TKN/KS/16/5950

Bachelor of Computer Applications (B.C.A.) Part–I
Semester–I (C.B.S.) Examination
COMPUTER FUNDAMENTALS
Paper—I

Time—Three Hours]   [Maximum Marks—50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat labeled diagrams wherever necessary.

EITHER

1. (a) Draw block diagram of a Computer. Give the functions of each unit of CPU.   5

(b) Explain Octal number system. Do as directed :

(i) $(457)_{10} = (?)_2$

(ii) $(8AD)_{16} = (?)_2$ 5

OR

(c) What is Bus ? Draw computer system Bus organization diagram. Explain address bus and data bus in computer system.   5

(d) What is source program and object program ?

Write characteristics of a good programming language.   5

EITHER

2. (a) Explain following in brief :

   (i) SRAM

   (ii) EEPROM

   (iii) CACHE

   (iv) FLASH

   (v) ROM   5

   (b) Define the term 'Seektime'. Explain how data is organized on Hard Disk ?   5

   OR

   (c) What is meant by nonvolatile memory ? Explain in brief ROM, PROM, EPROM and EEPROM.   5

   (d) Explain the working of Optical Disk (CD).   5

   EITHER

3. (a) List input devices and explain any two of them. 5

   (b) Explain working of Dot Matrix and Laser Printers in brief.   5

   OR

   (c) Explain VDU and Flat-bed Plotter.   5

   (d) Explain MICR and Barcode Reader.   5

EITHER

4. (a) Define Network topology. Explain linear and circular topologies   5

   (b) Describe Bluetooth and infrared devices.   5

OR

   (c) Explain the following network devices :

   (i) Bridge

   (ii) Gateway   5

   (d) Explain LAN and WAN.   5

5. (a) What are the different types of Languages ? Explain any two of them.   2½

   (b) Explain the working of optical disk in detail. 2½

   (c) Explain the working of flatbed scanner.   2½

   (d) What is Peer-to-peer Architecture ? Explain in brief.   2½

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Paper–I

Time : Three Hours]   [Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

   (2) Draw neat labelled diagrams wherever necessary.

EITHER

1. (a) Draw block diagram of computer and explain the functions of each unit.   5

   (b) What is Bus ? Explain data, control and address bus.   5

OR

   (c) What is Translator ? Explain Compiler and Interpreter.   5

   (d) Convert the following decimal numbers to binary numbers :

      (i) $(435)_{10} = (\quad)_2$

      (ii) $(32)_{10} = (\quad)_2$ 5

EITHER

2. (a) Write short notes on :

      (i)   RAM

      (ii) ROM.   5

   (b) Draw and explain the structure of Hard Disk.   5

OR

   (c) Explain the working of Optical Disk.   5

   (d) Explain :

      (i)   Flash Memory.

      (ii) Cache Memory.   5

EITHER

3. (a) Explain :

    (i) Keyboard.

    (ii) Mouse.   5

  (b) Write a short note on MICR and OCR.   5

OR

  (c) Explain the working of Inkjet Printer.   5

  (d) Explain VDU in detail.   5

EITHER

4. (a) What is Topology ? Explain any two topologies.   5

  (b) Explain :

    (i) LAN.

    (ii) MAN.   5

OR

  (c) Explain Client-Server architecture in detail.   5

  (d) Explain :

    (i) Routers.

    (ii) Brouters.   5

5. Attempt **ALL** :

  (a) Explain ASCII, BCD, EBCDIC with suitable example.   2½

  (b) What is blu ray ? Explain in detail.   2½

  (c) Explain the working of Drum Plotter.   2½

  (d) What is the need of repeaters in Computer Network ?   2½

NJR/KS/18/3206

Bachelor of Computer Application (B.C.A.) Semester—I (C.B.S.) Examination
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Paper—I

Time : Three Hours]   [Maximum Marks : 50

Note :— (1) **All** questions are compulsory and carry equal marks.
        (2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (a) What is instruction cycle ? Explain fetch cycle and execution cycle.   5
    (b) Explain basic components of computer in detail.   5

