



**Mangalmai Institute of Management Technology**  
Greater Noida (U.P.)



**MANGALMAI**  
INSTITUTE OF MANAGEMENT TECHNOLOGY



# **CERTIFICATION PROGRAMME**

**On**

**Hardware, Assembly and Networking**

**From**

**10<sup>th</sup> October – 20<sup>th</sup> December, 2022**

**Convener: Mr. Abhay N Tripathi, Associate Professor, MIMT**

**For BCA 1<sup>st</sup> Semester**

**Resource Person**

**Ms. Monika Pathak**  
**Assistant Professor, MIMT**



## **SYLLABUS**

### **Hardware Assembly and Networking**

**Duration: 30 Hours**

#### **Module 1:**

Computer Basics – Introduction and History, Introduction & Definition of Computer, Block Diagram of computer, Classification of computer, Characteristics of Computers, What is Language?, Types of Languages and language translators.  
History and Generation of computers, Memory - Bits, Bytes, KB, MB, GB, TB, PB, EB, ZB, YB etc, Computer Software, Types of Software with Ex. (System/Application/Utility S/W, Computer Hardware, Intro. to Hardware components of computer

#### **Module 2:**

Assembling and Disassembling PCs - Assembling and Disassembling a PC , Precautions to be taken while assembling the PC Introduction to BIOS / CMOS Setup, POST (Power On Self Test) , Introduction to BIOS/CMOS Setup, POST (Power On Self-Test, Demonstration of BIOS/CMOS Configuration (Date, Time, Enable/Disable Devices), Dual BIOS Feature , BIOS/CMOS Setup, Booting Sequence/Boot Order

#### **Module 3:**

Introduction to Operating System , Definition and types of Operating Systems – MS-DOS, Windows 9x/XP/Vista/7/8, Linux, MAC OS, Android etc. , Process of Booting the Operating System., WinXP/Win7. Activation and Automatic Updating procedures.



**Schedule**  
**Hardware Assembly and Networking**

<b>Duration: 30hours</b>			
<b>Session</b>	<b>Content</b>	<b>Time</b>	<b>Date</b>
1.	Computer Basics–Introduction and History, block diagram of computer.	3:00 -04:30	10/10/2022
2.	Classification of computer • Characteristics of Computers	3:00 -04:30	11/10/2022
3.	What is Language? • Types of Languages and language translators	3:00 -04:30	17/10/2022
4.	History and Generation of computers	3:00 -04:30	18/10/2022
5.	Memory- Bits, Bytes, KB, MB, GB, TB, PB, EB, ZB, YB etc	3:00 -04:30	31/10/2022
6.	Computer Software, Types of Software & Computer Hardware, Intro. to Hardware components of computer	3:00 -04:30	01/11/2022
7.	Assembling and Disassembling PCs & Precautions to be taken while assembling the PC	3:00 -04:30	07/11/2022
8.	Introduction to BIOS/CMOS Setup, POST (Power On Self Test)	3:00 -04:30	08/11/2022
9.	Demonstration of BIOS/CMOS Configuration (Date, Time, Enable/Disable Devices).	3:00 -04:30	14/11/2022
10.	Dual BIOS Feature • BIOS/CMOS Setup, Booting Sequence/Boot Order	3:00 -04:30	15/11/2022
11.	Introduction to Operating System & Definition and types of Operating Systems	3:00 -04:30	21/11/2022
12.	MS Dos & Windows 9x & Android	3:00 -04:30	22/11/2022
13.	XP/Vista, Linux, MACOS	3:00 -04:30	28/11/2022
14.	Process of Booting the Operating System	3:00 -04:30	29/11/2022
15.	WinXP/Win7	3:00 -04:30	05/12/2022
16.	Activation and Automatic Updating procedures	3:00 -04:30	06/12/2022
17.	Linux	3:00 -04:30	12/12/2022
18.	Practical Demonstration of Computer Assembling	3:00 -04:30	13/12/2022
19.	Practical Demonstration of Computer Assembling	3:00 -04:30	19/12/2022
20.	Revision	3:00 -04:30	20/12/2022



