 Marks each)**

i) What is RHIPE?

ii) Name any two file formats supported by Hive.

iii) What is HDFS?

iv) What is MLib?

(B) Attempt each of the following **(2 Marks each)**

i) Explain the term "Big Data Analytics."

ii) Define structured and unstructured data.

iii) What is Spark?

iv) Explain data types in Hive.

Q.2 Attempt <u>any three</u> of the following. **(4 Marks each)**

i) Explain the key features of the R language.

ii) Discuss the different types of digital data with examples.

iii) Explain the concept of views and indexes in Hive.

iv) Explain the architecture of RHIPE.

Q.3 Attempt <u>any two</u> of the following. **(6 Marks each)**

i) Describe Hadoop Ecosystem with suitable diagram.

ii) Discuss different types of queries in Hive QL.

iii) Explain any three Hadoop Shell Commands with example.

Q.4 Attempt any two of the following. **(6 Marks**

i) Explain the architecture of R Hadoop.

ii) Write a note on Google File System.

iii) Describe the working of HDFS storage mechanism.

Q.5 Attempt any one of the following (Long answer questions). **(12 Marks**

i) a) Explain the complete architecture of Hadoop with proper components.

b) Explain the applications of Big Data in e-commerce and social media.

ii) Create a employee table in Hive with the field named firstname, salary, project, Load data in table using a load command and write a queries for the following:

a. Display employees whose salary between 8000 and 20000

b. Add column Profession into table.

c. Group the employees on the basis of project undertaken by the employees.

d. Display the records where salary is not null.

Exam Seat No. [ ]

Total No. of questions: 05] [Total No. of Pages: 02

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: T.Y. BBA (C. A.)
(Semester-VI)
UBCA364 (A): Data Mining
(Fresh)(2022 pattern)
(No of credits: 03)

Time: 2:00 Hours] [Max.Marks:60

Instructions to the candidates:

i. All questions are compulsory.
ii. Figure to right indicate full marks.

Q1. A. Attempt each the following. **1mark each**

i) What is noisy data?
ii) List two data mining functionalities.
iii) What is ETL?
iv) What is Data Visualization?

B. Attempt each the following. **2mark each**

i) What is clustering in data mining?
ii) What is support in association rule mining? how it is calculated?
iii) What is Data Integration?
iv) Define Data mart.

Q2. Write a short note on any Three of the following. **4 mark each**

i) Rule Based Classifier
ii) Bagging and Boosting
iii) Transactional Database
iv) Bayesian Classification

Q3. Attempt any Two of the following. **6 mark each**

i) Explain DBSCAN in clustering?

ii) Explain KNN in detail.

iii) What are the applications of Data Mining? Explain.

Q4. Attempt any Two of the following. **6 mark each**

i) Explain the steps involved in the Apriori algorithm

ii) Explain the working of the K-means algorithm.

iii) Explain the process of KDD.

Q5. Attempt any One of the following: **12 mark each**

i) Given the following transaction dataset, use the FP-Growth algorithm to find the frequent itemsets with a minimum support threshold of 2.

TID	Items
1	{A, B, D, E}
2	{B, C, E}
3	{A, B, C, E}
4	{B, E}
5	{A, B, C, D}

- Construct the FP-tree.
- Find the conditional pattern bases.
- Extract the frequent itemsets.

ii) Discuss various data mining functionalities in detail with real-world examples.

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Exam. Seat No.

Total No. of Questions: 5 Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: TYBBA(C.A.)
SEMESTER-V
BCA3501 : ANDROID APPLICATION PROGRAMMING
(Backlog) (2019 Pattern)

Time : 02.00 Hours **(No.of.Credit:03)** **Max. Marks: 60**

Instructions:

i)All questions are compulsory
ii)figure to right side indicates full marks
iii) Neat diagram must be drawn whenever necessary
iv)Assume suitable data if necessary

Q.1) A)Answer the following questions **(1 Marks each)**

i) What is Android API?

ii) What is use of GPS?

iii) Which is the topmost layer of android architecture?

iv) What is AVD?

B)Answer the following questions **(2 Marks each)**

i)Write a .xml code for creating TextView.

ii) Define Toast.

iii) What is a Fragment in Android?

iv)Define Activity

Q.2) Attempt any Three of the following **(4 Marks each)**

i)Draw a block diagram of Android Architecture.

ii)Write a simple android code to create make addition of two values.

[Write a .Xml code & MainActivity. Java Code]

iii)Write a note on Scroll Layout

iv)Explain different feature of android

Q.3) Attempt any Two of the following **(6 Marks ea**

i)What is SQLite database? Explain a methods of SQLiteOpenHelper class.

ii)Write a android program to create intent that opens google.com webpage & dial tel number (+911111111111).

iii)Write a note on Basic View of Android.

Q.4) Attempt any Two of the following **(6 Marks ea**

i) Draw a bock diagram of Activity life Cycle. Explain different methods of Activity Life Cycle with simple android code.

ii)What is Spinner View? Create a simple android application to show spinner view of subject names.

iii)What is AutoComplete TextView? Write a android program create a AutoComplete TextView of Country Names.

