

**VOCATIONAL DIPLOMA IN COMPUTER
HARDWARE SERVICING EXAMINATION
DECEMBER 2020**

PERSONAL COMPUTER ORGANIZATION

Time : 3 hours

Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Explain in detail about the different types of mother boards.
2. Describe about SCSI.
3. Describe about the floppy disk drive.
4. Discuss about the Pen drive.
5. Discuss about Use and RS232 C.
6. Mention about the Monitor.
7. Discuss about the Dot matrix printer.

8. Discuss about the Printer Controller.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

Answer FIVE questions, question 9 and 10 Compulsory.

9. Choose the correct answer : (10 × 1 = 10)

(a) _____ are used to overcome the difference in data transfer speeds of various devices.

(i) Speed enhancing circuitry

(ii) Bridge circuits

(iii) Multiple Buses

(iv) Buffer registers

(b) To extend the connectivity of the processor bus we use _____.

(i) PCI bus

(ii) SCSI bus

(iii) Controllers

- (iv) Multiple bus
- (c) The bus used to connect the monitor to the CPU is _____.
 - (i) PCI bus
 - (ii) SCSI bus
 - (iii) Memory bus
 - (iv) Rambus
- (d) The ISA standard Buses are used to connect _____.
 - (i) RAM and processor
 - (ii) GPU and processor
 - (iii) Harddisk and Processor
 - (iv) CD/DVD drives and Processor
- (e) Which memory device is generally made of semiconductors?
 - (i) RAM
 - (ii) Hard-disk
 - (iii) Floppy disk

- (iv) Cd disk
- (f) The best mode of connection between devices which need to send or receive large amounts of data over a short distance is _____.
 - (i) BUS
 - (ii) Serial port
 - (iii) Parallel port
 - (iv) Isochronous port
- (g) In the output interface of the parallel port, along with the valid signal _____ is also sent.
 - (i) Data
 - (ii) Idle signal
 - (iii) Interrupt
 - (iv) Acknowledge signal
- (h) The transmission over the USB is divided into
 - (i) Frames
 - (ii) Pages
 - (iii) Packets

- (iv) Tokens
- (i) Circuits that can hold their state as long as power is applied is _____.
- (i) Dynamic memory
- (ii) Static memory
- (iii) Register
- (iv) Cache
- (j) The reason for the fast operating speeds of the flash drives is
 - (i) The absence of any movable parts
 - (ii) The integrated electronic hardware
 - (iii) The improved bandwidth connection
 - (iv) All of the mentioned

10. State whether the following are true or false :
(10 × 1 = 10)

- (a) IBM developed a bus standard for their line of computers 'PC AT' called IB bus.
- (b) Direct mapping implies that the number of lines in the cache must be equal to the main memory.

- (c) Multiple interrupts cannot be handled by the processor.
 - (d) The program counter stores the address of the next instruction to be executed.
 - (e) The fundamental building block of the ENIAC machine was transistors.
 - (f) The Intelx86 architecture is CISC-based.
 - (g) Static RAM is a faster and more dense memory than DRAM.
 - (h) ROMs cannot be used even when only few bits are corrupted.
 - (i) Hamming code is a typical error correcting mechanism used to repair Hard failures.
 - (j) Read-mostly memory is a type of random-access memory.
11. Explain in detail about the Disk control and Hard Disk controller.
12. Briefly explain about the Video display Adaptors and Solid state display.

13. Write in detail about the CRT block diagram and principle of operation of computer.
 14. Write about the FDD.
 15. Write detail about the Printing Mechanism.
 16. Discuss about the signals from PC to Printer and Printer to PC.
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VOCATIONAL DIPLOMA EXAMINATION - DECEMBER- 2020
VOCATIONAL DIPLOMA IN COMPUTER HARDWARE SERVICING
PERSONAL COMPUTER ORGANIZATION (PCO)

Time: 3 Hours

Maximum Marks: 70

PART- A (3 x 3 = 9 Marks)

Answer any Three questions out of Five questions in 100 words.
All questions carry equal marks.

1. Write brief about Pen Drives.
2. Write about common faults with mouse.
3. Explain about use of computer for instrumentation.
4. Mention about the Monitor.
5. Discuss about the Printer Controller.

PART- B (3 x 7 = 21 Marks)

Answer any Three questions out of Five questions in 200 words.
All questions carry equal marks.

6. Explain in detail about the different types of mother boards.
7. Describe about the floppy disk drive.
8. Write about the HDD.
9. Mention about the scanner.
10. Describe about the RAM.

PART- C (4 x 10 = 40 Marks)

Answer any Four questions out of Seven questions in 500 words.
All questions carry equal marks.

11. Explain in detail about Hard Disk Controller.
12. Discuss in detail about Video display Adaptors.
13. Briefly explain about the keyboard switches and common faults with mouse.
14. Describe about the signals from PC to printer and Printer to PC.
15. Explain in detail about the Disk control and Hard Disk controller.
16. Write in detail about the CRT block diagram and principle of operation of computer.
17. Write detail about the Printing Mechanism.