	<b>Report</b>
<b>NameofActivity</b>	<b>Hardware, Assembly and Networking</b>
<b>Date</b>	10 <sup>th</sup> October , 2022 – 20 <sup>th</sup> December , 2022
<b>Venue</b>	BCAClassroom
<b>Organizedby</b>	BCADepartment
<b>Resourceperson</b>	Ms.Monika Pathak,AssistantProfessor,MIMT
<b>Participated by</b>	BCA1styearstudents(90 students)
<b>Convener</b>	Mr. Abhay N Tripathi, AssociateProfessor,MIMT
<b>Objective</b>	Theobjectiveisto: <ul style="list-style-type: none"><li>• To obtain a responsible challenging and rewarding position in the field of Desktop Support and network maintenance in an organization.</li><li>• This subject is help to identify problems associated with connectivity hardware.</li></ul>
<b>Content</b>	<p>With the initiative of IQAC, Mangalmai Institute of Management andTechnology organized add on certification course on “hardware andnetworking”. The course gave the opportunity to learn about hardware and internalize their basic computer components.</p> <p>Day1: The description of the computer's fundamental components, its history, and its block diagram learn into that session.</p> <p>Day2: Students learned about computer classification and characteristics during this interactive workshop.</p> <p>Day3:The session was introduced by the resource person by talking about the various translators and computer languages that they used.</p> <p>Day4:Studentslearntaboutvariousgenerationsofcomputer.</p> <p>Day5:Thesessionwas focus onmemory.</p> <p>Day6: Computer software and the many types of software and hardware were the main topics of this session.</p> <p>Day 7: The resource people talked about how to assemble and disassemble the PCs as well as safety measures to be implemented.</p> <p>Day 8: In this session, the BIOS and CMOS configuration were covered. POST stands for power on self test.</p> <p>Day9:The session begins with a BIOS and CMOS demonstration.</p> <p>Day10:The resource people had a discussion with the students regarding the dual BIOS feature, which is the BIOS/CMOS configuration and booting routine.</p> <p>Day 11: In this session, the resource person now discusses operating systems and their different varieties. Operating is important.</p> <p>Day12:The command operating systems, MS-DOS and Windows OS, were discussed by the resource person.</p> <p>Day13: The discussion was still going on when using the MAC OS, Ubuntu Linux, and Windows XP and VISTA operating systems.</p> <p>Day14:Students learned how to boot the operating system during this lesson.</p> <p>Day15: WinXP and Win7 were taught to the students.</p> <p>Day16:The process for activation and automatic updating was covered in this session.</p> <p>Day17: Ubuntu Linux was discussed in this session.</p> <p>Day18:The resource person begins with a hands-on computer assembly demonstration.</p> <p>Day19:A demonstration of how to assemble a computer was done practically in this session.</p> <p>Day20: The overall session was discussed by the resource person.</p>



<b>Outcome of Activity</b>	Through Hardware and Networking Course students are capable of: <ul style="list-style-type: none"><li>• Identify the hardware components of a computer.</li><li>• Identify the peripheral devices outside computer.</li><li>• Identify the software running on a computer.</li></ul>
----------------------------	--



**Mangalmay Institute of Management Technology**  
Greater Noida (U.P.)



### RESOURCEPERSONPROFILE

**Name:**Ms. Monika Pathak,Assistant Professor

**Org:**MIMT, GreaterNoida

**Qualification:** BCA, MCA

**AreaofExpertise:** Networking

#### Certificate Template:

	<b>MANGALMAY</b> INSTITUTE OF MANAGEMENT TECHNOLOGY Gr. NOIDA	
<b>CERTIFICATE OF COURSE COMPLETION</b>		
<p>This is to certified the <b>SANSKAR MISHRA</b> student of BCA (Batch: 2022-25) has successfully completed <b>30 Hours</b> course on “<b>Hardware Assembly and Networking</b>” from <b>10-October-2022</b> to <b>20-December-2022</b></p>		
 PRINCIPAL Mangalmay Institute of Management & Technology		 CONVENER Mangalmay Institute of Management Technology



- 8) With respect to a network interface card, the term 10/100 refers to
- a.) Protocol speed  
 b.) Megabits per second  
 c.) A fiber speed  
 d.) None of these
- 9) The value of Gigabyte is
- a.) 1024 Megabytes  
 b.) 1024 Petabytes  
 c.) 1024 bytes  
 d.) 1024 bits
- 10) A source program is the program written in \_\_\_\_\_ language.
- a.) English  
 b.) Symbolic  
 c.) High level  
 d.) Machine
- 11) The box that contains the central electronic components of the computer is the
- a.) Input device  
 b.) Peripheral  
 c.) System unit  
 d.) Motherboard
- 12) ..... is used as a high speed network backbone media
- a.) Fiber Optic Cable  
 b.) Coaxial cable  
 c.) Twisted pair Cable  
 d.) None of the above
- 13) LAN stands for
- a.) Local Area Network  
 b.) Limited Area Network  
 c.) Local Area Next  
 d.) None of these
- 14) A microprocessor used in
- a.) Personal computer  
 b.) ENIAC  
 c.) Mini computer  
 d.) Mainframe Computer
- 15) Which of the following is not an example of hardware?
- a.) Excel  
 b.) Monitor  
 c.) Printer  
 d.) Mouse

----- For Departmental use only -----

Max. Marks: 15

Marks Obtained: 13

Name of Evaluator: Monika Pathak Sign.

