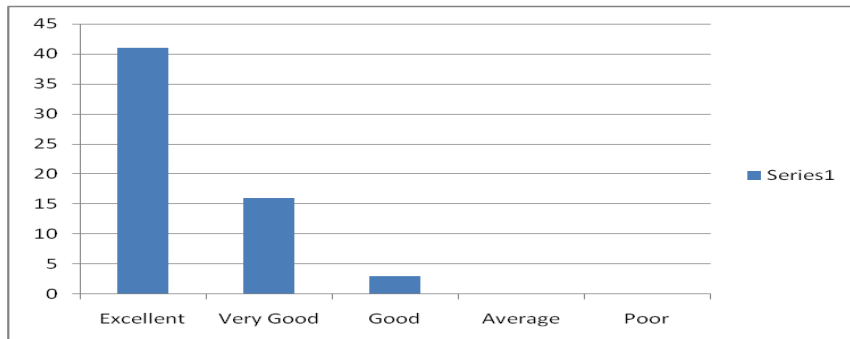**SHRI G. S. INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**

Department of Computer Engineering
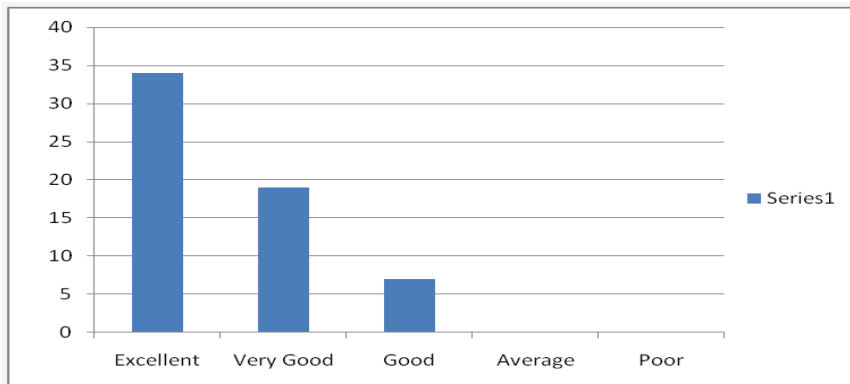
FeedBack (2023-24)
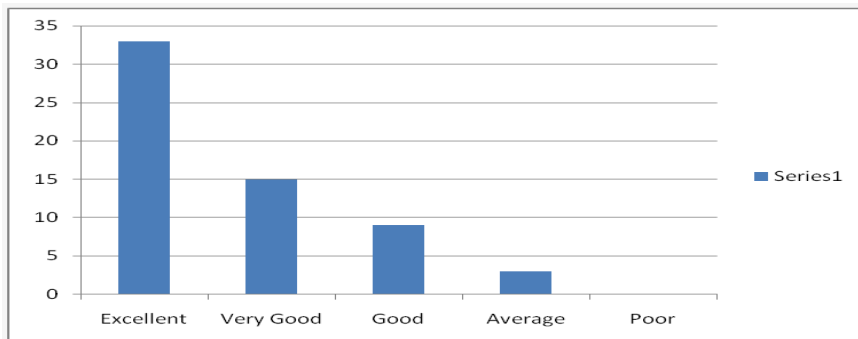
CO24057_Object Oriented Programming Systems

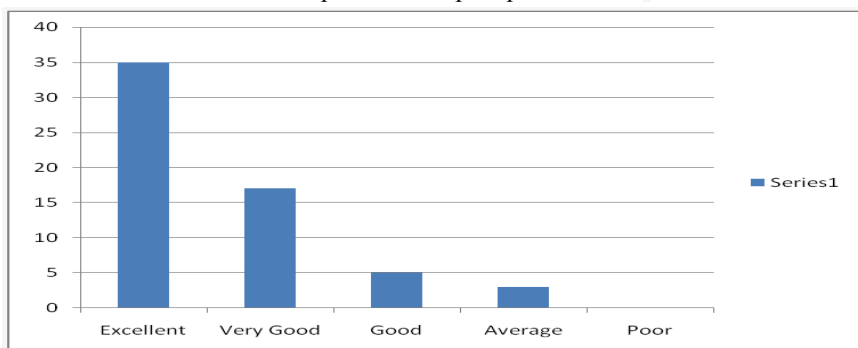Explain various concepts of object oriented terminology.

Define and implement the concepts of data encapsulation, abstraction, inheritance and polymorphism.

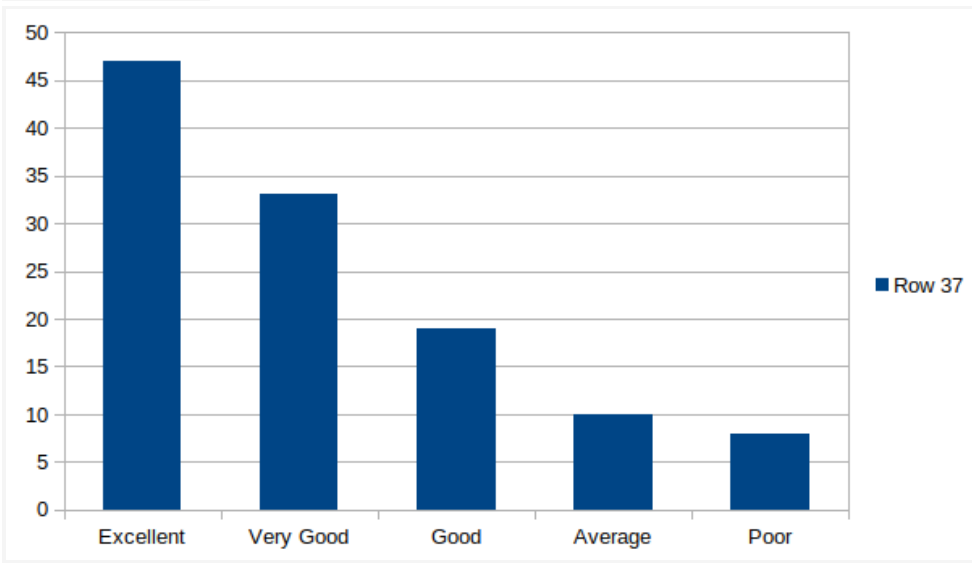Design and execute quality programs using exception handling.

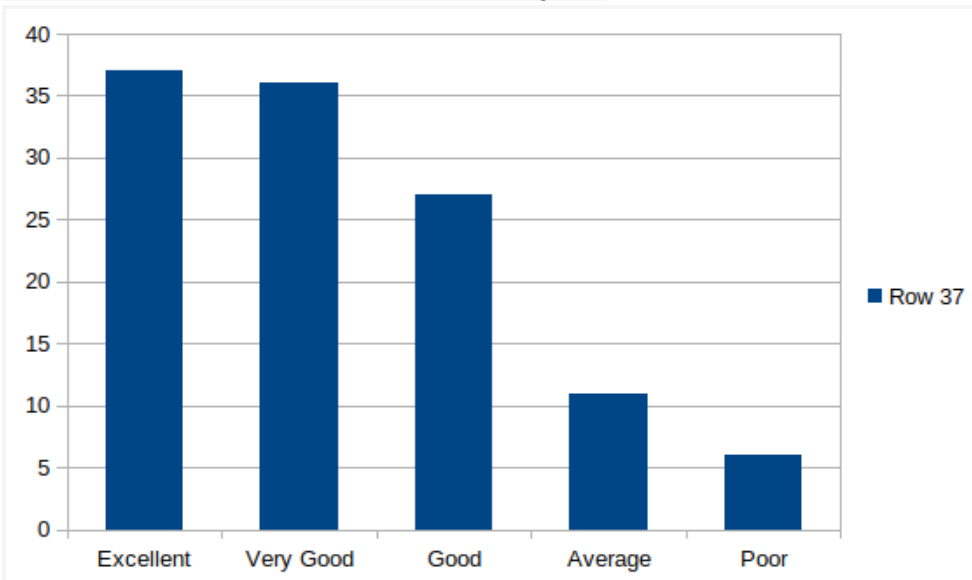Solve the real world business problems as per specifications.
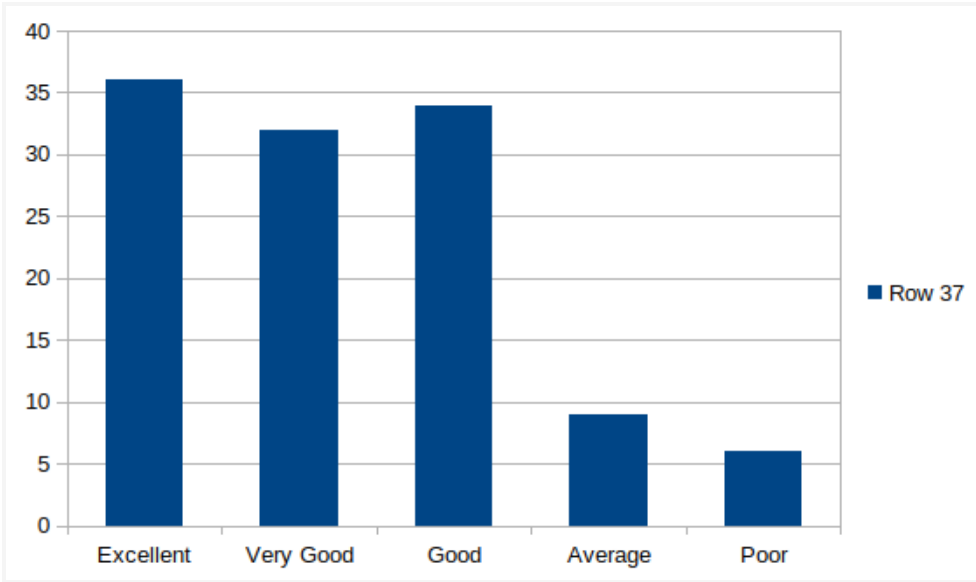
CO24009: Computer Architecture

Illustrate architecture of a computer, its components and their interconnection.
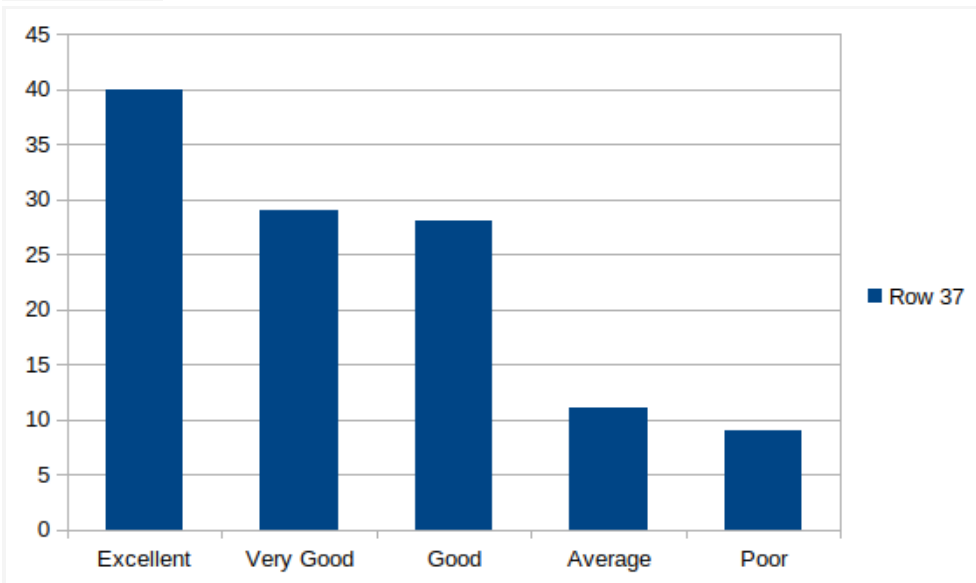