VOCATIONAL DIPLOMA EXAMINATION —
DECEMBER 2020

COMPUTER HARDWARE SERVICING

Time : 3 hours

Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Explain about the front panel controls.
2. What is PC-BUS? Explain it.
3. Discuss about ROM BIOS organization.
4. Explain the trouble shooting system faults using POST.
5. What is BIOS? Explain the setup program.
6. Discuss the IPL hardware in detail.
7. What is a printer? Explain dot matrix printer.
8. Describe about the video card failure.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

Question 9 and 10 compulsory.

9. Choose the correct answer. (10 × 1 = 10)
- (a) On the motherboard _____ is the temporary computer memory area in which data can be stored.
- (i) expansion slot
 - (ii) math co-processor
 - (iii) RAM
 - (iv) ROM BIOS
- (b) The device used in a data communication network to perform the conversion between analogue and digital signals, is called a
- (i) front end processor.
 - (ii) modem
 - (iii) decoder
 - (iv) multiplexer

- (c) If you look carefully at the motherboard, you will notice that some chips are soldered to the board whilst others are plugged into the board. The removable chips allow you to
 - (i) extra power sources to your computer.
 - (ii) integrate the ALU and the system clock unit.
 - (iii) re-arrange the layout of your motherboard.
 - (iv) upgrade your computer components.
- (d) The Internet offers different services. Which one listed below is incorrect? Chat room
 - (i) Electronic mail
 - (ii) Off line shopping
 - (iii) World Wide Web
 - (iv) None of the above
- (e) The Internet is...
 - (i) a global network of computers networks.
 - (ii) a government-owned agency that links computers.
 - (iii) software for sending e-mail around the world.

- (iv) a specialised form of local area network.
- (f) The CPU deals with each instruction in a cycle. The sequence of instructions to carry out one machine instruction is called the instruction or machine cycle. The first action is to fetch the instruction from memory and then the program counter is updated (reset). The other three phases of the machine cycle in the correct order are:
 - (i) Decode the instruction; Execute the instruction; Transfer the data.
 - (ii) Decode the instruction; Transfer the data; Execute the instruction.
 - (iii) Execute the instruction; Decode the instruction; Transfer the data.
 - (iv) Transfer the data; Execute the instruction; Decode the instruction.
- (g) When the electrical power is disrupted or cut off, data and programs are lost in/on basic tools.
 - (i) hard disk.
 - (ii) memory

- (iii) secondary storage
 - (iv) None of the above
- (h) The communication bus which is used to fetch the address of an instruction from memory is called the
- (i) address bus (ii) control bus
 - (iii) data bus. (iv) fetch bus
- (i) Read Only Memory (ROM)
- (i) Is volatile
 - (ii) Is programmable
 - (iii) Is mounted on the mother board
 - (iv) Contains the bootstrap loader
- (j) An online meeting allows users to
- (i) determine the receiver's geographic location.
 - (ii) leave voice messages for one or two people.
 - (iii) print to a web address that is associated to a particular printer.

(iv) share documents with others in real time.

10. State whether the following are true or false : (10 × 1 = 10)

- (a) A machine cycle is the series of operations required to process a single machine instruction
- (b) Peer-to-peer computing can tap unused disk space on PCs.
- (c) DVDs have a higher storage capacity than CD-ROMs.
- (d) Computer hardware provides the underlying physical foundation for the firm's IT infrastructure.
- (e) Eight bits make a byte.
- (f) Microprocessors integrate memory, logic, and control circuits for an entire CPU onto a single chip.
- (g) Inkjet printers make images in black and white only.
- (h) Printers with lower resolution are better than those with higher resolution.

- (i) The CPU cache is a type of memory on the CPU.
 - (j) Restarting a computer is called Soft booting.
11. Describe the mother board and daughter boards.
 12. Explain about the functional blocks of 286/386/486 systems.
 13. Discuss in detail about the BIOS for DOS and windows.
 14. Explain about the configuring the IDE card and POST error message.
 15. Discuss the Printer sub assemblies and block diagram.
 16. Write short notes on
 - (a) PC Troubleshooting strategy.
 - (b) Solving Interrupt and I/O conflicts.
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**VOCATIONAL DIPLOMA EXAMINATION
DECEMBER 2020**

Computer Hardware Servicing

Time: 3 Hours

Maximum Marks:70

PART –A (3 x 3 = 9 Marks)

Answer any Three questions out of Five questions in 100 words.

All questions carry equal Marks.

1. Explain briefly BIOS for DOS and Windows.
2. Explain about various printing options.
3. Write about the FDD.
4. Explain about the keyboard switches.
5. Write about the Hard Disk Drive

PART –B (3 x 7 = 21 Marks)

Answer any Three questions out of Five questions in 200 words.

All questions carry equal Marks.

6. Explain PC system unit layout.
7. Discuss about the identifying the connectors and cables.
8. Discuss about the Printer Controller.
9. Discuss about SCSI.
10. Write detail about the Printing Mechanism..

PART –C (4 x 10 = 40 Marks)

Answer any Four questions out of Seven questions in 500 words.

All questions carry equal Marks.

