This question paper contains **2** printed pages]

PD—24—2024

FACULTY OF COMPUTER STUDIES

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

APRIL/MAY, 2024

(CBSC/Revised Pattern)

COMPUTER SCIENCE

(BCS–504–B)

[Basics of Linux]

(Wednesday, 10-04-2024)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 Hours   *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

       (*ii*) Assume suitable data, if necessary.

1. Attempt any *five* of the following :   15

(*a*) Explain operating system.

(*b*) Explain features of linux.

(*c*) Explain /bin & /sbin directories.

(*d*) Explain inittab command.

(*e*) Explain free command in detail.

(*f*) Describe shells in detail.

(*g*) Explain finger command.

P.T.O.

2. Attempt any *three* of the following : 15

    (*a*) Explain Vi in detail.

    (*b*) Write difference between Linux and Windows OS.

    (*c*) Explain hardware requirements for linux.

    (*d*) Explain login and logout in detail.

    (*e*) Explain rc-sysinit-rc.

3. Attempt any *three* of the following : 15

    (*a*) Explain the term boot loader with example.

    (*b*) Explain cat and cp commands.

    (*c*) What are functions of OS ? Explain.

    (*d*) Explain /etc directory in detail.

    (*e*) Explain head and tail commands.

4. Attempt any *three* of the following : 15

    (*a*) Write down installation steps of Linux OS.

    (*b*) Explain zip, unzip commands.

    (*c*) Explain who and whoami commands.

    (*d*) Explain lpr and lpd commands.

    (*e*) Explain features of Vi.

5. Write short notes on (any *three*) : 15

    (*a*) Changing passwords.

    (*b*) Su command.

    (*c*) Difference between Unix & Linux.

    (*d*) Linux Distributions

    (*e*) Sort commond.

PD—28—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (C.S.) (Third Year) (Fifth Semester) EXAMINATION

APRIL/MAY, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

(Data Science)

(Friday, 12-4-2024)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 Hours   *Maximum Marks—75*

N.B. :—   (*i*)   *All* questions carry equal marks.

         (*ii*)   Figures to the right indicate full marks.

1. Attempt any *five* of the following :   15

     (*a*)   What is database and its explain ?

     (*b*)   Explain data analysis.

     (*c*)   Explain artificial intelligence.

     (*d*)   Explain software engineering trends and techniques.

     (*e*)   Explain parallel computing and algorithms.

     (*f*)   Explain Hadoop integration with R.

     (*g*)   Explain various applications of Data Science.

P.T.O.

2. Attempt any *three* of the following : 15

   (*a*) Explain Evaluation.

   (*b*) Explain machine learning bigdata.

   (*c*) Explain Data warehousing.

   (*d*) Explain AI and ANNbasic.

   (*e*) Explain programming paradigm and its algorithms.

3. Attempt any *three* of the following : 15

   (*a*) Explain predictive analysis.

   (*b*) Explain non-scalable and scalable data.

   (*c*) Explain classification.

   (*d*) Explain descriptive and inferential statistics.

   (*e*) Explain Hypothesis techniques.

4. Attempt any *three* of the following : 15

   (*a*) What is data mining and its detail ?

   (*b*) What is Data visualization and its detail ?

   (*c*) Explain basic introduction to Data Science.

   (*d*) Explain research methodology basic and its importance.

   (*e*) Explain Data Scientist roles and responsibilities.

5. Write short notes on any *three* of the following : 15

   (*a*)   Data structures

   (*b*)   Data acquisition

   (*c*)   Essential of algorithms and data structure

   (*d*)   Experimentation

   (*e*)   Data Mining *Vs*. Data Science.

This question paper contains **2** printed pages]

PD—19—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Third Year) (Fifth Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

PYTHON

(CS–502)

(Monday, 08-04-2024)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 Hours   *Maximum Marks—*75

N.B. :— (*i*)   Attempt *all* questions.

(*ii*)   Figures to the right indicate full marks.

1.   Attempt any *five* of the following :   15

(*a*)   Explain the introduction of python.

(*b*)   Write a program in python to check prime number.

(*c*)   Explain pickling data in python.

(*d*)   Define classes.

(*e*)   Explain data structures in dictionary.

(*f*)   Explain polymorphism.

(*g*)   Explain exception handling.

P.T.O.

2. Attempt any *three* of the following : 15

   (*a*)   Explain interpreter in python.

   (*b*)   Write a program in python to demonstrate the use of keyword arguments.

