COMPUTER NETWORKS
COMPUTER ENGINEERING

SEM-5TH

LIST OF PRACTICALS

1. Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network.
2. Recognition and use of various types of connectors RJ-45, RJ-11,BNC and SCST
3. Recognition of network devices (Switches, Hub, Routers of access points for Wi-Fi
4. Making of cross cable and straight cable
5. Install and configure a network interface card in a workstation.
6. Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
7. Managing user accounts in windows and LINUX
8. Study and Demonstration of sub netting of IP address
9. Use of Netstat and its options.
10. Connectivity troubleshooting using PING, IPCONFIG, IFCONFIG
11. Installation of Network Operating System(NOS)
12. Visit to nearby industry for latest networking techniques

RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS)
COMPUTER ENGINEERING

SEM-5TH

LIST OF PRACTICALS

1. Installing and Uninstalling SQL Server.
2. Creating, modifying and removing database objects.
3. Working with queries involving joins, correlation, sub-queries, set operators.
4. Creating and using stored procedures and user defined functions.
5. Creating indexes.
6. Creating and using views.
7. Using and understanding grant, revoke and deny statements.
8. Creating and using database triggers

VISUAL BASIC
COMPUTER ENGINEERING

SEM-5TH

LIST OF PRACTICALS

1) Exercise on opening projects like standard Exe, Active-X EXE and Active-X control
2) Exercise on all the menus of opening window of VB
3) Exercise on all basic controls
4) Exercise on design form like calculators, traffic lights
5) Exercise on small application using appropriate commands
6) Exercise on menus
7) Writing programs using arrays
8) Exercise on creating reports
9) Exercise on Data base connectivity
10) Exercise on creating own active X, component

TROUBLESHOOTING OF COMPUER SYSTEM
COMPUTER ENGINEERING

SEM-5TH

DETAILED CONTENTS

1. Repair servicing and maintenance concepts

Introduction to servicing and maintenance concepts. Meantime between failure(MTBF). Meantime to repair and maintenance policy, potential problems. Concept of preventive maintenance and corrective maintenance. Factors responsible for preventive maintenance, scheduling of preventive maintenance. Comparison of Preventive maintenance and corrective maintenance. Concepts of shielding, grounding. Power supply requirements in consideration of computer and its peripherals.

2. Pre-Installation planning, Installation practise: Unpacking and checking, Removing a motherboard, Removing and replacing daughter boards. Routine checks, PC Assembling. Standard CMOS setup, Adding HDD to a system. Preparing HDD for use: Low level formatting, partitioning, high level formatting. Using system tools: Scandisk, defragmentation, check disk. Backup: Using backup utility, system restoring. Creating drive image: GHOST.

3. Troubleshooting

Introduction, computer faults, nature of faults: Solid and Intermittent. Types of faults: Hardware and software. Reliability problems(Dry solder, loose contact, track break, etc)

Diagnostic programs and tools: Nodal Testers and System Testers. Introduction to nodal tools like Logic probe, logic pulser, current tracer, Oscilloscope, Digital Multimeter. Introduction to system testers like function tester, signature analyzer, logic analyser. Introduction to service manuals.

Fault elimination process, Systematic Troubleshooting: Symptoms observation, Symptom analysis, Fault diagnosis, fault rectification. Troubleshooting levels: POST messages, running diagnostics, probing with tools, using emulator. Troubleshooting techniques: Functional area approach, split half method, circuit tracing techniques. Fault finding in divergent, convergent and feedback path circuits.

4. Troubleshooting of computers and peripherals

Using Device manager, using task manager, dealing with error messages. problems and diagnosis of parts of computers : Motherboard, Floppy disk drive, Hard disk drives, CD ROM, DVD, Printers(Dot Matrix, Inkjet and laser), Modems, Monitors, SMPS, Serial ports.

NETWORK SECURITY

COMPUTER ENGINEERING

SEM-6TH

LIST OF PRACTICALS

1. Installation and comparison of various anti virus software
2. Installation and study of various parameters of firewall.
3. Writing program in C to Encrypt/Decrypt using XOR key.
4. Study of VPN.
5. Study of various hacking tools.
6. Practical applications of digital signature

PROGRAMMING IN JAVA

COMPUTER ENGINEERING

SEM-6TH

LIST OF PRACTICALS

1 a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50

b) Display the output which is given below:

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* *

* * *

c) Write a program which sorts an array of type integer

d) Write a programme to determine the sum of the following harmonic series for a given value of n: 1+1/2+1/3……..+1/n the value of n should be given interactively through the keyboard

2. 2 Write a programme to convert the given temperature in Fahrenheit to Celsius using the following conversion formula

C = F.32/1.8 and display the value in a tabular form

3. 3 Write a programme to find all the numbers and sum of all integers greater than 100 less than 200 that are divisible by 7

4. Given a list of marks ranging from 0 to 100, write a programme to compute and print the number of student should have obtained marks (a) in the range 81 to 100 (ii) in the range 61 to 80 (c) in the range 41 to 60 (d) in the range 0 to 40. The

programme should use a minimum number of if statement
5. Admission to a professional course is subject to the following conditions:
a) Marks in mathematics >=60
b) Marks in physics >=50
c) Marks in chemistry >=40
d) Total in all 3 subjects >=200 (OR)
Total in mathematics and physics >=150 given the marks in the 3 subjects. Write the programme to process the application to list the eligible candidates
6. The number in the sequence 1 1 2 3 5 8 13 21 ……. Are called Fibonacci numbers. Write programme using a do ….. while loop to calculate and print the first m ibonacci numbers
(Hint: after the first 2 numbers in the series, each number is the sum of the 2 preceding the numbers)
123
7. Write a programme to evaluate the following investment equation V=P (1+r)n and print the tables which would give the value of V for various combination of the following values of P, r and n.
8. Write a program which will store the students roll no. names and total marks in the database
9. Write a program which will display all those records whose marks are above 75%
10. Write a programme to draw the following using Applet:
11. Exercises on implementing Java Classes.
12. Exercises on exceptional handling
13. Exercises on creating and running threads