Describe execution of instruction in a computer

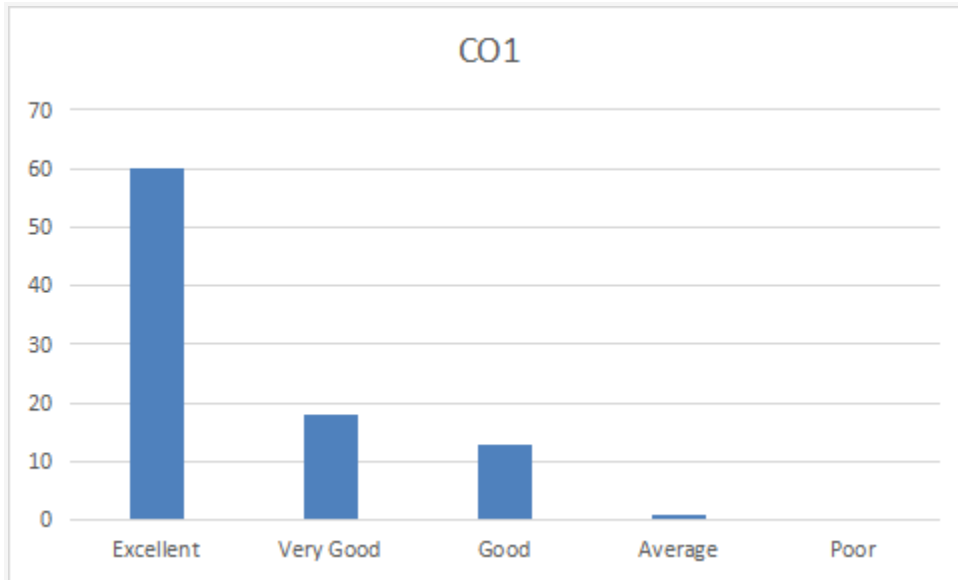**Identify the addressing modes used in macro instruction**

Design programs in assembly language and justify the importance of parallel architecture.
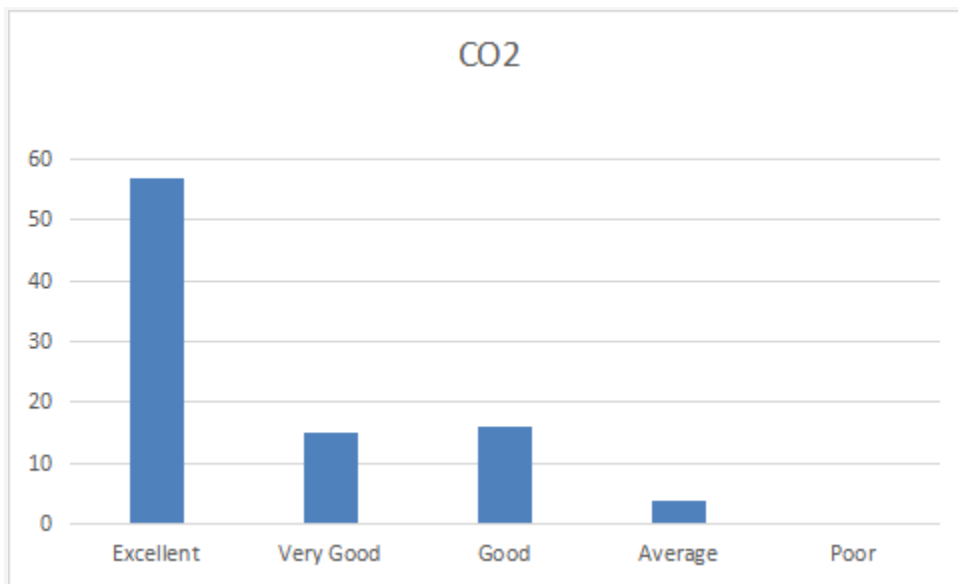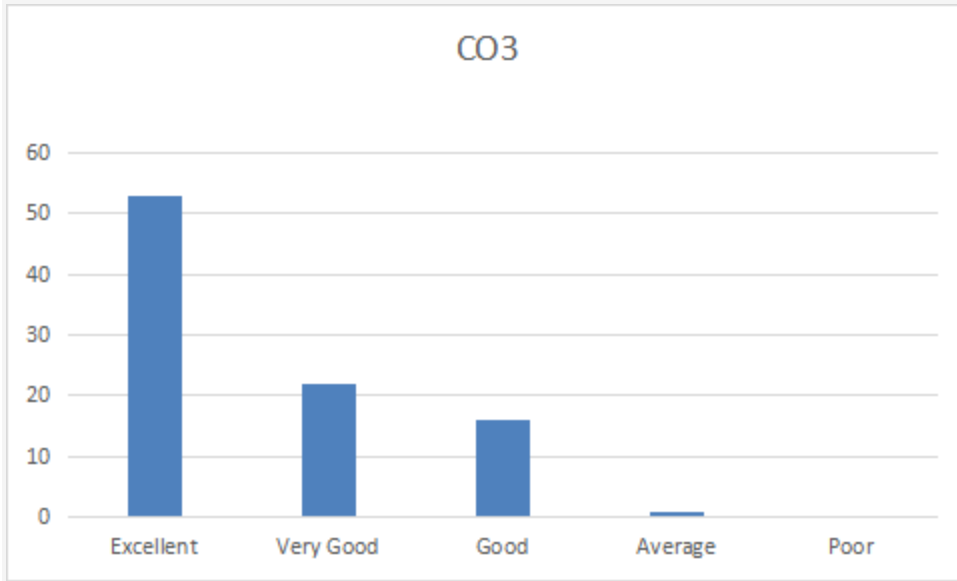
CO44251: Deep Learning

CO1: Describe in-depth about theories, fundamentals, and techniques in Deep learning.
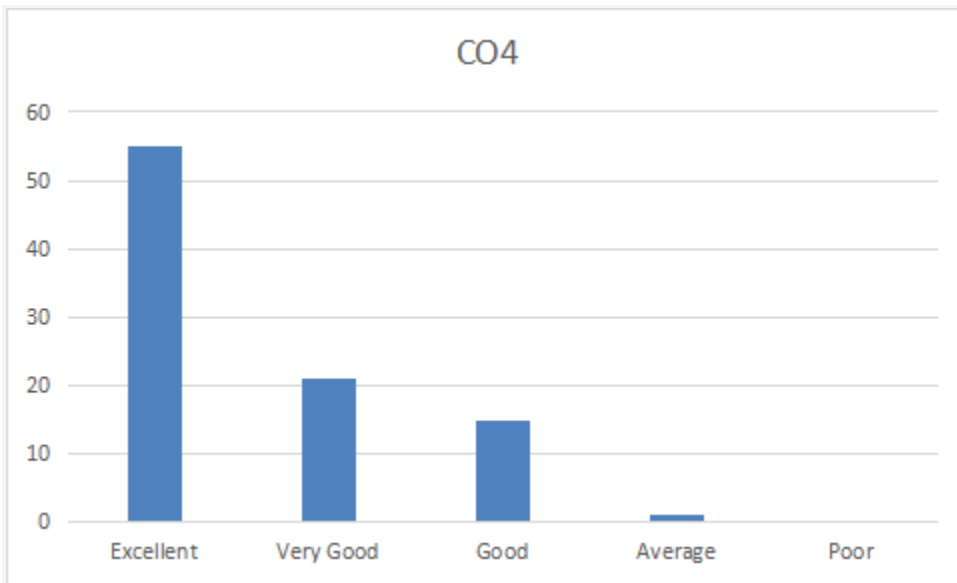

CO2: Identify the ongoing research in computer vision and multimedia field.

CO3: Evaluate various deep networks using performance parameters.

CO3

	Excellent	Very Good	Good	Average	Poor

CO4: Design and validate deep neural network as per requirements.

CO4

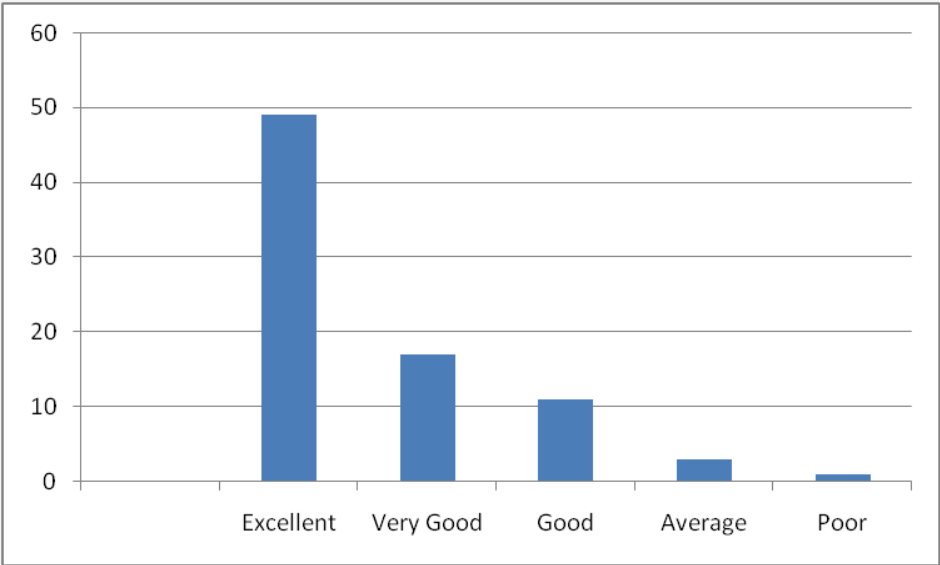|	Excellent	Very Good	Good	Average	Poor

CO34014_Agile Software Methodology

CO1:- Describe the fundamental principles and practices associated with software development process models.
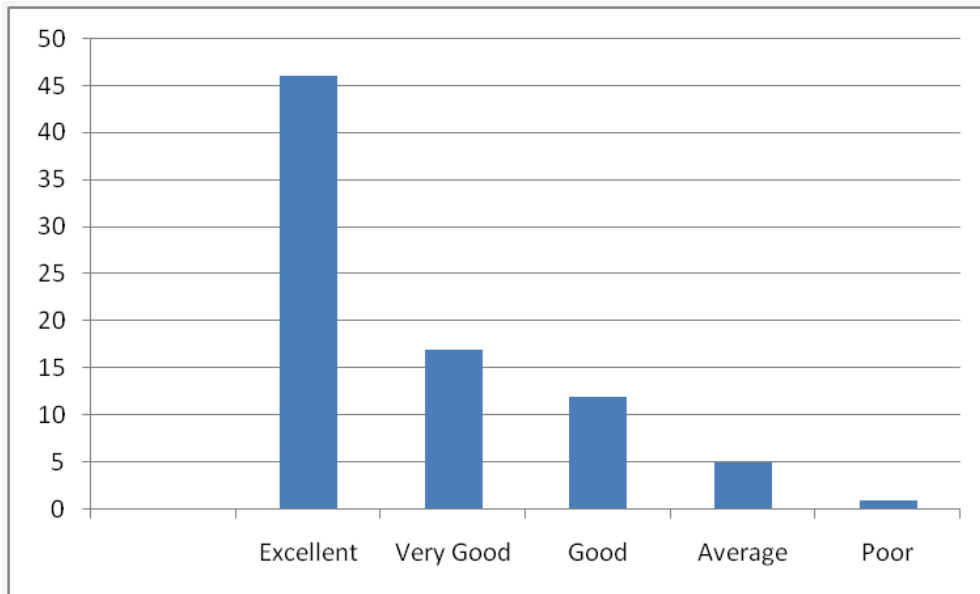

