From   **To**

Dr.S.Vijayulu Reddy   The Registrar

Principal   S.V. University

Chairman BOS(Pass / Combined) in Commerce   Tirupati-517582

Government Degree College

 Karvetinagaram

e mail: vijay.sita@gmail.com

Mobile:9440079121

Sub : UG Courses - V/VI Semester (Skill Enhancement Courses) – Meeting of the Board of Studies (PASS / COMBINED) - Submission of Syllabus, Model Question Papers, Text and Reference Books of B.Com (CA, General, Taxation, CA with Business Analytics and B.A Accounts) from the   Academic Year 2022-23 - regarding.

Ref : Mail from Dean, CDC, SV University, Tirupati, Dated 29th October, 2022.

<div align="center">****</div>

In continuation of the meeting notice, I am to inform you that meeting of the Board of Studies (Pass / Combined) in Commerce is conducted on 31-10-2022 at 10.30 A.M. The resolutions of the meeting above Board of Studies is enclosed for your kind reference and record.

The revised Syllabus, Reference Books and Model Question Papers pertaining to B.Com (C.A, General, Taxation, C.A. with Business Analytics and B.A. Accounts) **V /VI semester** is enclosed herewith for the circulation among the faculty of commerce of the colleges affiliated to the S.V. University. The syllabus designed by APSCHE is revised with the discussion of the members of BOS conforming the rules and regulations laid down by APSCHE.

The students studying **B.Com (CA) have to choose any 2 pairs out of 9 pairs** (SECs) from 3 series namely (A) Accountancy, (B) Services and (C) E-Commerce without breaking a pair as per regulations. In addition to this, they have to **choose 1 pair out of 4 pairs in Computer Application papers** without breaking a pair.

The students studying **B.Com (General) and B.Com (Taxation) have to choose any 3 pairs out of 9 pairs** (SECs) from 3 series namely (A) Accountancy, (B) Services and (C) E-Commerce without breaking a pair as per regulations.

The students studying **B.A. (Accounts) have to choose any 1 pair out of 9 pairs** (SECs) from 3 series namely (A) Accountancy, (B) Services and (C) E-Commerce without breaking a pair as per regulations.

The students studying **B.A (CA) and B. Sc (CA)** have to **choose any 1 pair out of 4 pairs in Computer Application papers** without breaking a pair.

Therefore, I request you to kindly accord necessary approval for implementation of the syllabi for the **V** /VI Semester Syllabus, Reference Books and Model Question Papers, from the academic year 2022-23. Further, the syllabus and model question papers for I semester to IV semester of all B.Com groups and B.A. Accounts are enclosed herewith as per the guidelines of APSCHE and I request you to kindly accord necessary approval for implementation of the same w.e.f. the Academic Year 2022-23.

<div align="center">Thanking you</div>

Yours faithfully

PRINCIPAL
Govt. Degree College
KARVETINAGAR - 517582
Chittoor Dt. A.P.

(S.Vijayulu Reddy)

Chairman BOS - Commerce (UG)

SRI VENKATESWARA UNIVERSITY

B.Com. Computer Applications & B.Com Computer Applications with Business Analytics, BA Computer Applications & B.Sc. Computer Applications
III Year – V Semester (Under CBCS W.E.F. 2020-21)
Course-**6A: BIGDATA ANALYTICS USING R**
(Skill Enhancement Course (Elective), 5 credits)

I. **Learning Outcomes**:

Upon successful completion of the course, a student will be able to:

1. Understand data and classification of digital data.
2. Understand Big Data Analytics.
3. Load data in to R.
4. Organize data in the form of R objects and manipulate them as needed.
5. Perform analytics using R programming.

II. **Syllabus:** (Total hours: 75 including Theory, Practical, Training, Unit tests etc.)

Unit – 1:   Introduction to Big data (12 h)

Data, classification Of Digital Data--structured, unstructured, semi-structured data, characteristics of data, evaluation of big data, definition and challenges of big data , what is big data and why to use big data ?, business intelligence Vs big data.

Unit – 2: Big data Analytics (10 h)

What is and isn't big data analytics? Why hype around big data analytics? Classification of analytics, top challenges facing big data, importance of big data analytics, technologies needed to meet challenges of big data.

