# Lecture : 16

# Introduction to Computing

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# Pattern of Midterm Exam

Portions:

| | | |
|---|---|---|
| Problem Solving: | 45% - 50% | Programming |
| Book: | 25% - 30% | MCQ |
| Number System: | 20% - 25% | Numerical |

Total Time is 90 minutes: adjust as per % mentioned above.

No queries during the exam: understanding the question is part of exam

- You may take wise assumption(s) for any missing element.
- Any typos/misprints will benefit you so don't worry!

No calculators and mobiles inside exam center

Negative marking in MCQ: (-¼ for wrong/overwritten answers)

- The biggest mistake is to try to correct your mistakenly written option! Leave it uncorrected!

Separate answer sheet for MCQs – use only CAPITAL LETTERS

DO NOT open the exam booklet unless announced by the staff

Honesty is best policy: focus on bigger exam/reward; save yourself

# Revision Lecture

## Lecture 1 & 2

## What is Problem Solving

- Problem Solving consists in using methods in orderly manner for finding solution to specific problems.

## What is Natural language

- A language that has developed naturally.
- Humans use natural language for communication.
- For example: English, Urdu, Arabic, Hindi

# Revision Lecture

## Lecture 3

**What is:**

- Computer
- Data
- Information
- Internet
- Software
- Components of computer
- Types of computer

# Revision Lecture

## Lecture 4 – Chapter 2

**What is:**

- Internet
- History of Internet
- Internet Protocol (IP)
- Uses of Internet
- World Wide Web (www)
- Email

# Revision Lecture

## Lecture 5 & 6

- What is flowchart.
- Uses of flowchart
- Flowchart Symbols
- What is if else statements
- How to use if else statements in flowcharts

# Revision Lecture

## Lecture 7 – Chapter 3

- What is Application Software
- Why we use Software
- Types of Application Software
- Business Software
- Project Management Software
- Educational Software
- Graphics and Multimedia Software
- Web Applications
- Web based learning
- Entertainment Software

# Revision Lecture

## Lecture 8 – Chapter 4

- What is System Unit
- What is Motherboard and Processor
- Parts of CPU (ALU, CU)
- Machine Cycle
- Parallel Processing
- Data Representation inside Computer
- Binary System
- Types of Memory (RAM,ROM)
- What are Ports, Bays
- USB and FireWire Port
- What are Buses

# Revision Lecture

## Lecture 9 - Chapter 5,6

- What is input device? Some examples of input devices.
- What is keyboard, mouse, trackball, touchpad, touchscreen, pointing stick.
- What is output device? Some examples of output devices.
- Four types of output (Text, Audio, Graphics, Video)

# Revision Lecture

## Lecture 10 - Chapter 7

- What is storage device, storage medium, capacity?
- What is hard disk? why we use hard disk?
- Characteristics of hard disk (capacity, platters, read/write head, cylinders, sectors, tracks, revolution per minute, transfer rate and access time)
- What is Hard disk controller?
- What is optical disk? Types of optical disks.
- Why we use optical disks?

# Revision Lecture

## Lecture 11 & 12

- What is Iteration?
- Why we use iteration?
- Problem solving without iteration.
- Review of flowchart
- Iteration symbols used in flowchart.

# Revision Lecture

## Lecture 13

- What is number system?
- Types of number systems (decimal, hexadecimal, binary, octal)
- Conversion between different number systems (i.e. binary to hexadecimal, binary to octal, binary to decimal etc.)

# Revision Lecture

## Lecture 14

- What is binary arithmetic?
- Addition, subtraction, division and multiplication of binary numbers.
- 1's complement
- 2's complement
- Subtraction using 2's complement.

# Revision Lecture

## Lecture 15

- Converting Factions (IEEE standard 754)
- What is Coding Scheme?
- What is BCD, ASCII and Unicode Scheme?
- What is Boolean logic? What is truth table?
- Truth table of AND, OR, NOT, XOR, XNOR gate.

- A and B or not C  is same as  $A \cdot B + \overline{C}$

# Best of Luck ☺