CO2:- Compare and contrast agile software development models with traditional development models.
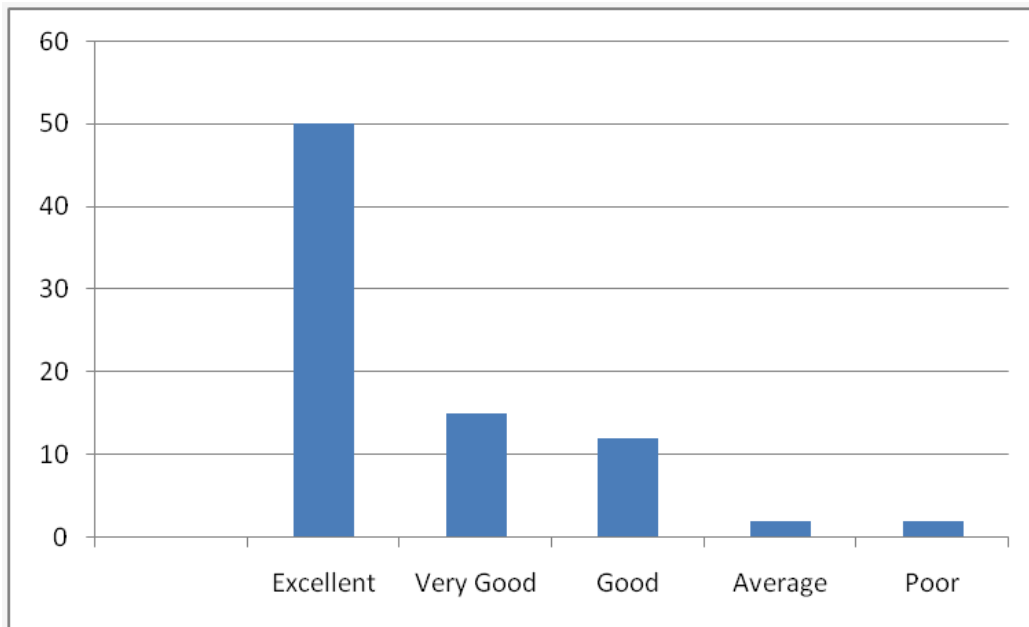
CO3:-

Apply techniques and skills to build and mentor agile projects for effective software development using scrum.
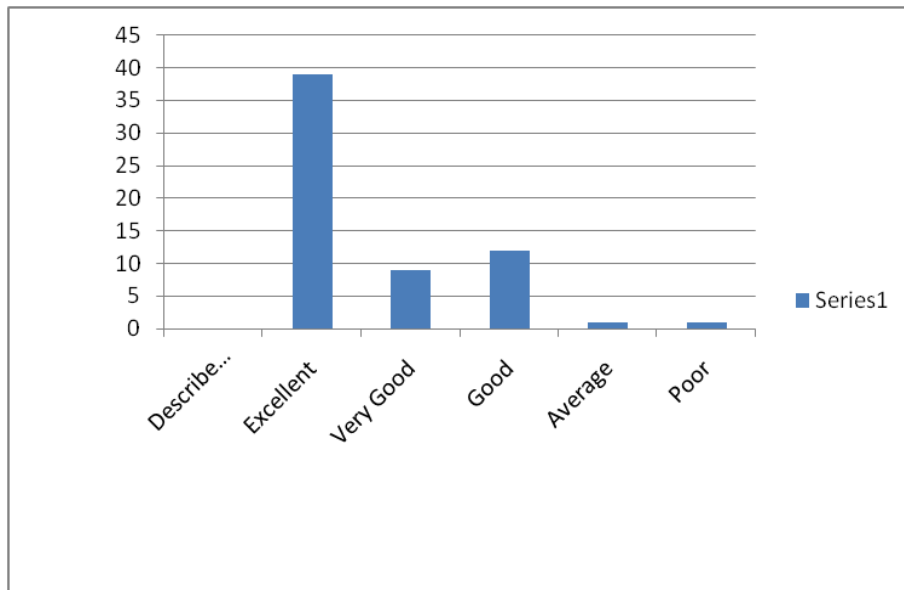

CO4:- Adapt existing agile testing techniques and knowledge to implement agile projects.
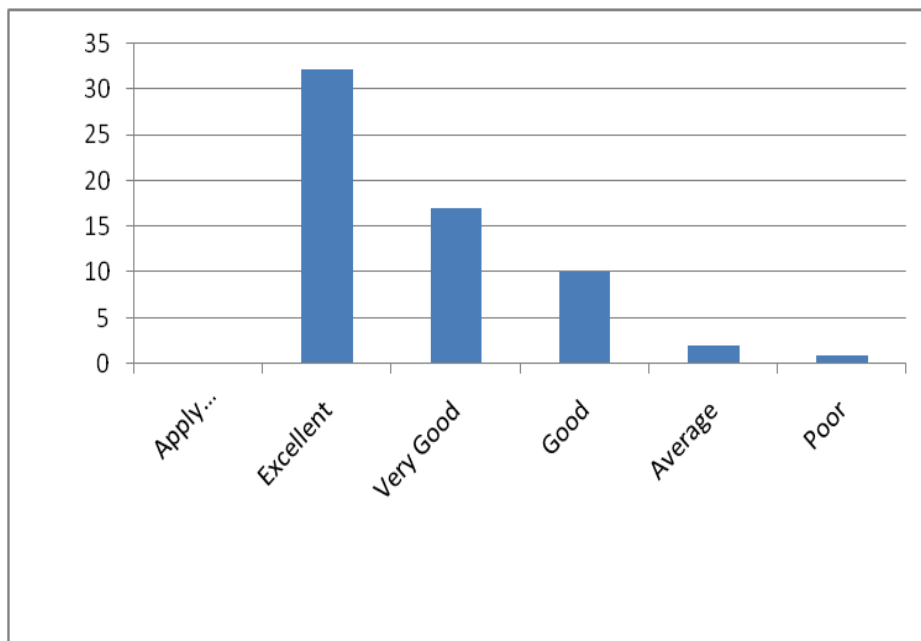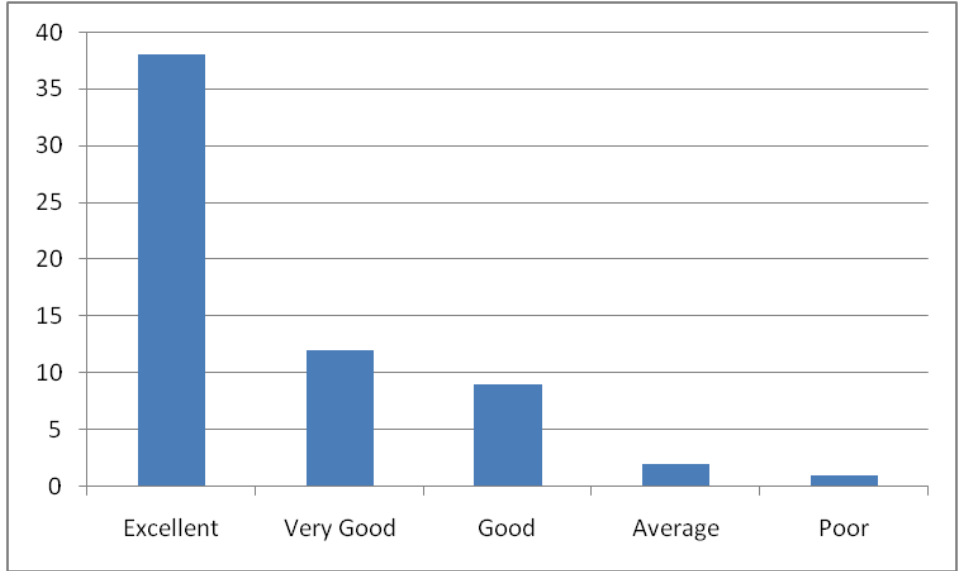
CO34298_Artificial Intelligence
CO1- Describe fundamentals of Artificial Intelligence (AI) and its foundations.


CO2-Apply formal methods of knowledge representation, logic and reasoning for problem solving.

CO3-Apply basic principles of AI in solutions using inference, perception, knowledge representation, and learning concepts.

CO4-Demonstrate awareness and understanding of various applications of AI techniques in intelligent agents, expert systems and other machine learning models.
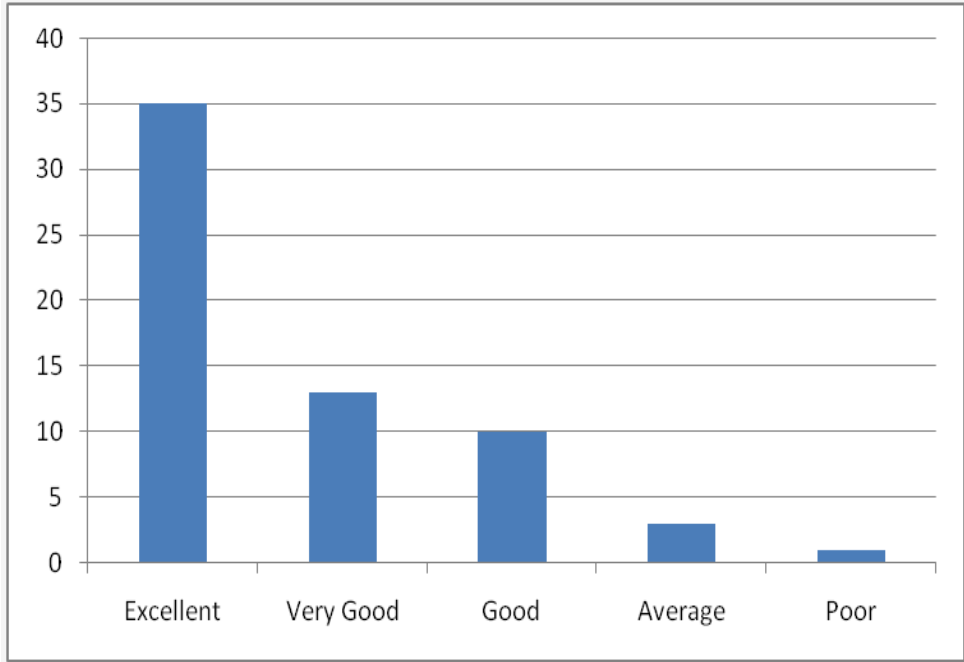
CO34701 Android Application Development

CO1:Understand the basic building blocks of Android and android architecture framework.

1 and 1

Understand the basic building blocks of Android and android architecture framework.
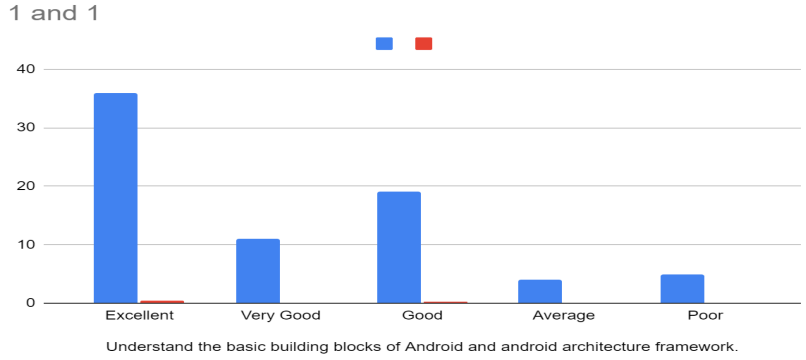
**CO2:Understand basic UI design, concept of Views and ViewGroups and different Layouts and widgets in Android.**

2 and 2

Understand basic UI design, concept of Views and ViewGroups and different Layouts and widgets…

CO3:Use styles and themes and create Android apps with databases using SQLite.

3 and 3
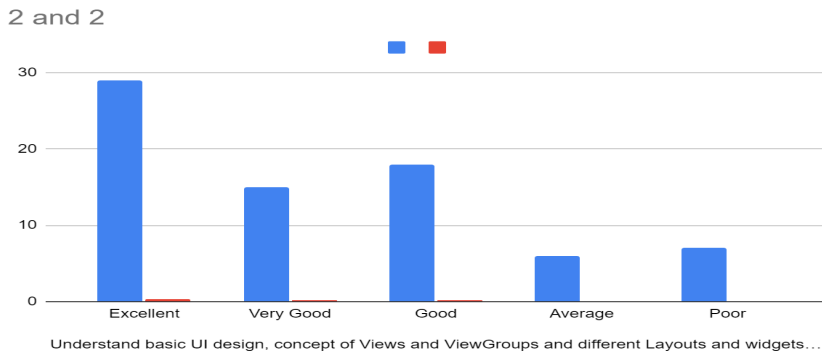

Use styles and themes and create Android apps with databases using SQLite.
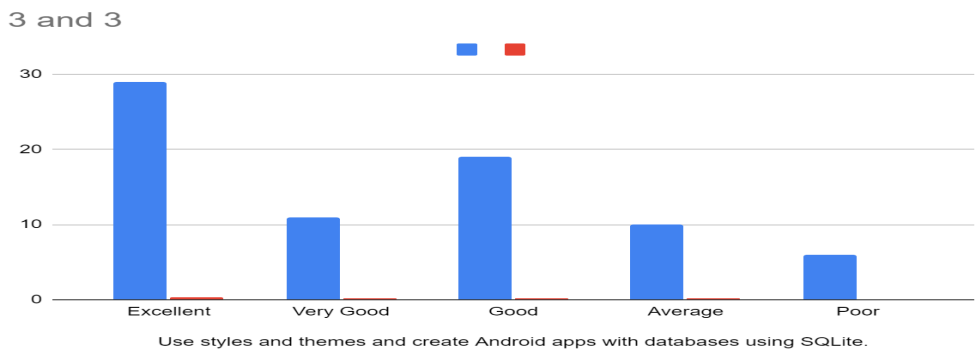
CO4:Implement and use various services in Android applications.