*Monika*





Course: BCA

ADD-ON COURSE QUIZ

Time: 30 Min

Course Name: Hardware, Assembly & Networking

Date: 26/12/2022

Roll No:

Name: Rohan Prakash

Year/Sem: I/I

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

- 1) When the computers shut down, the..... contents are lost.  
a.) Input  b.) Output   
c.) Memory  d.) Storage
- 2) A hard disk is divided into tracks which are further subdivided into .....  
a.) Vectors  b.) Clusters   
c.) Sectors  d.) None of the above
- 3) The Expansion cards are inserted into .....in a computer  
a.) Slots of CPU  b.) Hard Disk of CPU   
c.) Peripheral Devices  d.) None of the above
- 4) Which memory is known as Volatile Memory  
a.) RAM  b.) ROM
- 5) Which of the following is a device that is used to connect a number of LANs?  
a.) Bridge  b.) Switch   
c.) Router  d.) Repeater
- 6) Which of the following has the highest storage  
a.) Megabyte  b.) Gigabyte   
c.) Terabyte  d.) Kilobyte
- 7) Which of the following has the fastest speed in the computer memory hierarchy?  
a.) Cache  b.) Registers in CPU   
c.) Main memory  d.) Disk Cache

PTO

- 8) With respect to a network interface card, the term 10/100 refers to
- a.) Protocol speed ✓ ~~b.) Megabits per second~~  
c.) A fiber speed ~~d.) None of these~~
- 9) The value of Gigabyte is
- a.) 1024 Megabytes ✓ ~~b.) 1024 Petabytes~~  
c.) 1024 bytes ~~d.) 1024 bits~~
- 10) A source program is the program written in \_\_\_\_\_ language.
- a.) English ~~b.) Symbolic~~  
c.) High level ✓ ~~d.) Machine~~
- 11) The box that contains the central electronic components of the computer is the
- a.) Input device ~~b.) Peripheral ✓~~  
c.) System unit ~~d.) Motherboard~~
- 12) ..... is used as a high speed network backbone media
- a.) Fiber Optic Cable ✓ ~~b.) Coaxial cable~~  
c.) Twisted pair Cable ✓ ~~d.) None of the above~~
- 13) LAN stands for
- a.) Local Area Network ✓ ~~b.) Limited Area Network~~  
c.) Local Area Next ~~d.) None of these~~
- 14) A microprocessor used in
- a.) Personal computer ✓ ~~b.) ENIAC~~  
c.) Mini computer ~~d.) Mainframe Computer~~
- 15) Which of the following is not an example of hardware?
- a.) Excel ✓ ~~b.) Monitor~~  
c.) Printer ~~d.) Mouse~~

----- For Departmental use only -----

Max. Marks: 15

Marks Obtained: 09

Name of Evaluator: Monika Pather Sign. Monika



- 8) With respect to a network interface card, the term 10/100 refers to
- a.) Protocol speed  
 b.) Megabits per second ✓  
 c.) A fiber speed  
 d.) None of these
- 9) The value of Gigabyte is
- a.) 1024 Megabytes ✓  
 b.) 1024 Petabytes  
 c.) 1024 bytes  
 d.) 1024 bits
- 10) A source program is the program written in \_\_\_\_\_ language.
- a.) English ✓  
 b.) Symbolic  
 c.) High level  
 d.) Machine
- 11) The box that contains the central electronic components of the computer is the
- a.) Input device  
 b.) Peripheral  
 c.) System unit  
 d.) Motherboard ✓
- 12) ..... is used as a high speed network backbone media
- a.) Fiber Optic Cable ✓  
 b.) Coaxial cable  
 c.) Twisted pair Cable  
 d.) None of the above
- 13) LAN stands for
- a.) Local Area Network ✓  
 b.) Limited Area Network  
 c.) Local Area Next  
 d.) None of these
- 14) A microprocessor used in
- a.) Personal computer  
 b.) ENIAC ✓  
 c.) Mini computer  
 d.) Mainframe Computer
- 15) Which of the following is not an example of hardware?
- a.) Excel ✓  
 b.) Monitor  
 c.) Printer  
 d.) Mouse

----- For Departmental use only -----

Max. Marks: 15

Marks Obtained: 10

Name of Evaluator: Movika Pathak Sign.