Q.5) Attempt any One of the following **(12 Marks ea**

i) Write a simple program to accept any number from one activity and display its square value into another activity. (Use Explicit Intent)

ii) How to create option menu and context menu in Android explain with suitable code of MainActivity.java.

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Q.3) Attempt any Two of the following **(6 Marks eac**

i)What is SQLite database? Explain a methods of SQLiteOpenHelper class.

ii)Write a android program to create intent that opens google.com webpage & dial tel number (+911111111111).

iii)Write a note on Basic View of Android.

Q.4) Attempt any Two of the following **(6 Marks each**

i) Draw a bock diagram of Activity life Cycle. Explain different methods of Activity Life Cycle with simple android code.

ii)What is Spinner View? Create a simple android application to show spinner view of subject names.

iii)What is AutoComplete TextView? Write a android program create a AutoComplete TextView of Country Names.

Q.5) Attempt any One of the following **(12 Marks eac**

i) Write a simple program to accept any number from one activity and display its square value into another activity. (Use Explicit Intent)

ii) How to create option menu and context menu in Android explain with suitable code of MainActivity.java.

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Exam Seat No

Total No. of questions: 05] **[Total No. of Pages: 02**

Anekant Education Society's

Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati

(Empowered Autonomous)

Affiliated to Savitribai Phule Pune University, Pune.

T.Y. BBA (C.A.)

BCA3503A: Cloud Computing

Semester-V

Backlog (2019 pattern)

Time: 2:00 Hours] **No of Credit:3** **[Max.Marks:60**

Instruction: i. All questions are compulsory

ii. Figure to right indicate full marks

Q1. A. Attempt <u>each</u> of the following **1 mark each**

i What is Cloud Computing?

ii Name any two cloud service models.

iii Define public cloud.

iv State any two service provider of IaaS.

B. Attempt <u>each</u> of the following **2 mark each**

i What is Virtualization?

ii What are the characteristics of cloud computing?

iii What is Cloud Provider and Cloud Broker?

iv What do you mean by Clusters?

Q2. Write short note on <u>any Three</u> of the following **4 mark each**

i Cloud Storage

ii Cloud Security challenges.

iii Xen Architecture

iv Message Oriented Middleware

Q3. Attempt <u>any Two</u> of the following **6 mark each**

i Explain the Architecture of Cloud Computing.

ii State the responsibilities of VMM.

iii What are the types of Cloud Services?

Q4. Attempt <u>any Two</u> of the following **6 mark each**

i Explain the concept of Map Reduce.

ii What is Identity and Access Management (IAM) in cloud security?

iii What is Google App Engine?

Q5. Attempt <u>any One</u> of the following **12 mark each**

i What are the different implementation levels of Virtualization? Explain in detail.

ii Compare AWS, Microsoft Azure, and Google Cloud in terms of services.

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Exam. Seat No.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's

Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati

(Empowered Autonomous)

Affiliated to Savitribai Phule Pune University, Pune

Class: TYBBA(C.A.)

SEMESTER-VI

BCA3601: DATA ANALYTICS USING PYTHON

(Backlog) (2019 Pattern)

Time : 02.00 Hours (No.of.Credit:03) Max. Marks: 60

Instructions:

i)All questions are compulsory
ii)figure to right side indicates full marks
iii) Neat diagram must be drawn whenever necessary
iv)Assume suitable data if necessary

Q.1) A)Answer the following questions **(1 Marks each)**

i) State different types of Data Analytics.

ii)What is Data Visualization?

iii)NUMPY stands for?

iv)What is Machine Learning?

B)Answer the following questions **(2 Marks each)**

i)State any Two Features of pandas library

ii)Define Series

iii)Define Regression

iv)Write a python code to create scatter plot

Q.2) Attempt any Three of the following **(4 Marks each)**

i)What is Data Processing? Write a steps of data Preprocessing in Machine Learning.

ii)Explain Grouping methods of Dataframe with suitable code

iii)What is Data Science write a steps for working with data science project

iv)Write a python code to create a (n-dimensional) ndarray

Q.3) Attempt any Two of the following **(6 Marks each)**

i) Explain subplot() in Matplotlib library. Create any two plots and display it with subplot().

ii)Write a steps to create a K-Nearest Neighbors algorithm with suitable code.

iii)What is Dataframe explain joining and merging of Dataframe with suitable code

Q.4) Attempt any Two of the following **(6 Marks eac**

i)What is supervised Learning? Explain SVM (Support Vector Machine) implementation with suitable code

ii)Write a note on different types of visualizations in matplotlib

iii)What is array? Explain different methods of array creation with suitable code

Q.5) Attempt any One of the following **(12 Marks e**

i)Explain different methods of indexing in Dataframe with suitable code. write a different methods used for data cleaning.

ii)Create a multiple linear regression model for house price prediction for the following dataset.