OR

    (c) Convert the following :
       (i) $(01.1011)_2 = (?)_{10}$
       (ii) $(580)_{10} = (?)_{16}$.   5
    (d) Write a note on EBCDIC and ASCII codes.   5

EITHER

2. (a) Explain Blu-Ray disk in detail.   5
    (b) What are RAM, ROM and EEPROM ? Explain.   5

OR

    (c) What is a plotter ? Explain flat bed plotter.   5
    (d) Explain the organization of data on hard disk.   5

EITHER

3. (a) Explain the working mechanism of Inkjet printer with its advantages and disadvantages.   5
    (b) Explain :
       (i) MICR
       (ii) OCR.   5

OR

    (c) Explain any two input devices with a suitable diagram.   5
    (d) Write the working mechanism of light pen.   5

EITHER

4. (a) What is Network Topology ? Explain and give its advantages and disadvantages.   5
    (b) Explain :
       (i) LAN
       (ii) WAN
       (iii) MAN.   5

OR

    (c) What is the significance of Bridges and Gateways in communication network.   5
    (d) Write short notes on :
       (i) Bluetooth
       (ii) Router.   5

5. Attempt **ALL** :
    (a) Explain Data Control Bus and Address Bus.   2½
    (b) Explain flash and cache memory.   2½
    (c) Write a short note on Barcode Reader.   2½
    (d) What is an infrared device ? Explain.   2½

NRT/KS/19/2206

Bachelor of Computer Application (B.C.A.) Semester–I Examination
COMPUTER FUNDAMENTALS
Paper—I

Time : Three Hours]   [Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

EITHER

1. (a) What is Bus ? Explain address and data bus in detail.   5

   (b) Draw block diagram of a computer. Explain the functions of each unit.   5

   OR

   (c) Do as directed :

   (i) $(367)_{10} = (?)_2$

   (ii) $(7AC)_{16} = (?)_{10}$.   5

   (d) Explain compiler and interpreter.   5

EITHER

2. (a) Explain the following memory in brief :

   (i)   FLASH

   (ii) RAM.   5

   (b) Explain the working of blue ray and zip disk.   5

   OR

   (c) What is a Memory ? Explain static and dynamic Memory.   5

   (d) Explain the structure and working of Hard Disk.   5

EITHER

3. (a) What is input device ? Explain voice input and light pen.   5

   (b) Write short notes on :

   (i)   OCR

   (ii) MICR.   5

   OR

   (c) Explain Dot Matrix and Laser Printer in detail.   5

   (d) Explain VDU and drum plotters.   5

EITHER

4. (a) What is Topology ? Explain Tree and Mesh Topology.   5

   (b) What is Network ? Explain LAN and WAN in detail.   5

   OR

   (c) Describe peer-to-peer and client–server network.   5

   (d) Explain :

   (i)   Infrared devices

   (ii) Routers.   5

5. (a) Explain ASCII code with example.   2½

   (b) Write a note on Pen Drive.   2½

   (c) Explain the working of Inkjet Printer.   2½

   (d) Explain WiFi Network.   2½

CLS—13428

Bachelor of Computer Application (B.C.A.) Semester—I (C.B.S.) Examination

COMPUTER FUNDAMENTALS

Paper—I

Time : Three Hours]   [Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

       (2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (A) Define number system. Explain Octal number system and Hexadecimal number system in detail giving suitable example.   5

   (B) Explain Bus organisation in brief.   5

OR

   (C) Draw the functional block diagram of computer and explain the function of each block.   5

   (D) Write short notes on :   5

      (i) BCD code

      (ii) EBCDIC code.

EITHER

2. (A) Explain construction and working of Hard disk.   5

   (B) Explain cache and flash memory in detail.   5

OR

   (C) Write a note on different types of semiconductor memories.   5

   (D) Write short note on Blu-ray Disc.   5

EITHER

3. (A) Write short notes on :

      (i) Flat bed scanner

      (ii) Barcode Reader.   5

   (B) Explain the working mechanism of Laser Printer.   5

OR

(C) Write short notes on :

   (i) MICR

   (ii) OCR   5

(D) Write a short note on different types of plotters.   5

EITHER

4. (A) Define Computer Network. Explain Goals of a Computer Network.   5

   (B) Define Network Topology. Explain the following Network Topologies in detail :

   (i) Linear Bus Topology

   (ii) Ring Topology   5

OR

(C) Define Network Architecture. Explain :   5

   (i) Peer-to-Peer Network Architecture

   (ii) Client-Server Architecture.