Movika



Course: BCA

ADD-ON COURSE QUIZ

Time: 30 Min

Course Name: Hardware, Assembly & Networking

Date: 26/12/2022

Roll No:

Name: Somil Pal

Year/Sem: I/I

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

- 1) When the computers shut down, the..... contents are lost.  
a.) Input      b.) Output  
c.) Memory      d.) Storage
- 2) A hard disk is divided into tracks which are further subdivided into .....  
a.) Vectors      b.) Clusters  
c.) Sectors      d.) None of the above
- 3) The Expansion cards are inserted into .....in a computer  
a.) Slots of CPU      b.) Hard Disk of CPU   
c.) Peripheral Devices      d.) None of the above
- 4) Which memory is known as Volatile Memory  
a.) RAM      b.) ROM
- 5) Which of the following is a device that is used to connect a number of LANs?  
a.) Bridge      b.) Switch  
c.) Router      d.) Repeater
- 6) Which of the following has the highest storage  
a.) Megabyte      b.) Gigabyte  
c.) Terabyte      d.) Kilobyte
- 7) Which of the following has the fastest speed in the computer memory hierarchy?  
a.) Cache      b.) Registers in CPU   
c.) Main memory      d.) Disk Cache

PTO

- 8) With respect to a network interface card, the term 10/100 refers to
- a.) Protocol speed ✓ ~~b.) Megabits per second~~  
 c.) A fiber speed d.) None of these
- 9) The value of Gigabyte is
- a.) 1024 Megabytes ✓ ~~b.) 1024 Petabytes~~  
 c.) 1024 bytes d.) 1024 bits
- 10) A source program is the program written in \_\_\_\_\_ language.
- a.) English ✓ ~~b.) Symbolic~~  
 c.) High level ✓ d.) Machine
- 11) The box that contains the central electronic components of the computer is the
- a.) Input device b.) Peripheral ~~c.) System unit~~  
 d.) Motherboard
- 12) ..... is used as a high speed network backbone media
- a.) Fiber Optic Cable ✓ ~~b.) Coaxial cable~~  
 c.) Twisted pair Cable d.) None of the above
- 13) LAN stands for
- a.) Local Area Network ✓ ~~b.) Limited Area Network~~  
 c.) Local Area Next d.) None of these
- 14) A microprocessor used in
- a.) Personal computer ✓ ~~b.) ENIAC~~  
 c.) Mini computer d.) Mainframe Computer
- 15) Which of the following is not an example of hardware?
- a.) Excel ✓ ~~b.) Monitor~~  
 c.) Printer d.) Mouse

----- For Departmental use only -----

Max. Marks: 15

Marks Obtained: 13

Name of Evaluator: Monika Pathak Sign.

Monika



Course: BCA

ADD-ON COURSE QUIZ

Time: 30 Min

Course Name: Hardware, Assembly & Networking

Date: 26/12/2022

Roll No:

Name: Prateek Kumar

Year/Sem: I/I

gl

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

- 1) When the computers shut down, the..... contents are lost.
  - a.) Input
  - b.) Output
  - c.) Memory
  - d.) ~~Storage~~ ✓
- 2) A hard disk is divided into tracks which are further subdivided into .....
  - a.) Vectors ✓ ~~X~~
  - b.) Clusters
  - c.) Sectors
  - d.) None of the above
- 3) The Expansion cards are inserted into ..... in a computer
  - a.) Slots of CPU
  - b.) Hard Disk of CPU
  - c.) Peripheral Devices ✓ ~~X~~
  - d.) None of the above
- 4) Which memory is known as Volatile Memory
  - a.) RAM
  - b.) ~~ROM~~ ✓
- 5) Which of the following is a device that is used to connect a number of LANs?
  - a.) Bridge
  - b.) Switch
  - c.) Router ✓ ~~X~~
  - d.) Repeater
- 6) Which of the following has the highest storage
  - a.) Megabyte
  - b.) Gigabyte
  - c.) Terabyte ✓ ~~X~~
  - d.) Kilobyte
- 7) Which of the following has the fastest speed in the computer memory hierarchy?
  - a.) Cache ✓ ~~X~~
  - b.) Registers in CPU
  - c.) Main memory
  - d.) Disk Cache