Unit – 3: Introduction to R and getting started with R (13h)

What is R? Why R? , advantages of R over other programming languages, Data types inR-logical, numeric, integer, character, double, complex, raw, ls() command, expressions, variables and functions, control structures, Array, Matrix, Vectors

Unit – 4: Exploring data in R (13h)

Data frames-data frame access, ordering data frames, R functions for data frames dim(), nrow(), ncol(), str(), summary(), names(), head(), tail(), edit() .Load data frames—readingfrom .CSV files, reading from tab separated value files, reading from tables.

Unit – 5: Data Visualization using R (12h)

Reading and getting data into R (External Data): XML files, Web Data, JSON files, Databases, Excel files.

Working with R Charts and Graphs: Histograms, Bar Charts, Line Graphs, Scatter plots, Pie Charts

BOOKS

1. Seema Acharya , Subhashini Chellappan --- Big Data And Analytics secondedition, Wiley
2. Seema Acharya--Data Analytics using R, McGraw Hill education (India) Private Limited.
3. Big Data Analytics, Introduction to Hadoop, Spark, and Machine-Learning, Rajkamal, Preeti Saxena, McGraw Hill, 2018.
4. Big Data, Big Analytics: Emerging Business intelligence and Analytic trends forToday's Business, Michael Minelli, Michelle Chambers, and Ambiga Dhiraj, John Wiley &Sons, 2013

Reference Books:

1. An Introduction to R, Notes on R: A Programming Environment for Data Analysis and Graphics. W. N. Venables, D.M. Smith and the R Development Core Team

RECOMMENDED CO-CURRICULAR ACTIVITIES:

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

A.   Measurable

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity))
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups a steams))
4. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity

B.   General

1. Group Discussion
2. Try to solve MCQ's available online.
3. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Problem-solving exercises,
4. Practical assignments and laboratory reports.
5. Observation of practical skills,
6. Individual and group project reports like ─Creating Text Editor in C‖.
7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work

Course-6A: **Big Data Analytics Using R ----Lab (Practical) Syllabus (15 Hrs.)**

(Since, the proposed SECs are connected to Computer Programming/Software Tools and Skill enhancement, the students need to get exposure on the syllabus content by practicing on the computer even though there is no formal assignment of credits and laboratory hours for practical sessions. So, as part of the Co-curricular activities and continuous assessment, students should be engaged in practicing on computer for at least 15 hours per semester.)

1. Create a vector in R and perform operations on it.
2. Create integer, complex, logical, character data type objects in R and print their values and their class using print and class functions.
3. Write code in R to demonstrate sum(), min(), max() and seq() functions.
4. Write code in R to manipulate text in R using grep(), toupper(), tolower() and substr() functions.
5. Create data frame in R and perform operations on it.
6. Import data into R from text and excel files using read.table () and read.csv () functions.
7. Write code in R to find out whether number is prime or not.
8. Print numbers from 1 to 100 using while loop and for loop in R.
9. Write a program to import data from csv file and print the data on the console.
10. Write a program to demonstrate histogram in R.

Note: The list of experiments need not be restricted to the above list. *Detailed list of Programming/software tool based exercises can be prepared by the concerned Faculty members.*

SRI VENKATESWARA UNIVERSITY

**B.Com. Computer Applications & B.Com Computer Applications with Business Analytics, BA
Computer Applications &B.Sc. Computer Applications
III Year – V Semester (**Under CBCS W.E.F. 2020-21)
Course-**6A: BIGDATA ANALYTICS USING R**

MODEL QUESTION PAPER

SECTION - A (Total 15 marks)
Answer any FIVE Questions   5×3 = 15 Marks

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

SECTION - B (Total 60 marks)
Answer any FIVE Questions   5×12 = 60 Marks

11.
12
13.
14.
15.
16.
17.
18.
19.
20.

Note: Must Give Two 3 Marks Questions and Two 12 Marks Questions from each Unit.