4 and 4

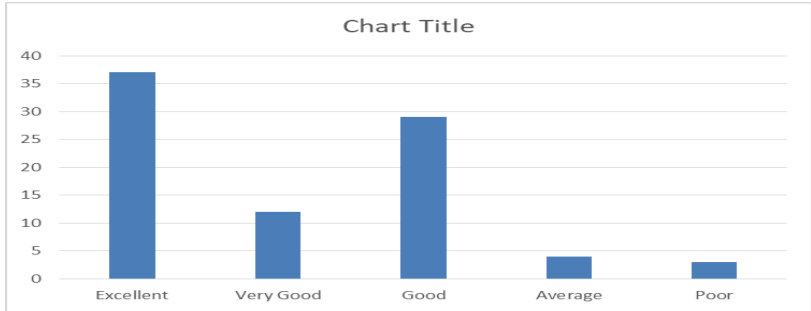

Implement and use various services in Android applications.
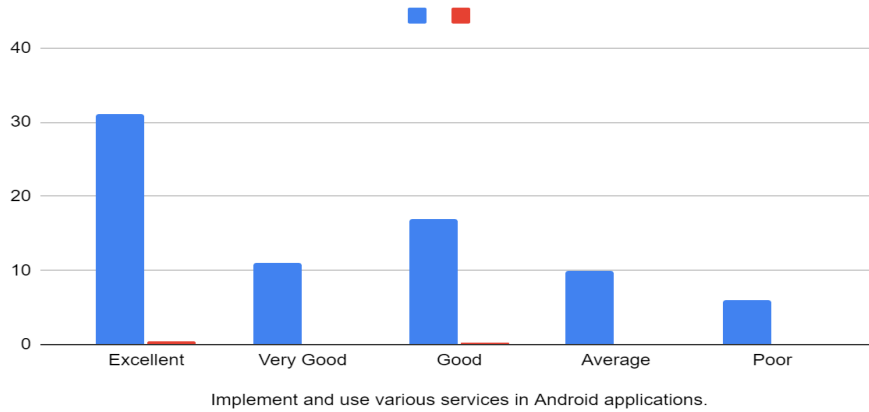
CO5:Successfully create, test and deploy working android apps on Google Play Store.

5 and 5

Successfully create, test and deploy working android apps on Google Play Store.
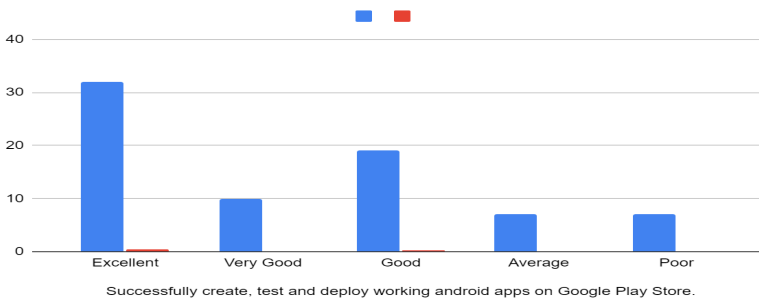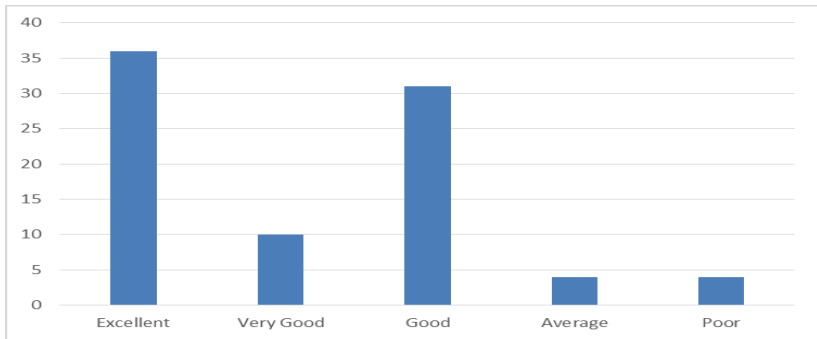
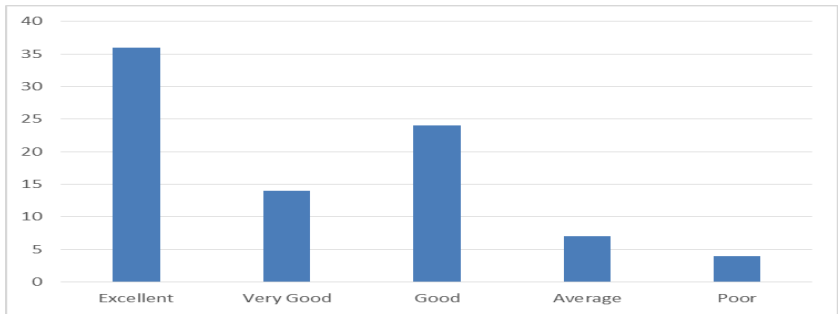**CO34563 : Design and Analysis of Algorithms**

CO1: Describe complexity of an algorithm and various notations to represent it.
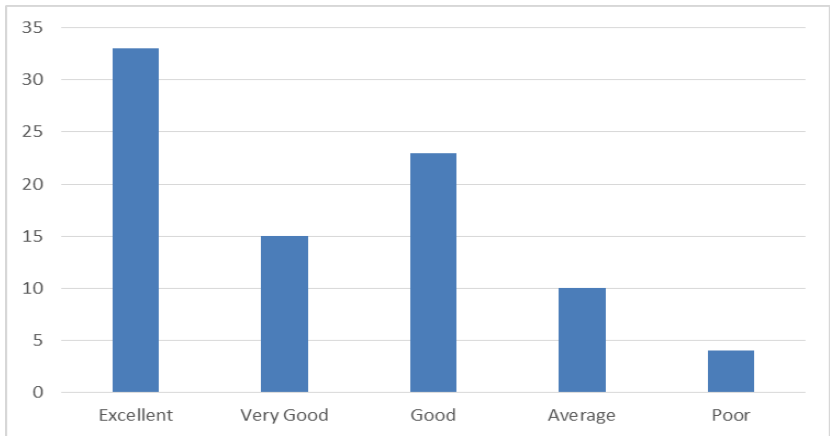

CO2: Apply and evaluate different algorithm design techniques for getting the effective solutions of specified problems.

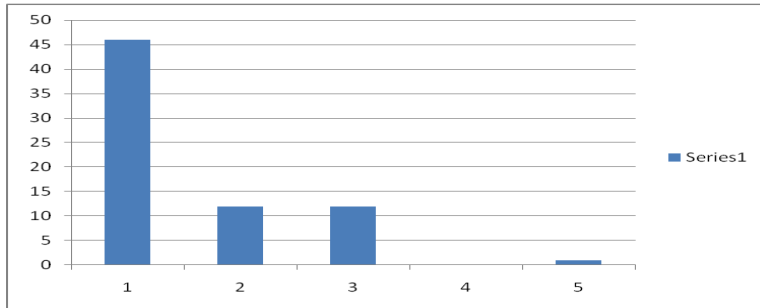**CO3: Compare and contrast different graph algorithms with its applications.**

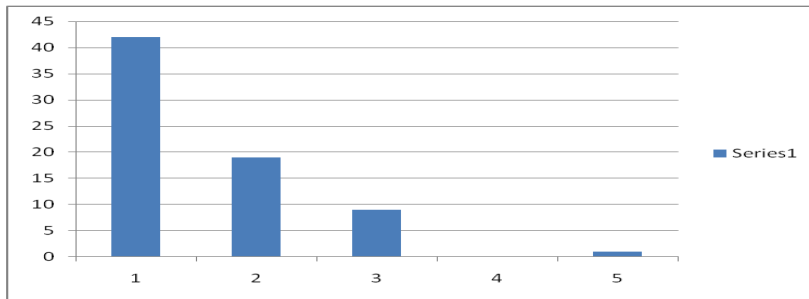**CO4: Explain computability and non-computability and various complexity classes**
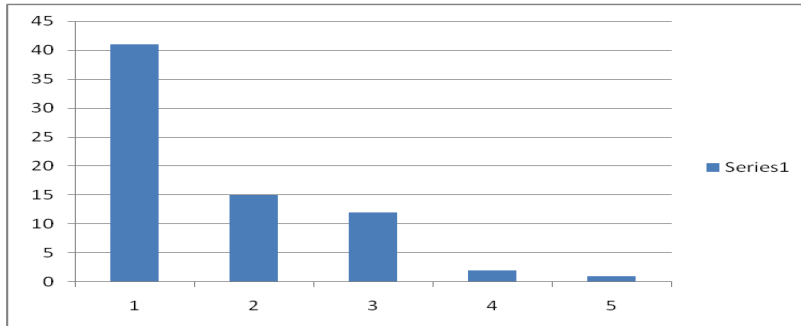
Theory of Computation

Compare and analyze different theoretical computational models, languages and grammars.
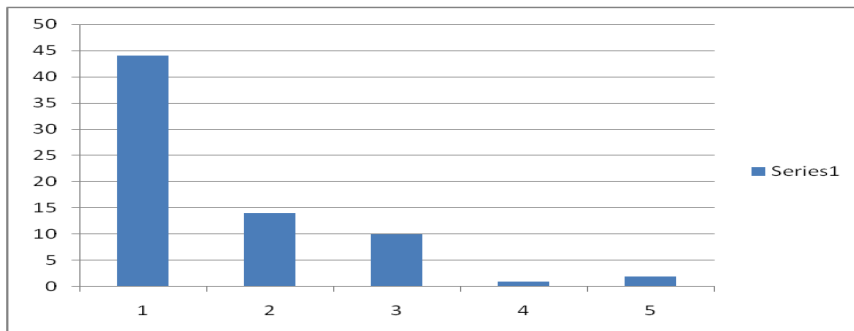

Design and construct finite automata, pushdown automata and Turing machine for various problems.

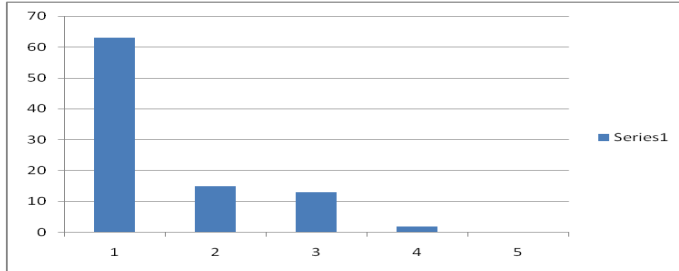## Identify limitations of some computational models and possible methods of proving them.

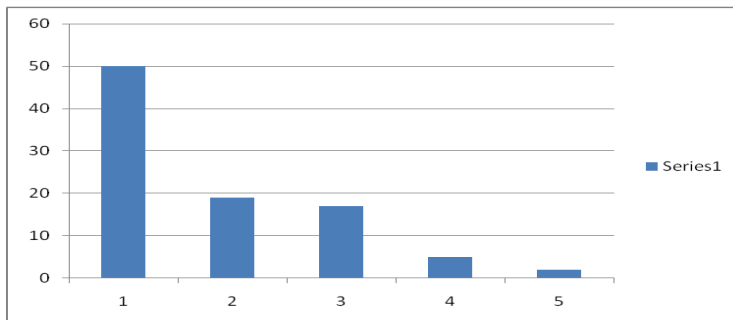## Describe the concept of computable and non computable problems.

Database Management System

Knowledge of basic concepts,components & applications of database systems as well as Entity-Relationship model.