area_type	availability	location	size	society	total_sqft	bath	balcony	price
Super built-up Area	19-Dec	Electronic City Phase II	2 BHK	Coomee	1056	2	1	39.07
Plot Area	Ready To Move	Chikka Tirupathi	4 Bedroom	Theanmp	2600	5	3	120
Built-up Area	Ready To Move	Uttarahalli	3 BHK		1440	2	3	62
Super built-up Area	Ready To Move	Lingadheera nahalli	3 BHK	Soiewre	1521	3	1	95
Super built-up Area	Ready To Move	Kothanur	2 BHK		1200	2	1	51
Super built-up Area	Ready To Move	Whitefield	2 BHK	DuenaTa	1170	2	1	38

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Exam. Seat No. [ ]

Total No. of Pages: 2

Total No. of Questions: 5

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class : TYBBA(CA)
Semester : VI
BCA3602 NOSQL
(Backlog) (2019 Pattern)
(No.of.Credit:03)

Time : 02.00 Hours **Max. Marks: 60**

Instructions to the candidates:

i. *All Questions are Compulsory.*
ii. *Figure to the right indicates full marks.*
iii. *Draw the diagram whenever necessary.*

Q.1 (A) Attempt each of the following **(1 Mark each)**

i) What does NOSQL stand for?

ii) What are the four main types of NOSQL databases?

iii) Name any two NOSQL database products.

iv) Which CRUD operation is used to modify existing data in a NOSQL database?

(B) Attempt each of the following **(2 Marks each)**

i) Explain features of NOSQL databases.

ii) Explain the history of NOSQL databases.

iii) What are the advantages of using NOSQL databases in cloud computing?

iv) List two challenges of migrating from RDBMS to NOSQL.

Q.2 Attempt <u>any three</u> of the following. **(4 Marks each)**

i) Explain differences between SQL and NOSQL databases with examples.

ii) How does indexing work in NOSQL databases? Explain with an example.

iii) Explain the role of Hive in Big Data processing.

iv) Explain the concept of MapReduce and its role in parallel processing.

Q.3 Attempt <u>any two</u> of the following. **(6 Marks each)**

i) Describe the architecture of NOSQL databases and explain its components.

ii) How is NOSQL used in web applications? Explain with examples of PHP and Python.

iii) Explain Pipeline aggregation in detail.

Q.4 Attempt any two of the following. **(6 Marks each)**

i) What is a multikey index? Explain with an example.

ii) Explain different delete operators used in delete command of MongoDB.

iii) Explain the details of the capped collection with an example.

Q.5 Attempt any one of the following (Long answer questions). **(12 Marks each)**

i) Describe the process of creating and managing a MongoDB replica set. Explain its importance with an example.

ii) a. Explain how MongoDB handles sharding to distribute data across multiple servers.

b. Consider the students collection with the structure {student_id: string, name: string, marks: array, course: string}. Write MongoDB queries to:

1. Create a collection and insert 5 records in it.
2. Calculate the total marks for each student.
3. Find the students who have scored more than 80% in all subjects.
4. Update the course of students who scored less than 40% in any subject to "Remedial".
5. Delete students who have not scored any marks in any subject.

Exam. Seat No.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati.
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: T.Y. BBA (C. A.)
(Semester-VI)
BCA3603A: Big Data
(Backlog)(2019 pattern)

Time: 02.00 Hours (No.of.Credit:03) Max. Marks: 60

Instructions to the candidates:

i. All questions are compulsory.
ii. Figures to the right indicate full marks.
iii. Draw neat diagrams wherever necessary.

Q.1 **(A) Attempt each of the following** **(1 Marks each)**

i) Define Big Data.
ii) What is HDFS?
iii) What is YARN?
iv) List any two types of digital data.

(B) Attempt each of the following **(2 Marks each)**

i) What is Big Data analytics?
ii) What are the applications of Big Data?
iii) Differentiate between Name Node and Data Node.
iv) Explain the primitive datatypes in Hive.

Q.2 Write short notes on <u>any three</u> of the following. **(4 Marks each)**

i) HiveQL.
ii) Google File System
iii) MapReduce Job
iv) 3V's of Big Data

Q.3 Attempt <u>any two</u> of the following. **(6 Marks each)**

i) Explain the Hadoop Architecture with a neat diagram.
ii) Explain Data Manipulation Commands in HiveQL.
iii) What is indexing in Hive? Explain in detail.

Q.4 Attempt any two of the following. **(6 Marks each)**

i) Explain any three Hadoop Shell Commands.

ii) Explain different file formats in hive.

iii) Explain Types of Big Data in details.

Q.5 Attempt any one of the following (Long answer questions). **(12 Marks each)**

i) a) Discuss the Machine Learning tools: Spark and SparkML.

b) Explain the following commands with syntax and example.

1) Create table 2) Alter table

ii) a) Explain Hadoop Eco System with a neat diagram.

b) Discuss various big data technologies in details?