SRI VENKATESWARA UNIVERSITY

**B.Com. Computer Applications & B.Com Computer Applications with Business Analytics,
BA Computer Applications & B.Sc. Computer Applications**
III Year – V Semester (Under CBCS W.E.F. 2020-21)
Course-**7A: DATA SCIENCE USING PYTHON**
(Skill Enhancement Course (Elective), 5 credits)

Learning Outcomes:

Upon successful completion of the course, a student will be able to:
1. Understand basic concepts of data science
2. Understand why python is a useful scripting language for developers.
3. Use standard programming constructs like selection and repetition.
4. Use aggregated data (list, tuple, and dictionary).
5. Implement functions and modules.

II. Syllabus :(Total hours: 75 including Theory, Practical, Training, Unit tests etc.)
Unit – 1: Introduction to data science **(12h)**
Data science and its importance, advantages of data science, the process of data science,
Responsibilities of a data scientist, qualifications of data scientists, would you be a good data
scientist, why to use python for data science.

Unit – 2: Introduction to python **(14h)**
What is python , features of python, history of python, writing and executing the python
program, basic syntax, variables, keywords, data types ,operators ,indentation, Conditional
statements-if, if-else, nested if-else, looping statements-for, while, break, continue, pass

Unit – 3: Control structures and strings (10h)
Strings - definition, accessing, slicing and basic operations
Lists - introduction, accessing list, operations, functions and methods,
Tuples - introduction, accessing tuple
Dictionaries - introduction, accessing values in dictionaries

Unit – 4: Functions and modules **(13h)**
Functions - defining a function, calling a function, types of functions, function arguments, local
and global variables, lambda and recursive functions, Modules- math and random

Unit-5: Classes & Objects **(11h)**
Classes and Objects, Class method and self-argument, class variables and object variables, public
and private data members, private methods, built-in class attributes, static methods.

Reference Books:
1. Steven cooper--- Data Science from Scratch, Kindle edition
2. Reemathareja—Python Programming using problem solving approach, OxfordPublication

RECOMMENDED CO-CURRICULAR ACTIVITIES:

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

C.   Measurable

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity))
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups a steams))
4. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity

D.   General

1. Group Discussion
2. Try to solve MCQ's available online.
3. Others

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

11. The oral and written examinations (Scheduled and surprise tests),
12. Closed-book and open-book tests,
13. Problem-solving exercises,
14. Practical assignments and laboratory reports.
15. Observation of practical skills,
16. Individual and group project reports like ‒Creating Text Editor in C‖.
17. Efficient delivery using seminar presentations,
18. Viva voce interviews.
19. Computerized adaptive testing, literature surveys and evaluations,
20. Peers and self-assessment, outputs form individual and collaborative work

(Since, the proposed SECs are connected to Computer Programming/Software Tools and Skill enhancement, the students need to get exposure on the syllabus content by practicing on the computer even though there is no formal assignment of credits and laboratory hours for practical sessions. So, as part of the Co-curricular activities and continuous assessment, students should be engaged in practicing on computer for at least 15 hours per semester.)

1. Python Program to Find the Square Root
2. Python Program to Swap Two Variables
3. Python Program to Generate a Random Number
4. Python Program to Check if a Number is Odd or Even
5. Python Program to Find the Largest Among Three Numbers
6. Python Program to Check Prime Number
7. Python Program to Display the multiplication Table
8. Python Program to Print the Fibonacci sequence
9. Python Program to Find the Sum of Natural Numbers
10. Python Program to Find Factorial of Number Using Recursion
11. Python Program to work with string methods.
12. Python Program to create a dictionary and print its content.
13. Python Program to create class and objects.

- - - - - - - - - - - -

Note: The list of experiments need not be restricted to the above list. *Detailed list of Programming/software tool based exercises can be prepared by the concerned Faculty members.*

SRI VENKATESWARA UNIVERSITY

B.Com. Computer Applications & B.Com Computer Applications with Business Analytics, BA Computer Applications &B.Sc. Computer Applications
III Year – V Semester (Under CBCS W.E.F. 2020-21)
Course-**7A: DATA SCIENCE USING PYTHON**

MODEL QUESTION PAPER

SECTION - A (Total 15 marks)
Answer any FIVE Questions   5×3 = 15 Marks

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

SECTION - B (Total 60 marks)
Answer any FIVE Questions   5×12 = 60 Marks

11.
12
13.
14.
15.
16.
17.
18.
19.
20.

Note: Must Give Two 3 Marks Questions and Two 12 Marks Questions from each Unit.