Will learn basics of SQL and use of commercial relational database system (Oracle) by writing Queries using SQL.

Use of design principles for logical design of databases, including the E-R method and normalization approach. Applying relational algebra expressions for queries.
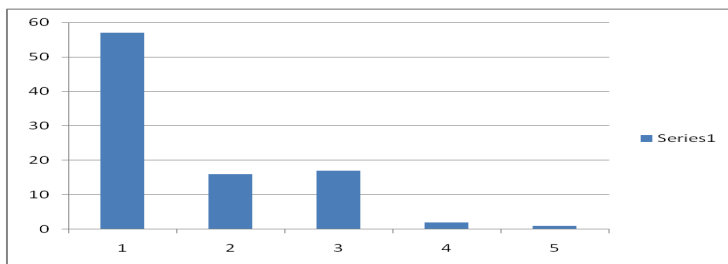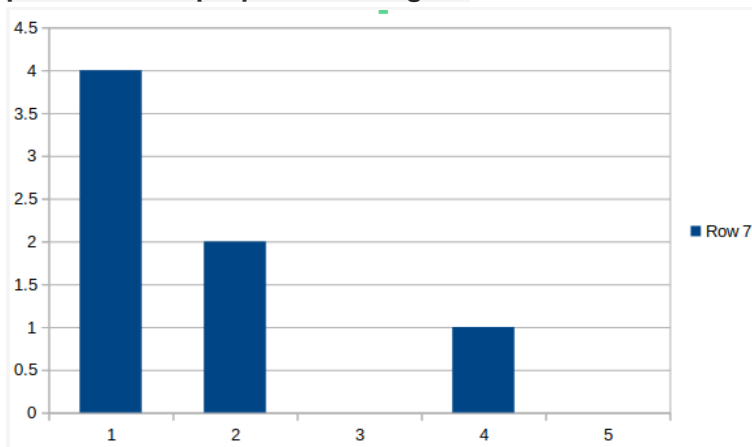

Knowledge of basic issues of transaction processing and concurrency control & basic database storage structures and access techniques.
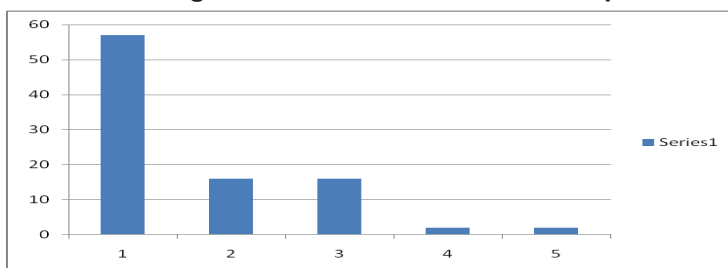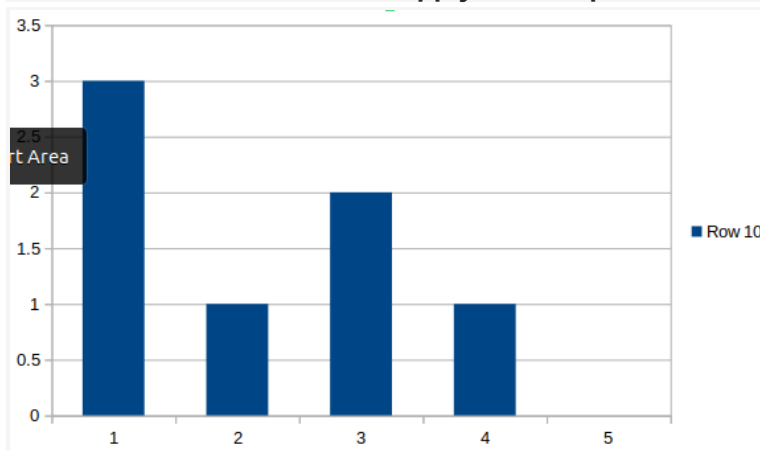
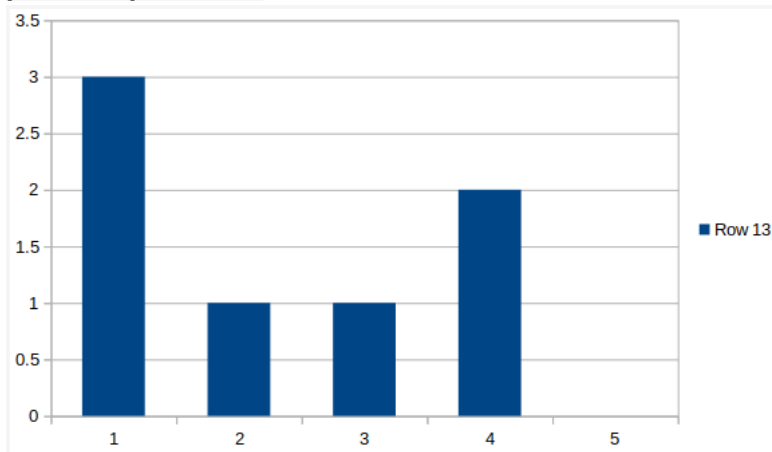**CO24553 - Discrete Structures Section A**

1. Solve problems which involve discrete structures such as sets, relations, functions, predicate and propositional logics.

2. Explain the notion of mathematical thinking, mathematical proofs, logical thinking, and combinatorics and be able to apply them in problem solving.
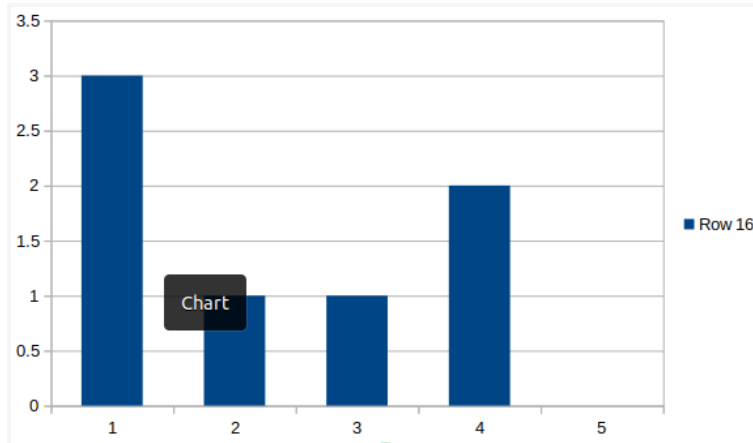

3. Describe the basic terminology and properties of graphs and trees and apply them to solve practical problems.
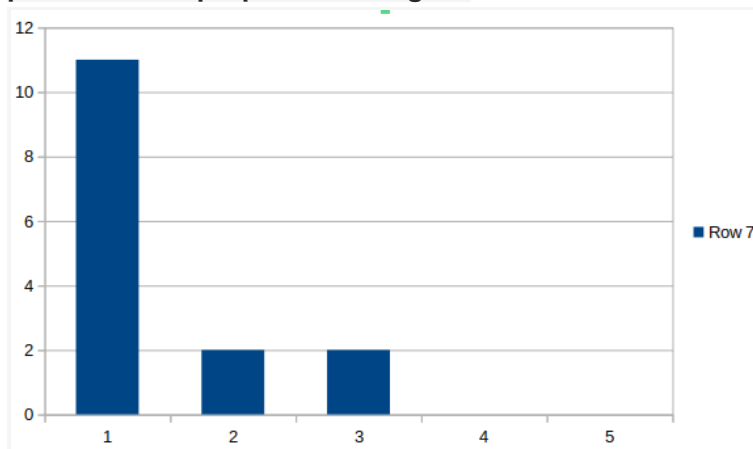
4. Apply algebraic techniques effectively to analyse basic discrete structures and algorithms for real world applications.
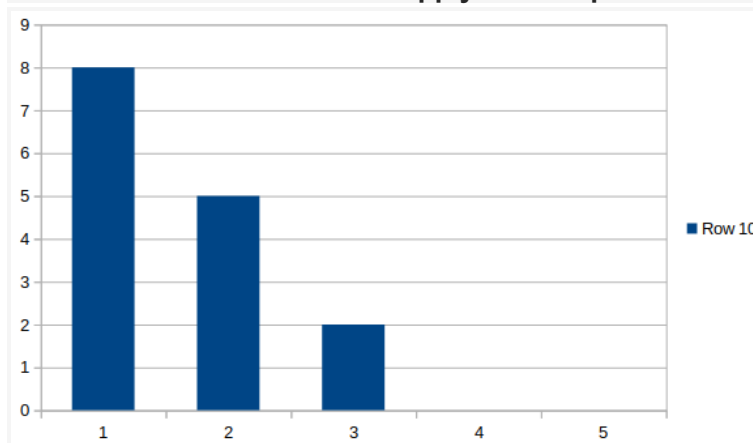

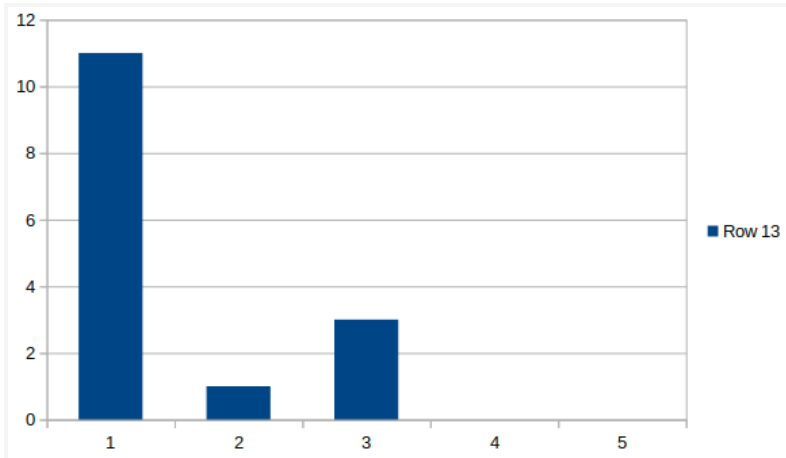**CO24553 - Discrete Structures Section B**

1. Solve problems which involve discrete structures such as sets, relations, functions, predicate and propositional logics.


2. Explain the notion of mathematical thinking, mathematical proofs, logical thinking, and combinatorics and be able to apply them in problem solving.

3. Describe the basic terminology and properties of graphs and trees and apply them to solve practical problems.
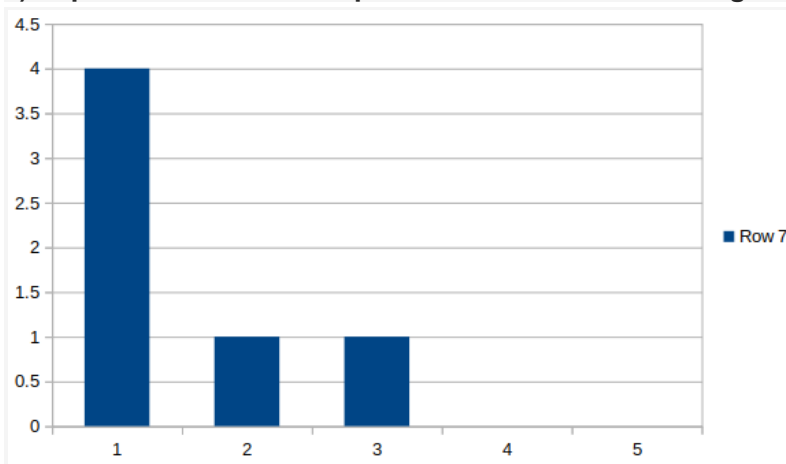

