

VDP - 435

VDHS-1

**VOCATIONAL DIPLOMA IN COMPUTER
HARDWARE SERVICING EXAMINATION –
JUNE 2019.**

First Year

Computer Science

PERSONAL COMPUTER ORGANIZATION (PCO)

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Explain in detail about the different types of mother boards.
 2. Discuss about USB and RS232 C.
 3. Write about the HDD.
 4. Describe about the RAM.
 5. Explain about the keyboard controller.
 6. Mention about the scanner.
 7. Write detail about the solid state displays.
 8. Discuss about the Dot matrix printer.

PART B — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

Question 9 and 10 compulsory.

9. Choose the correct answer: $(10 \times 1 = 10)$

(a) The word ‘FITNESS’ requires this many bytes:

(i) two

(ii) seven

(iii) eight

(iv) ten

(b) Most personal computers use this eight-bit coding system:

(i) Unicode

(ii) ASCII

(iii) EBCDIC

(iv) Decode

- (c) This coding system uses 16 bits instead of 8, and allows for approximately 65,000 different patterns:
- (i) Unicode
 - (ii) ASCII
 - (iii) EBCDIC
 - (iv) Decode
- (d) The set of electrical pathways moves information between the basic components on the motherboard including between RAM and the CPU:
- (i) system bus
 - (ii) control unit bus
 - (iii) processor bus
 - (iv) connector bus
- (e) A component of the CPU that performs arithmetic, as well as comparison and logic operations, is the:
- (i) ALU
 - (ii) RAM
 - (iii) CMOS
 - (iv) RISC

- (f) This computer component keeps all of the computers operations synchronized:
- (i) CPU BUS
 - (ii) CPU CLOCK
 - (iii) CPU CMOS
 - (iv) CPU BATTERY
- (g) For a CPU, the number or millions of CPU cycles per second is quoted as:
- (i) Gigahertz
 - (ii) Megahertz
 - (iii) Clock-hertz
 - (iv) Bus-hertz
- (h) Your operating system will detect and install the appropriate device drivers for this type or device:
- (i) Plug and play
 - (ii) Plug and go
 - (iii) Plug and continue
 - (iv) Plug and commence

- (i) Today's USB ports are USB _____
- (i) 1.0
 - (ii) 1.1
 - (iii) 2.0
 - (iv) 2.1
- (j) This connector has 5pins that fit into the holes of this type of port.
- (i) Serial port
 - (ii) Parallel port
 - (iii) USB port
 - (iv) fire wire port

10. State whether the following are true or false:

($10 \times 1 = 10$)

- (a) Direct mapping implies that the number of lines in the cache must be equal to the main memory.
- (b) Multiple interrupts cannot be handled by the processor.
- (c) The program counter stores the address of the next instruction to be executed.

- (d) The fundamental building block of the ENIAC machine was transistors.
 - (e) The Intelx86 architecture is CISC-based.
 - (f) The stored program concept is used in both ENIAC and Von-Neumann machines.
 - (g) Semiconductor ROM memory is a non-erasable but volatile type of memory.
 - (h) Static RAM is a faster and more dense memory than DRAM
 - (i) Hard failures in the memory cannot be repaired and hence have be replaced or spares have to be added
 - (j) The memory devices used in a computer form a hierarchy based on a set of characteristics.
11. Explain in detail about the different type of Buses and LPTI.
12. Describe about the Pen drive and floppy disk drive.
13. Briefly explain about the keyboard switches and common faults with mouse.
14. Write in detail about the monitor and video display adoptors.

15. Discuss about the printing mechanism and Inkjet Printer.
 16. Describe about the signals from PC to Printer and Printer to PC.
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VDP-436

VDHS-2

**VOCATIONAL DIPLOMA IN COMPUTER
HARDWARE SERVICING EXAMINATION
JUNE, 2019.**

Computer Science

COMPUTER HARDWARE SERVICING

Time : 3 hours

Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Explain in detail about the block diagram of motherboard.
2. Discuss about SCSI.
3. Write about the FDD.
4. Describe about the Pen drive.
5. Explain about the keyboard switches.
6. Mention about the Monitor.
7. Write detail about the Printing Mechanism.
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) From what location are the 1st computer instructions available on boot up.
- (i) ROM BIOS (ii) CPU
(iii) boot.ini (iv) CONFIG.SYS
(v) None of the above
- (b) What could cause a fixed disk error.
- (i) No-CD installed
(ii) bad ram
(iii) slow processor
(iv) Incorrect CMOS settings
(v) None of the above
- (c) Missing slot covers on a computer can cause.
- (i) Over heat
(ii) Power surges
(iii) EMI.
(iv) Incomplete path for ESD
(v) Non of the above

