ALLAMA IQBAL OPEN UNIVERSITY, ISLAMABAD
(Department of Computer Science)

Course: Basics of ICT (1431)   **Semester: Autumn, 2013**
Level: B.A   **Total Marks: 100**

ASSIGNMENT No. 1
(Units 1–4)

Note: All questions are compulsory. Each question carries equal marks.

Q.1 Define the term computer. Also describe basic five operations performed by the computer.

Q.2 a) Discuss the purpose of speech recognition device?
     b) What is the difference between memory and hard disk? Explain it in detail.

Q.3 Write down the advantages and disadvantages of "Information and Communication Technology".

Q.4 Explain the difference between "ICT" and "Telecommunication".

Q.5 Write a note on the following topics:
- Multimedia Projector
- Electronic Mail (email)
- Point and Draw Devices
- Social networking Websites

ASSIGNMENT No. 2
(Units 5–8)   **Total Marks: 100**

Note: All questions are compulsory. Each question carries equal marks.

Q.1 What is meant by computer software? Differentiate between system software and application software.

Q.2 What is meant by operating system? Define it in detail with the help of different examples.

Q.3 a) Identify basic elements of a communication system.
   b) Briefly explain the terms: assembler, compiler, linker and interpreter.

Q.4 Explain the basic concepts of multimedia. Identify ten different examples of multimedia and also describe five of them in detail.

Q.5 Write a note (in your own words) on the following:
   ➢ Multimedia kiosk
   ➢ Computer Hardware
   ➢ High Level Languages
   ➢ Compiler and Interpreter

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Course Code:	1431/5403 (Bachelor Level)
Course Title:	Basics of ICT
Credit Hours:	4 (4 + 0)
Session Offered:	As per offering schedule
Recommended Books:	Computer Fundamentals by PK Sinha, BPB Publications 4th Edition 2007
Audio/Video/Multimedia CD:	Will be developed
Reference Book:	Computer Literacy BASICS: A Comprehensive Guide to IC3 by Connie Morrison and Dolores Wells (August 2009) 3rd Edition.
Pre-Requisite:	None
Course Coordinator:	MS Kiran Fatima
Teaching Methodology:	Distance learning/Online
Course Introduction:	
The course is aimed to provide an outline of computer, its uses, development, Components, Input, Output devices, hardware and Software. The course also covers fundamentals and use of ICT.	

Course Objectives:

After completing the course the students should be able to:
1. Understand the role and importance of ICT in today's society.
2. Identify various components of a computer system.
3. Understand basics of data communication and networking of computer system.
4. Understand basics of windows operating system and its functionality.
5. Understand basic concepts of multimedia and identify and use various multimedia components.
6. Understand basic concepts of computer languages.

Evaluation Criteria:

i.	Assignments (02)	**30%**
ii.	Final Examination	**70%**

Course Outline:

Unit 1: **Introduction to ICT**
Introduction to ICT and definitions, ICT Application Examples, ICT as an AID to Computer teaching and learning.

Unit 2: **Overview and Organization of computers**
History and Development of Computer, Generations of Computer, Types of Computer, Classification of computer, Applications of Computer, Buses, Ports, Microprocessor, Main Memory, Motherboard of Computer system Secondary Storage Devices.

Unit 3: **Input Devices**
Keyboard Devices, Point and Draw Devices, Digitizer, Speech Recognition Devices, Data Scanning Devices (Image Scanner, OCR, OMR, BCR, MICR), Electronic Card Reader and Vision-Input system.

Unit 4: **Output Devices**
Monitor (Graphic Adopter, Size, Resolution, and Types of Monitors), Printers and Types (Dot-Matrix, Ink Jet, Drum, Chain/Band, and Laser), Plotters (Raster & Pen), Presentation Graphics, Special Function Terminal (ATMs, POSS), Multimedia Projector, and Voice Response Systems (Voice Reproduction System, Speech Synthesizer).

Unit 5: **Computer Software**
Introduction, How Software Works, Types of Software (Application and System Software), Software Installation, Uninstalling Software, Development of Software, Software Distribution.

Unit 6: **Operating System**
Introduction and Functions of an Operating System, System Performance Measure, Process Management, Some Popular Operating Systems, Microsoft Windows Practice (Start, Shutdown, Creating and Operating on the Icons, Opening Closing and Sizing the Windows, Using elementary job Commands like – Creating, Saving, Modifying, Renaming, Finding and Deleting a File, Creating and Operating on a folder, Changing setting like, Date, Time Color (back ground and foreground), Using Short Cuts, Using on-line help, Control Panel and its Usage, Concept of Task Manager, Setting up Network Connection and IP setting).

Unit 7: **Data Communication and Networking**
Data, Sources and types of Signals, Basic Elements of a Communication System, Data Transmission Modes, Data Transmission Media, Data Transmission Speed, Switching Techniques, Routing Techniques, Network Topology, Network Types, Communication Protocols, Network Interface Cards, Concept of OSI Model.

Unit 8: **Multimedia**
Introduction to Multimedia, Multimedia Components (Text, Graphics, Animation, Audio, and Video), Multimedia Applications (Multimedia Presentation, Foreign Language learning, Video Games, Special Effects in Movies, Multimedia Kiosk, Animated Advertisements, Multimedia Conferencing), Media Center Computer.

Unit 9: **Introduction to Computer Languages**
Introduction, Types, Characteristics, and Generations of Computer Languages, Concepts of Assembler, Compiler, Linker, and Interpreter.

Self-Assessment Activities/Practical

1. Write down the importance of ICT in daily life use.
2. Elaborate the evolution of computer system.
3. List the hardware components of a computer and their organization.
4. Figure out various types of components of data communication system and it functionality.
5. Compare features of Windows Operating System on your computer with other Operating System (use Internet).

Note: These are sample activities. Tutor may assign additional activities during the course workshop. In the assignments the students are instructed to keep in view the copy right law.

Prepared by: Department of Computer Science
Last Revised: 2011