4. Apply algebraic techniques effectively to analyse basic discrete structures and algorithms for real world applications.
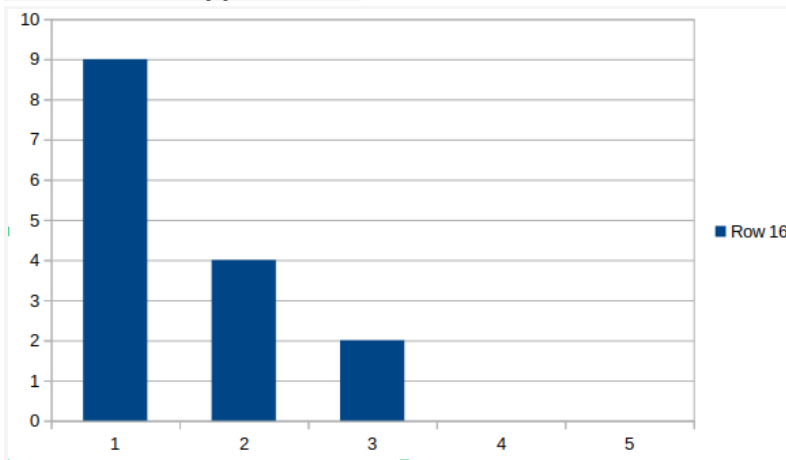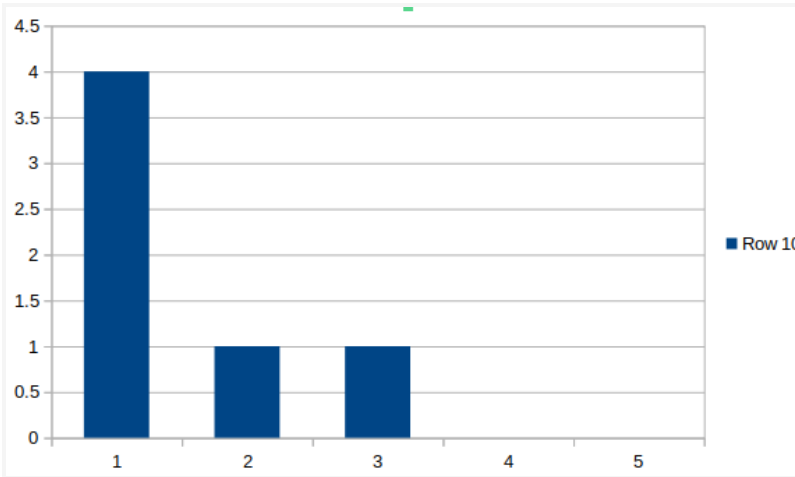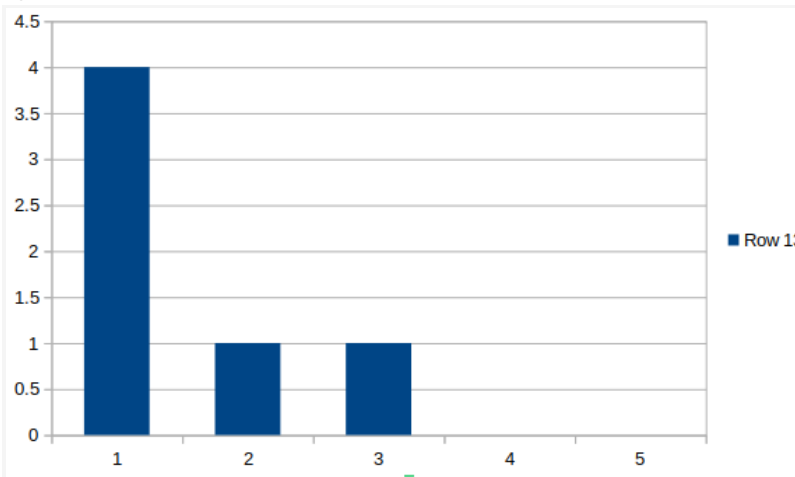

CO24507: Data Structure Section A

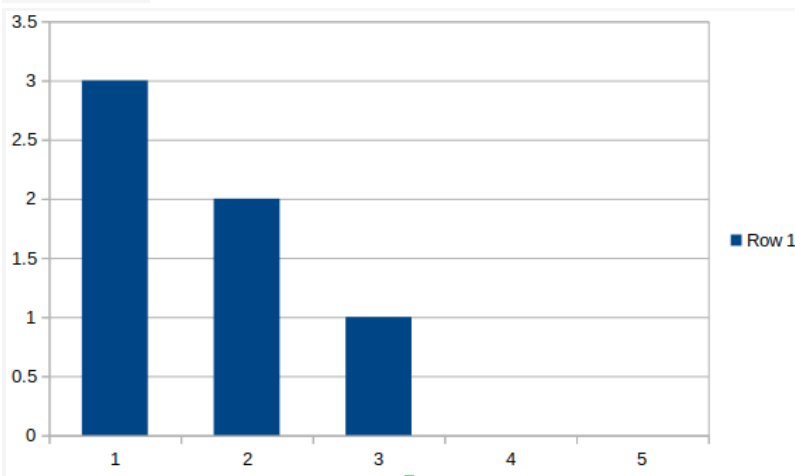**1) Explain the basic concepts of data structures and algorithms.**

2) Describe basic concepts about stacks, queues, linked lists, trees, graphs and their implementation

3) Apply data structures to efficiently organize the data for improving performance of the system.
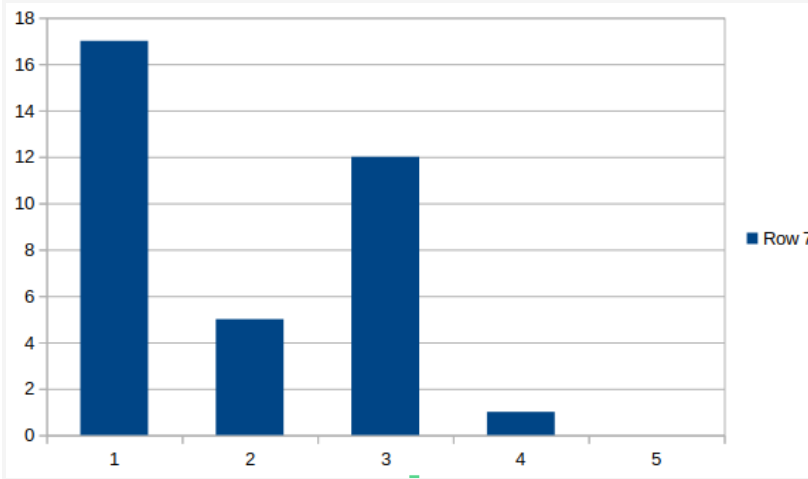

4) Design and implement algorithms for solving problems with the help of fundamental data Structures.
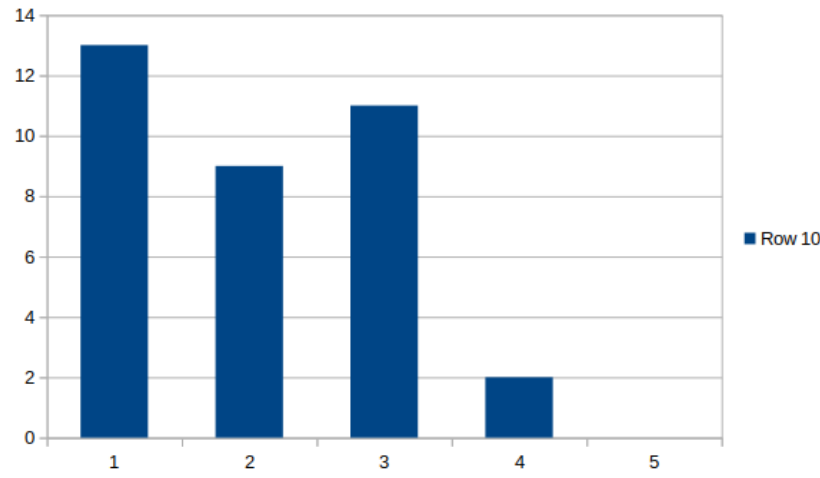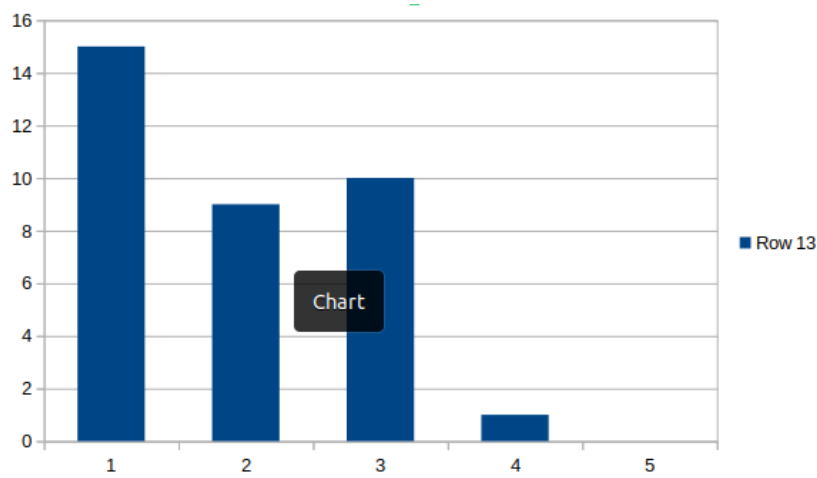
CO24507: Data Structure Section B

1) Explain the basic concepts of data structures and algorithms.
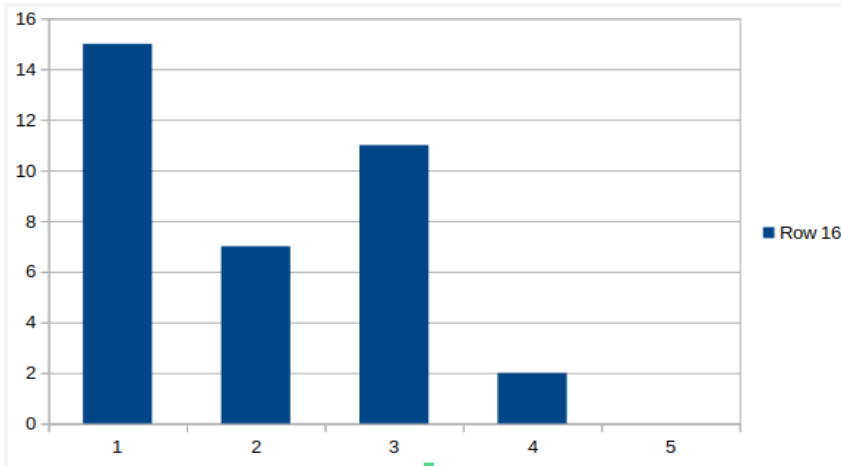

2) Describe basic concepts about stacks, queues, linked lists, trees, graphs and their implementation.

3) Apply data structures to efficiently organize the data for improving performance of the system.
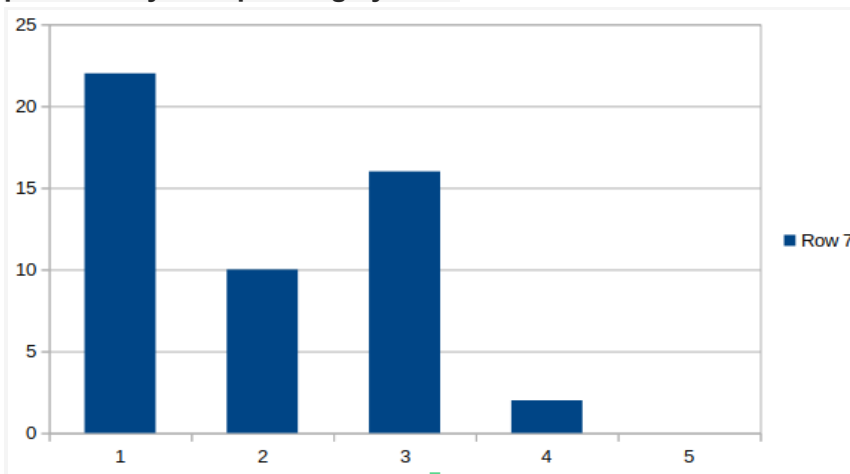
**4) Design and implement algorithms for solving problems with the help of fundamental data Structures.**