(D) Explain the following terms :   5

   (i)   Repeater

   (ii) Bridge

   (iii) Router.

5. Attempt **ALL** :

   (A) Differentiate between Interpreter and Compiler.   2½

   (B) What is Ram ? Explain in detail and also mention its types.   2½

   (C) Write a short note on Touch Screen.   2½

   (D) Write a short note on Wi-fi network.   2½

Bachelor of Computer Application (B.C.A.) Semester–I Examination
COMPUTER FUNDAMENTALS
Paper—I

Time : Three Hours]   [Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (A) Explain the following :
    (i)   Assembly language
    (ii) High level language.   5
    (B) Differentiate between compiler and interpreter.   5

OR

    (C) Draw the block diagram of a computer system. Give the function of each unit of CPU.   5
    (D) What is source program and object program ? Write characteristics of a good programming language.   5

EITHER

2. (A) Explain the construction and working of hard disk.   5
    (B) Explain cache and flash memory in detail.   5

OR

    (C) Write a short note on Blu-Ray Disk.   5
    (D) Explain ROM and EPROM in detail.   5

EITHER

3. (A) Enlist five input devices and explain any two.   5
    (B) Give classification of printers. Explain laser printer in detail.   5

OR

    (C) Explain the different data capturing techniques.   5
    (D) Write notes on :
    (i)   Mouse
    (ii) Voice input device.   5

EITHER

4. (A) Explain bridges and gateway in communication network.   5
    (B) Write note on Bluetooth and infrared devices.   5

OR

    (C) Explain different types of topologies along with their advantages and disadvantages.   5
    (D) Write short notes on :
    (i)   LAN
    (ii) WAN
    (iii) MAN
    (iv) GAN
    (v)   WiFi.   5

5. Attempt all :

    (A) Give the importance of control Bus.   2½

    (B) Write a short note on optical disk.   2½

    (C) Write a short note on Barcode Reader.   2½

    (D) Explain the use of Repeaters.   2½

Bachelor of Computer Application (BCA) Semester-I Examination
COMPUTER FUNDAMENTALS
Paper—I

Time : Three Hours]   [Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

EITHER

1. (a) What is Computer ? Explain functions of each unit.   5

   (b) Write short notes on :

   (i) ASCII

   (ii) EBCDIC.   5

   OR

   (c) Do as directed :

   (i) $(8AD)_{16} = (?)_2$

   (ii) $(461)_{10} = (?)_8$.   5

   (d) Differentiate between source and object program.   5

   EITHER

2. (a) Write short notes on :

   (i) Pen drive

   (ii) Blue ray disk   5

   (b) Explain working mechanism and structure of Hard disk.   5

   OR

   (c) What is volatile and non-volatile memory ? Explain in brief PROM and EPROM.   5

   (d) Explain the working mechanism of optical disk.   5

   EITHER

3. (a) What do you mean by input device ? Explain keyboard and mouse.   5

   (b) Write short notes on :

   (i) Dot matrix printer

   (ii) Laser printer.   5

   OR

   (c) Explain the following in brief :

   (i) MICR

   (ii) Bar Code Reader.   5

   (d) Explain Visual Display Unit (VDU) in detail.   5

EITHER

4. (a) What is Computer Network ? Explain its types.   5

   (b) Write notes on :
      (i) Wi-fi
      (ii) Bluetooth.   5

OR

   (c) What is network topology ? Explain tree and mesh topology in brief.   5

   (d) Explain the functionality of the following :
      (i) Bridge
      (ii) Gateway.   5

5. (a) Differentiate between compiler and interpreter.   2½

   (b) Give the difference between primary and secondary memory.   2½

   (c) Explain drum plotter in brief.   2½

   (d) Write a note on client-server architecture.   2½