PTO

- 8) With respect to a network interface card, the term 10/100 refers to  (1)
- a.) Protocol speed  b.) Megabits per second
- c.) A fiber speed  d.) None of these
- 9) The value of Gigabyte is  (1)
- a.) 1024 Megabytes  b.) 1024 Petabytes
- c.) 1024 bytes  d.) 1024 bits
- 10) A source program is the program written in \_\_\_\_\_ language.  (1)
- a.) English  b.) Symbolic
- c.) High level  d.) Machine
- 11) The box that contains the central electronic components of the computer is the  (1)
- a.) Input device  b.) Peripheral
- c.) System unit  d.) Motherboard
- 12) ..... is used as a high speed network backbone media  (1)
- a.) Fiber Optic Cable  b.) Coaxial cable
- c.) Twisted pair Cable  d.) None of the above
- 13) LAN stands for  (1)
- a.) Local Area Network  b.) Limited Area Network
- c.) Local Area Next  d.) None of these
- 14) A microprocessor used in  (1)
- a.) Personal computer  b.) ENIAC
- c.) Mini computer  d.) Mainframe Computer
- 15) Which of the following is not an example of hardware?  (1)
- a.) Excel  b.) Monitor
- c.) Printer  d.) Mouse

----- For Departmental use only -----

Max. Marks: 15

Marks Obtained: 09

Name of Evaluator: Monika Pathak Sign.

Monika





Course: BCA

ADD-ON COURSE QUIZ  
Course Name: Hardware, Assembly & Networking

Time: 30 Min

Date: 26/12/2022

Roll No:

Name: Isha

Year/Sem: I/I

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

- 1) When the computers shut down, the ..... contents are lost.  
a.) Input  
b.) Output   
c.) Memory ✓  
d.) Storage
- 2) A hard disk is divided into tracks which are further subdivided into .....  
a.) Vectors ✓  
b.) Clusters  
c.) Sectors ✓  
d.) None of the above
- 3) The Expansion cards are inserted into ..... in a computer  
a.) Slots of CPU  
b.) Hard Disk of CPU  
c.) Peripheral Devices ✓  
d.) None of the above
- 4) Which memory is known as Volatile Memory  
a.) RAM  
b.) ROM ✓
- 5) Which of the following is a device that is used to connect a number of LANs?  
a.) Bridge  
b.) Switch   
c.) Router ✓  
d.) Repeater
- 6) Which of the following has the highest storage  
a.) Megabyte  
b.) Gigabyte   
c.) Terabyte ✓  
d.) Kilobyte
- 7) Which of the following has the fastest speed in the computer memory hierarchy?  
a.) Cache ✓  
b.) Registers in CPU  
c.) Main memory  
d.) Disk Cache

PTO









Course: BCA

ADD-ON COURSE QUIZ

Time: 30 Min

Course Name: Hardware, Assembly & Networking

Date: 26/12/2022

Roll No:

Name: *Aarushi Goyal*

Year/Sem: I/I

Note: All questions are compulsory. Each question will carry '1' mark and there is no 'Negative Marking'

- 1) When the computers shut down, the..... contents are lost.
  - a.) Input
  - b.) Output
  - c.) Memory
  - d.) Storage ~~X~~
  
- 2) A hard disk is divided into tracks which are further subdivided into .....
  - a.) Vectors
  - b.) Clusters
  - c.) Sectors ✓
  - d.) None of the above ✓ (10)
  
- 3) The Expansion cards are inserted into ..... in a computer
  - a.) Slots of CPU
  - b.) Hard Disk of CPU
  - c.) Peripheral Devices ✓
  - d.) None of the above ~~X~~
  
- 4) Which memory is known as Volatile Memory
  - a.) RAM ✓
  - b.) ROM (1)
  
- 5) Which of the following is a device that is used to connect a number of LANs?
  - a.) Bridge
  - b.) Switch (1)
  - c.) Router ✓
  - d.) Repeater
  
- 6) Which of the following has the highest storage
  - a.) Megabyte
  - b.) Gigabyte
  - c.) Terabyte ✓
  - d.) Kilobyte (1)
  
- 7) Which of the following has the fastest speed in the computer memory hierarchy?
  - a.) Cache ✓
  - b.) Registers in CPU
  - c.) Main memory ~~X~~
  - d.) Disk Cache

PTO