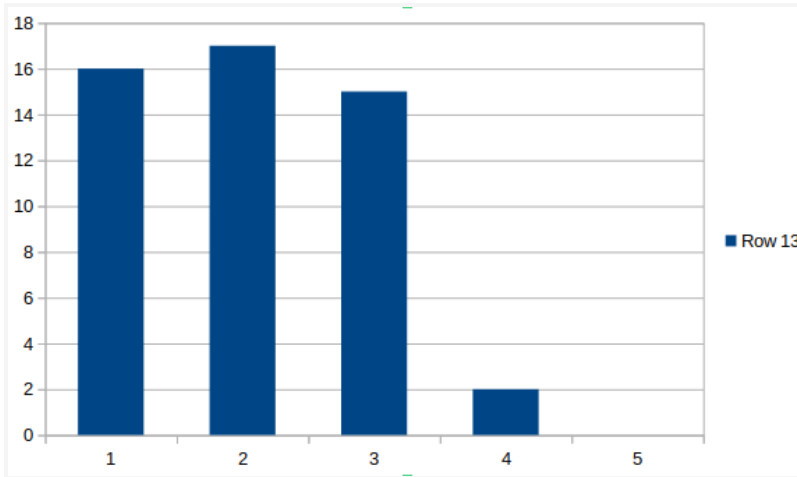**CO24508: Operating System Section A**

1) Describe the importance and objectives of an operating system and various services provided by the operating system.
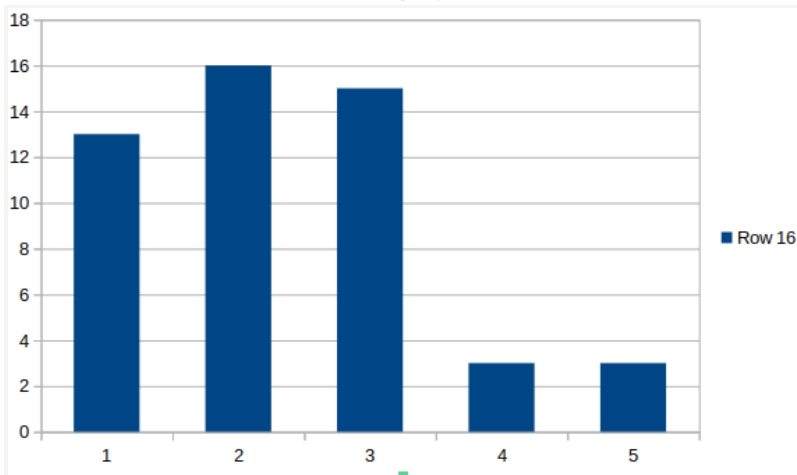

2) Interpret the important functions of different modules of an Operating system, like process management, memory management, device management and file system, etc. and will be able to apply these concepts in given test cases.
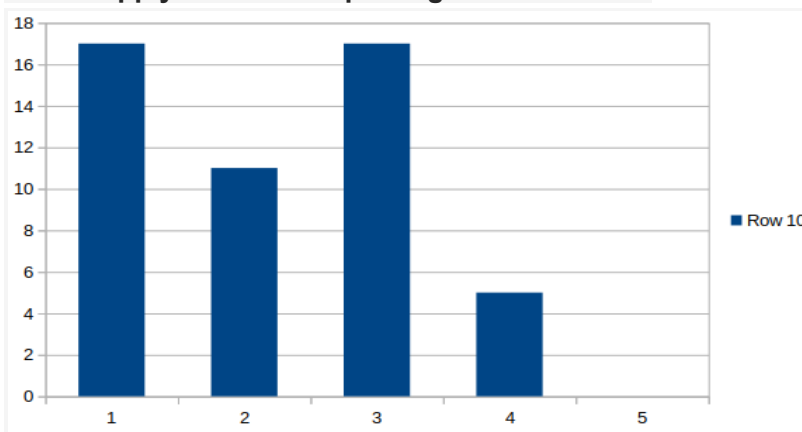
3) Compare and contrast different policies of CPU scheduling, Inter-process Communication, Page replacement and disk scheduling algorithms etc.
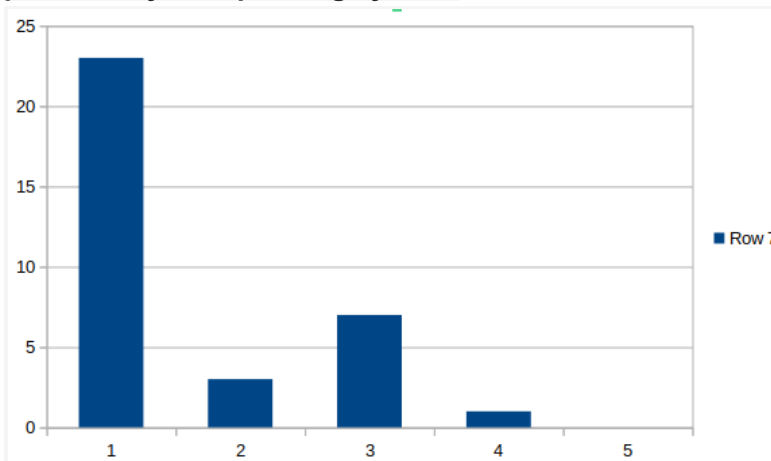

4) Design and develop small modules, shell and utility programs using system calls of Linux or some educational operating system.


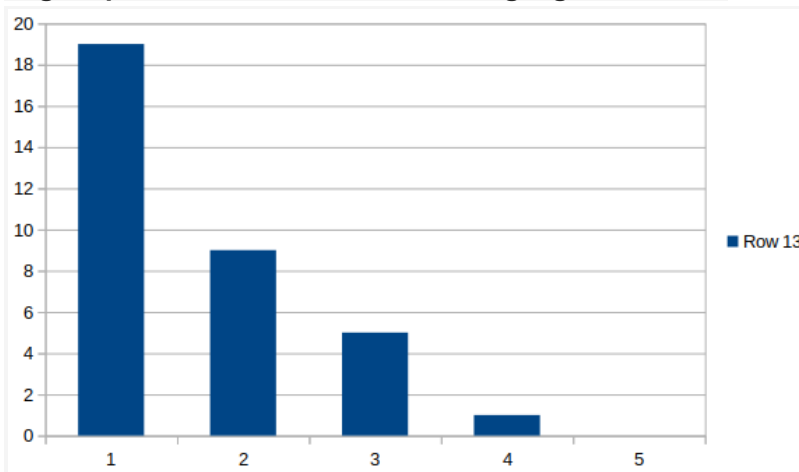**CO24508: Operating System Section B**
1) Describe the importance and objectives of an operating system and various services provided by the operating system.

2) Interpret the important functions of different modules of an Operating system, like process management, memory management, device management and file system, etc. and will be able to apply these concepts in given test cases.
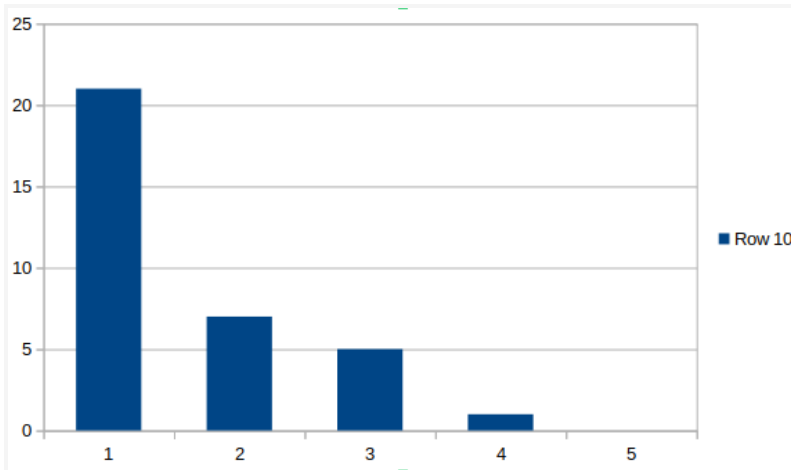
3) Compare and contrast different policies of CPU scheduling, Inter-process Communication, Page replacement and disk scheduling algorithms etc.
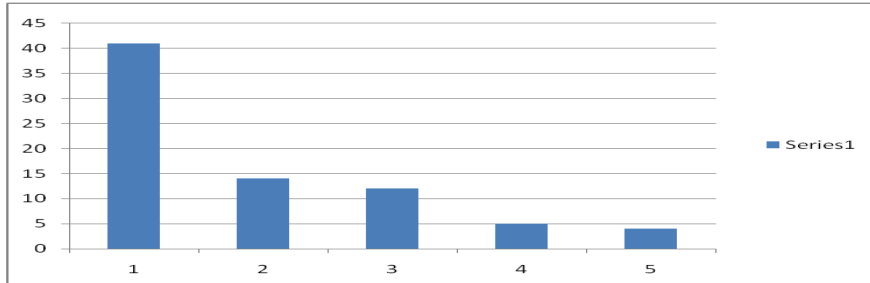

4) Design and develop small modules, shell and utility programs using system calls of Linux or some educational operating system.
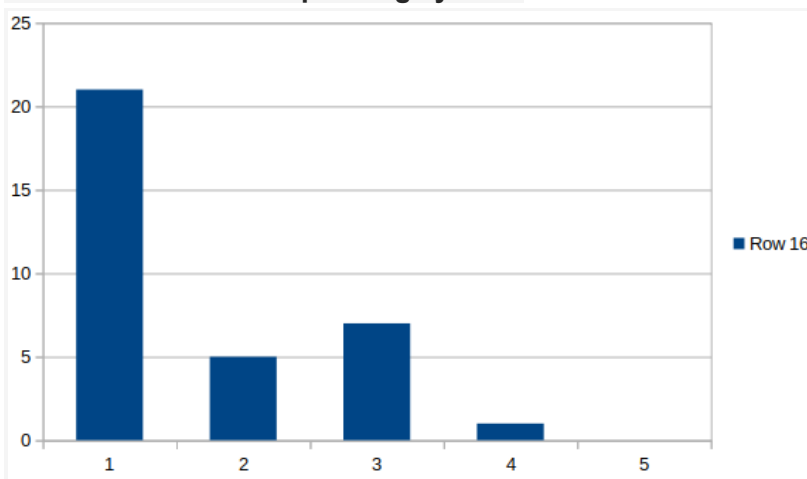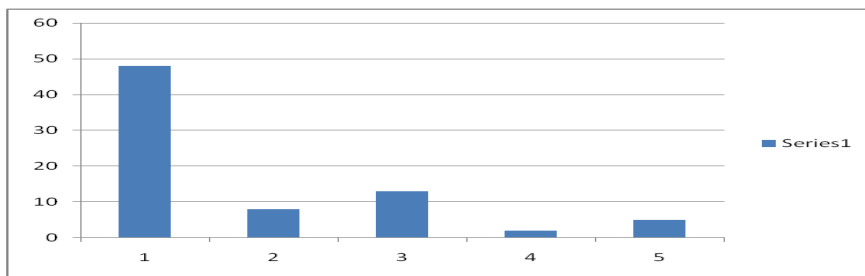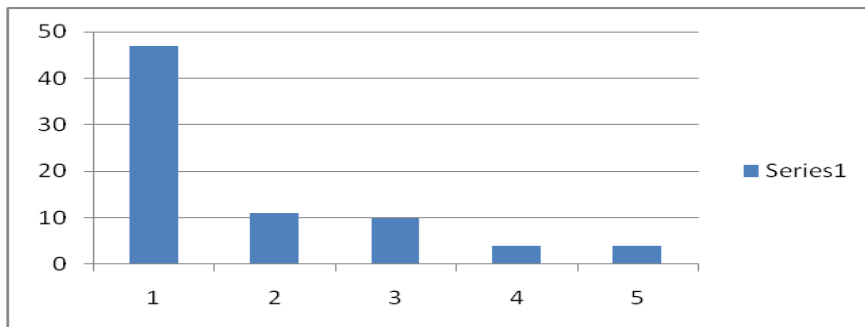
Computer Networks

Explain different terminologies of computer network and compare the architecture of networks.
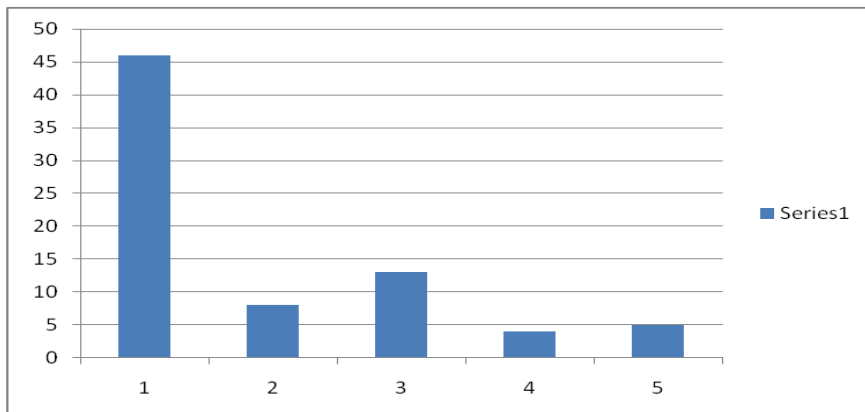

Evaluate the MAC layer performance.

