Swamy Saswthikananda College, Poothotta

Department of Computer Science.

Syllabus for Certificate Course

- **Title of the Course : Foundations of Computer Science**

- **Objectives:** This short term course is intended for individuals interested in the field of Information Technology. Many students are facing difficulties during the course of their studies. This preparatory course will provide basic knowledge and skills needed to learn the related subjects. The course also include practical sessions which gives hands on experience to improve their confidence and will be helpful for those who are looking for higher studies in the IT domain .

- **Eligibility for Admission:** One who have cleared 10+2 or equivalent exam from a recognized board.

- **Duration of the course:** Total 40 Hrs. Including theory and Lab

- **Assessment and Evaluation.** The participants will be evaluated through internal assessment, final examination and viva- voce for theory. Students will be graded based on the marks gained and the successful candidates will be issued certificates. Minimum 75% attendance is required for attending examination.

- **Medium of Instruction:** English.

SYLLABUS

Unit-1:   **(3 Hrs. Theory + 3 Hrs Lab)**

Basics of computer Hardware and Software: - Functional units of a computer system - Storage organization-- Different types of computers: Input Output devices- Types of Software- Different operating systems-working with DOS, WINDOWS, LINUX basic Idea.

Unit-2:   **(5 Hrs. Theory + 3 Hrs Lab)**

Working with Word, Excel and Power point.

Word Processing Package: MS-Word: Introduction; Features- Word user interface elements; Creating new documents; Basic editing, Saving a document; Printing a document;

Spreadsheet package: MS-Excel Introduction, Excel User interface, working with cell and cell addresses, Selecting a range, Moving, Cutting, Copying & Paste, inserting & deleting cells, freezing cells, adding deleting & copying worksheet within a workbook, Renaming a worksheet. Formatting cells and worksheet.

Power Point : Applying Themes and Layouts to Slides, Working with Objects, Entering, Editing, and Formatting Text, Outline View and Proofing Presentations, Adding and Reading Notes-Inserting Pictures, Graphics, Shapes, and Other Things, Inserting Tables into Presentations, Charts, Adding Sound and Video, Adding Transitions and Animation.

Unit-3:   **(5 Hrs. Theory)**

Computer Networks: Introduction to computer network, Components of data communication, Types of network, LAN, MAN, WAN, Client Server Model- Uses of networks. TCP/IP Protocol. IP address Concept.

Unit- 4   **(14 Hrs. Theory + 7 Hr Lab)**

Algorithms and flowcharts for problem solving.

Simple Algorithms - Flowcharts -flowchart Symbols - General Rules for Flowcharting - Examples - Advantages of Using Flowcharts.

Developing and executing programs.

Doing program using C language --Creating Web Page using HTML Concept of database - Stages of software development.

Prepared on November 2020