   (*c*)   Explain the manipulating string with ex.

   (*d*)   Write a program in python to check if a number is positive, negative or zero.

   (*e*)   Explain mathematical functions and constants.

3. Attempt any *three* of the following : 15

   (*a*)   How to writing list and manipulating list with examples ?

   (*b*)   Write a program in python to check leap year.

   (*c*)   Explain types of inheritance.

   (*d*)   Explain connecting with database.

   (*e*)   Explain reading data from CSV Excel file in python.

4. Attempt any *three* of the following : 15

   (*a*)   Explain conditional structures with example.

   (*b*)   Explain difference between list, triple and set.

   (*c*)   Explain data types in python.

   (*d*)   Write a program in python to use multilevel inheritance.

   (*e*)   Explain the step of installation python on windows.

5. Write short notes on any *three* of the following : 15

   (*a*)   Web using flask

   (*b*)   Dictionary

   (*c*)   Modules

   (*d*)   Data structure in list

   (*e*)   Passing query to mySQL.

This question paper contains **3** printed pages]

PD—23—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Fifth Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper AF-25

(Software Testing)

(Wednesday, 10-4-2024)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours   *Maximum Marks*—75

N.B. :— (*i*)   *All* questions are compulsory.

(*ii*)   Figures to the right indicate full marks.

(*iii*)   Assume suitable data, if required.

(*iv*)   Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) :   15

(*a*)   Explain cost of quality.

(*b*)   Explain software review in short.

(*c*)   What is unit testing ?

P.T.O.

(*d*) Explain software testing fundamentals.

(*e*) Explain user interface testing.

(*f*) Explain metrics for testing.

(*g*) Explain targeted quality factor.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Write a short note on quality control.

(*b*) Explain top down approach in testing.

(*c*) Explain formal technical review.

(*d*) Explain white box testing.

(*e*) Explain content testing.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain metrics for design model.

(*b*) Explain quality and security.

(*c*) Explain software quality assurance.

(*d*) Explain concept of software testing.

(*e*) Explain types of software testing in brief.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain overview of testing process.

(*b*) Explain metrics for requirement model.

(*c*) Explain McCall's five quality factor.

(*d*) Explain software reliability.

(*e*) What is art of debugging ?

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) Basic path testing

(*b*) Black box testing

(*c*) Testing concept for web apps

(*d*) Bottom up approach of testing

(*e*) SQA plan.

PD—12—2024

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (CS) (Fifth Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper-BCS-501

(Windows Programming)

(Friday, 05-04-2024)　　　　　　　　　**Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours*　　　　　　　　　　　　　　*Maximum Marks*—75

N.B. :— (*i*)　*All* questions are compulsory.

　　　　(*ii*)　Figures to the right indicate full marks.

　　　　(*iii*)　Assume suitable data, if required.

　　　　(*iv*)　Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1.　Attempt any *five* of the following (**3** marks each) :　　　　15

　(*a*)　Explain visual studio and IDE components in detail.

　(*b*)　Explain intelligsense in Visual Studio IDE.

　(*c*)　Explain textbox and label control with properties.

　　　　　　　　　　　　　　　　　　　　　　　　P.T.O.

(*d*) Explain string class and its methods.

(*e*) Explain properties in detail.

(*f*) Explain finally block in detail.

(*g*) Explain advantages of ADO.Net.

2. Attempt any *three* of the following (**5** marks each) :   15

(*a*) Explain Common Language Runtime (CLR) in detail.

(*b*) Explain .Net architecture in detail.

(*c*) Explain Listbox and Combobox controls.

(*d*) Explain Array and ArrayList class.

(*e*) Explain indexers with example.

3. Attempt any *three* of the following (**5** marks each) :   15

(*a*) What is interface ? Explain creating and using interfaces.

(*b*) What is exception handling ? Explain in detail.

(*c*) Write a program for call by reference.

(*d*) Explain jagged array in detail.

(*e*) Write a program to demonstrate use of properties.

4. Attempt any *three* of the following (**5** marks each) :   15

(*a*) Explain creating and using namespaces.

(*b*) Explain different types of dialog boxes in detail.

(*c*) Explain out parameter in detail.

(*d*) Explain multicast delegates with example.

(*e*) Write a program for jagged array.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) Explain Common Types System (CTS).

(*b*) Explain call by value in detail.

(*c*) Explain different project types.

(*d*) Explain differences between Java and C#.

(*e*) Explain button, check boxes and radio button.