Construct and evaluate the existing protocols at the network and transport layer.
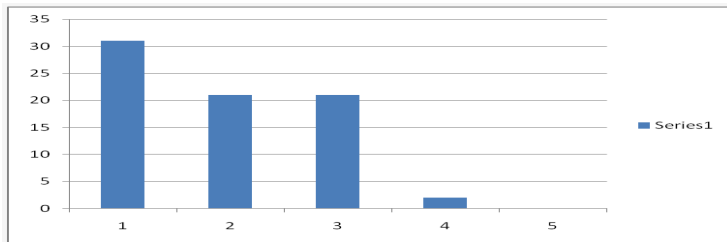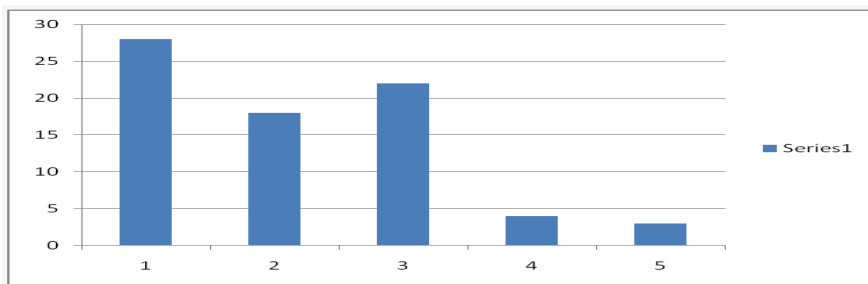

Design and debug the IP networks
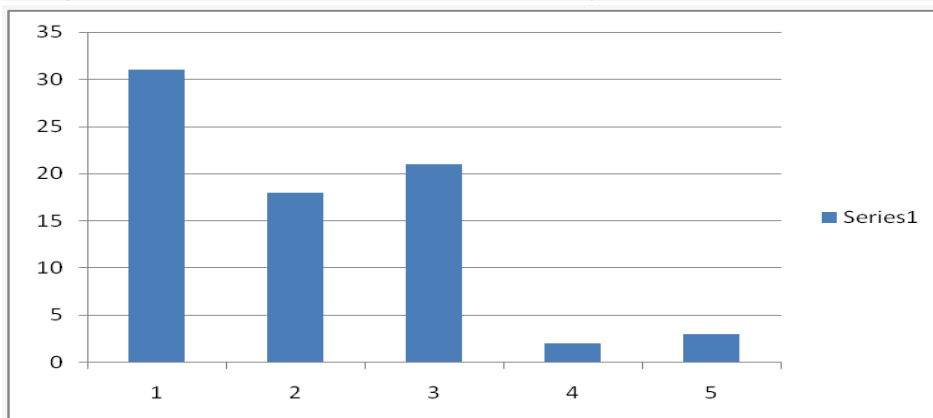
Foundation of Information Security

Explain the concepts related to classical cryptography, symmetric cryptography and asymmetric cryptography.
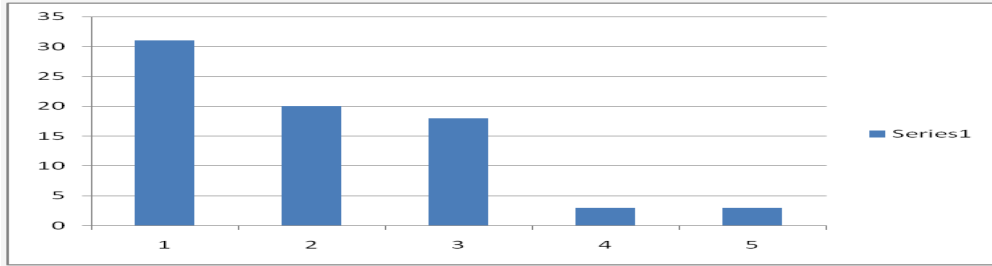

Identify common network vulnerabilities and attacks, and their defense mechanism.

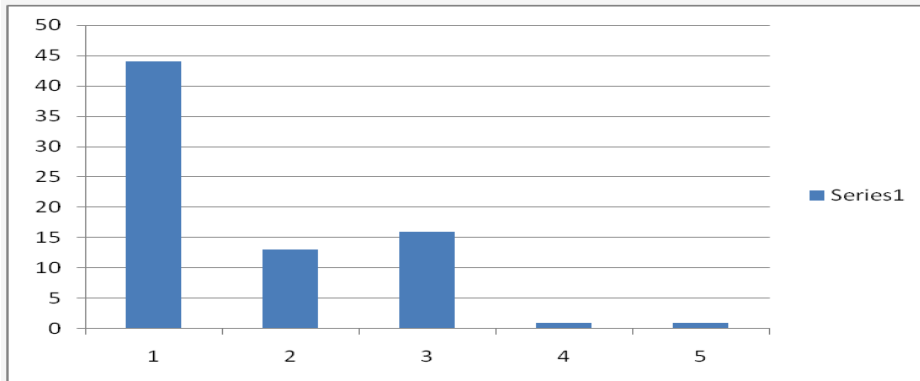**Apply concepts of Email, IP and web security in application development.**

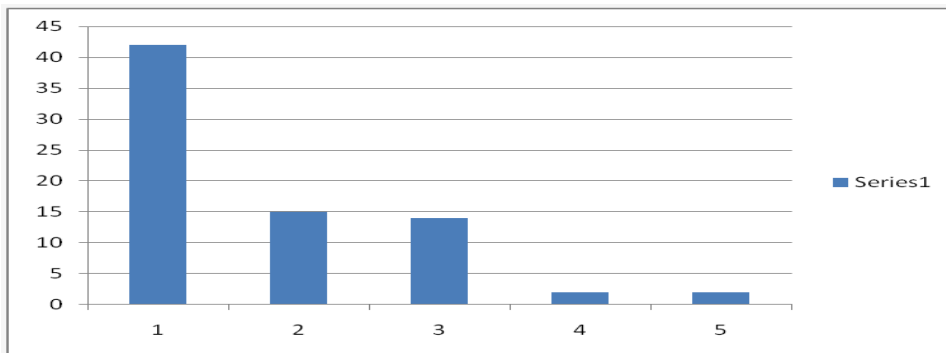**Summarize the concepts of security in various types of organizations.**
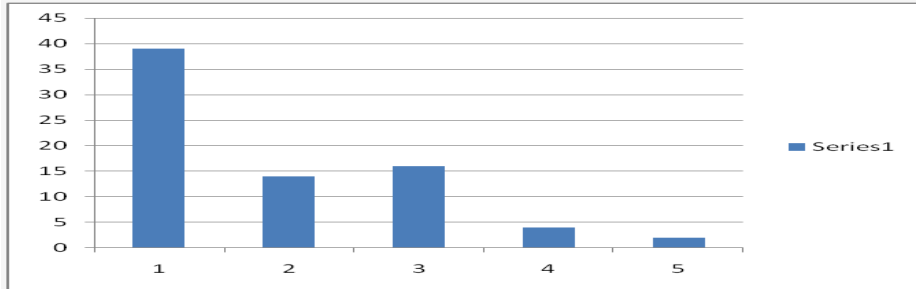
Machine Learning

Describe in-depth about theories, methods, and algorithms in machine learning
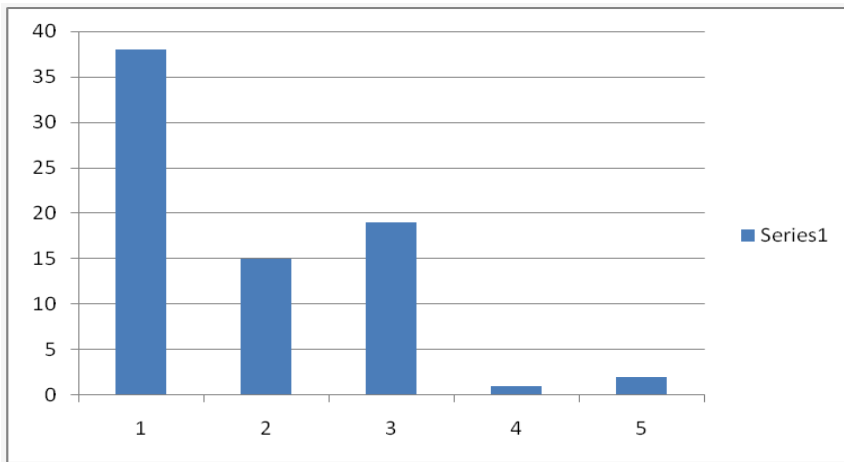

Find and analyze the optimal hyper parameters of the machine learning algorithms.

Examine the nature of a problem at hand and determine whether machine learning can solve it efficiently.
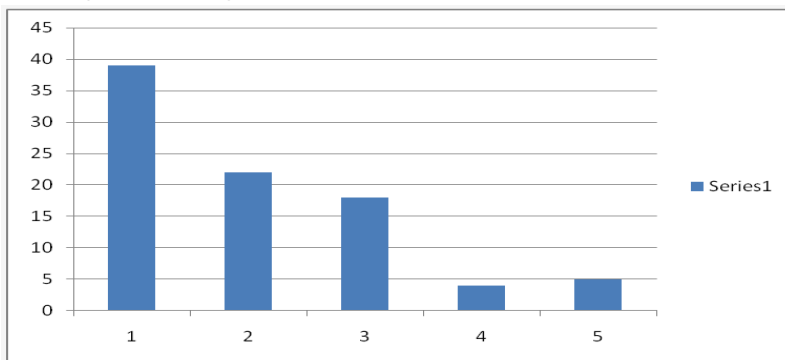
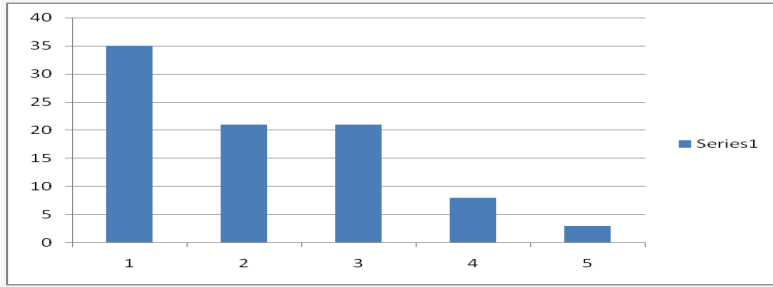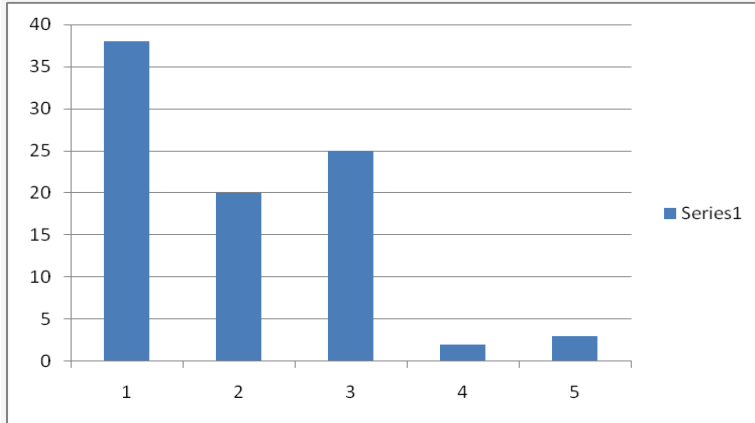**Solve and implement real world problems using machine learning.**

IOT
Identify various types of sensors and actuators.

Develop and demonstrate programs on various types of development boards.

Apply concepts of communication protocols for designing programs on ESP32.

Solve real world problems using the concepts of IoT.