11. Describe the history and types of Personal Computer Systems.
12. Explain the Intel Microprocessor family.
13. Discuss in detail about the trouble shooting.
14. Explain about the Video display Adaptors and Solid state display.
15. Write a VB program to create an Inkjet and Laser printer.
16. Discuss about the signals from PC to Printer and Printer to PC
17. Explain in detail about the different type of Buses and LPT1.

VDIP-C-263

VDHS-3

**VOCATIONAL DIPLOMA EXAMINATION –
DECEMBER - 2020**

COMPUTER HARDWARE SERVICING

TROUBLE SHOOTING AND DATA RECOVERY

Time: 3 Hours

Maximum Marks: 75

PART A (5 × 5 = 25 Marks)

Answer any FIVE questions.

1. Explain the function of DOS.
2. Describe the checking the device for errors.
3. Explain the purpose of antivirus and network game.
4. How to Removing Disk Fragmentation? Explain.
5. What is a registry? Explain.
6. What are the advantages of Disk Cloning?

7. Explain the upgrading hardware device drive installation.
8. Describe the FAT16 File System.

PART B (5 × 10 = 50 Marks)

Answer any FIVE questions.

Question No. 9 and 10 is compulsory.

9. Multiple Choice questions :
 - (a) What could cause a fixed disk error?
 - (i) No-CD installed
 - (ii) Bad ram
 - (iii) Incorrect CMOS settings.
 - (b) Missing slot covers on a computer can cause
 - (i) Over heat (ii) Power surges
 - (iii) EMI
 - (c) DLL stands for
 - (i) Dynamic Link Library
 - (ii) Dynamic Like Library
 - (iii) Dynamic Live Library

- (d) NTFS stands for
 - (i) Network Technology File System
 - (ii) New Technology File System
 - (iii) Novel Technology File System
- (e) To install office 2000 use
 - (i) Setup.ini (ii) Setup.exe
 - (iii) Setup.dll
- (f) Zip utility are
 - (i) Winzip
 - (ii) Winrar
 - (iii) Either (i) or (ii)
- (g) HAL stands for
 - (i) Hardware Abstraction Layer
 - (ii) Hardwired Abstraction Layer
 - (iii) Hardware Abstractly Layer
- (h) LLF in hard disk means of
 - (i) Light Level Formatting
 - (ii) Low Level Formatting
 - (iii) Link Level Formatting

- (i) NOS was replaced with NOS/VE on the _____ cyber 180 system.
 - (i) 64 Bit
 - (ii) 128 Bit
 - (iii) 256 Bit
- (j) The advantage of partitioning method
 - (i) Quick
 - (ii) Easy to understand
 - (iii) Both (i) and (ii)

Compulsory Question :

10. State whether TRUE or FALSE : (10 × 1 = 10)
- (a) Regular backup best way to protect your hard drive data.
 - (b) FAT 32 can support portions up to 2147 GB.
 - (c) Window 2003 are usually file with .sys file extension.
 - (d) The DOS operating file system is a FAT16.

- (e) The initial version of the FAT is now referred to as FAT14.
 - (f) NTFS supports long file names.
 - (g) Windows 98 not supporting multiprocessor.
 - (h) FAT 16 uses smaller clusters than FAT 32.
 - (i) USB is not supporting Windows 95.
 - (j) In order to backup the hard disk portion table and boot sector of partition to file press Shift + F1.
11. Describe the overview of windows operating system
12. Discuss the different types of FAT file system.
13. Write short notes on:
- (a) Recovering Files and Directories.
 - (b) Repairing the Master Boot Record.
14. Explain in detail about Backup utility program.

15. Discuss in detail about Common disk cloning errors and Solving Disk Cloning failures.
 16. Explain about the Hard Disk Drive Configuration and Installation.
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VOCATIONAL DIPLOMA EXAMINATION**DECEMBER- 2020**

Computer Hardware Servicing

TROUBLE SHOOTING AND DATA RECOVERY

Time: 3 Hours

Maximum Marks:70

PART –A (3 x 3 = 9 Marks)

Answer any Three questions out of Five questions in 100 words.

All questions carry equal Marks.

1. What is a Device driver? Explain.
2. Explain about the Windows core files.
3. Write about the Formatting a Hard drive.
4. Explain about the Network operating system.
5. Explain about the Disk Cloning software.

PART –B (3 x 7 = 21 Marks)

Answer any Three questions out of Five questions in 200 words.

All questions carry equal Marks.

6. How to remove disk fragmentation? Explain.
7. Discuss the removable media file recovery.
8. Discuss about the Backing up registry entries.
9. List the types of virus and explain them.
10. Discuss about the Recovering the Files and Directories.

PART –C (4 x 10 = 40 Marks)

Answer any Four questions out of Seven questions in 500 words.

All questions carry equal Marks.

11. Write short notes.
(a) Protecting against script based virus. (b) Master Boot Record.
12. Explain the history of computer virus and attacks.
13. Discuss about logical drive and volume.
14. Write in detail about the uninstalling Software.
15. Discuss about the dealing with accidental or mistakenly cloned drive.
16. Explain about the Hardware requirements and installing Windows XP.
17. Discuss about the Disk cloning using GHOST and solving Disk cloning failures.