- (d) When installing PCI NICs you can check the IRQ availability by looking at
 - (i) dip switches.
 - (ii) CONFIG.SYS
 - (iii) jumper settings
 - (iv) motherboard BIOS
 - (v) None of the above
- (e) With respect to a network interface card, the term 10/100 refers to
 - (i) protocol speed
 - (ii) a fiber speed
 - (iii) megabits per seconds
 - (iv) minimum and maximum server speed
 - (v) None of the above
- (f) Which Motherboard form factor uses one 20 pin connector
 - (i) ATX
 - (ii) AT
 - (iii) BABY AT
 - (iv) All of the above
 - (v) None of the above

- (g) A hard disk is divided into tracks which are further subdivided into :
- (i) clusters (ii) sectors
- (iii) vectors (iv) heads
- (v) None of the above
- (h) A wrist grounding strap contains which of the following :
- (i) Surge protector
- (ii) Capacitor
- (iii) Voltmeter
- (iv) Resistor
- (v) None of the above
- (i) Which standard govern parallel communications
- (i) RS232
- (ii) RS-232a
- (iii) CAT 5
- (iv) IEEE 1284
- (v) None of the above

- (j) In laser printer technology, what happens during the conditioning stage?
- (i) The corona wire places a uniform positive charge on the paper
 - (ii) A uniform negative charge is placed on the photosensitive drum
 - (iii) A uniform negative charge is placed on the toner
 - (iv) All of the above
 - (v) None of the above
10. State whether the following are true or false:
 $(10 \times 1 = 10)$
- (a) Higher temperatures and longer power-off time will shorten cell life of CMOS battery
 - (b) The BIOS software is built into the PC, and is NOT run by a PC when powered on.
 - (c) BIOS parameters can be configured by the user through the BIOS/CMOS setup program.
 - (d) Power-on self-test (POST) is a process performed by firmware or software routines immediately after many digital electronic devices are powered on.
 - (e) POST beep codes NOT vary from manufacturer to manufacturer.

- (f) The CPU sometimes called “Processor” actually functions as the “Brain” of the computer. It interprets and execute program commands and processes data stored in memory.
- (g) USB was designed to standardize the connection of computer peripherals, such as keyboards, pointing devices, digital cameras, printers, portable media players, disk drives and network adapters to personal computers, both to communicate and to supply electric power.
- (h) The fundamental purposes of the BIOS are to initialize and test the system hardware components, and to load a boot loader or an operating system from a mass memory device.
- (i) When you turn ON the computer, it will first run through POST, a series of software-controlled diagnostic test. The POST checks system memory, the motherboard circuitry, the display, the keyboard, the diskette drive, and other I/O devices.
- (j) POST beep codes vary from manufacturer to manufacturer.

11. Explain in detail about the Disk control and Hard Disk controller.
 12. Describe about the block diagram of keyboard controller.
 13. Briefly explain about the Video display Adoptors and Solid state display.
 14. Write in detail about the CRT block diagram and principle of operation of computer.
 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.
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**VOCATIONAL DIPLOMA IN COMPUTER
HARDWARE SERVICING EXAMINATION
JUNE 2019.**

Computer Science

TROUBLE SHOOTING AND DATA RECOVERY

Time : 3 hours **Maximum marks : 75**

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Explain about the Windows core files.
 2. Discuss about the File system care.
 3. Write about the Formatting a Hard drive.
 4. Describe about the common errors during installation.
 5. Discuss about the Adware.
 6. Explain about the Partition table.
 7. Discuss about the Backing up registry entries.
 8. Explain about the Disk Cloning Software.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions. 9 and 10 compulsory.

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

(a) Internal command in Dos are

 - (i) Cls, rd label (ii) Dir, ren, sys
 - (iii) Time, type, dir (iv) Del, disk copy, label

- (b) Which command is used to copy files?
 - (i) Copy
 - (ii) Diskcopy
 - (iii) Type
 - (iv) All of the above
- (c) To copy the hidden system files of DOS to another disk you can use the command
 - (i) Copy
 - (ii) Ren
 - (iii) Sys
 - (iv) Diskcopy
- (d) Disk copy command in DOS is used to
 - (i) Copy a file
 - (ii) Copy contents of one floppy disk to another
 - (iii) Copy contents of CD-ROM to another
 - (iv) All of the above
- (e) SYS command is used to
 - (i) Copy DOS system files to new disk
 - (ii) Copy DOS configuration files to a new disk
 - (iii) Update the DOS system files
 - (iv) None of above
- (f) The command used to copy a file named temp.doc from drive C: to drive A: is
 - (i) Copy temp.doc to a:
 - (ii) Copy c:\temp.doc a:
 - (iii) Copy c: a:
 - (iv) Copy temp a: c:
- (g) External command in DOS are
 - (i) Copy, edit, sys, format
 - (ii) Edit, sys, chkdsk
 - (iii) Chkdsk, prompt, date
 - (iv) Sys, ver, vol

- (h) Which keys can be pressed quit without saving in DOS
(i) Ctrl + A (ii) Ctrl+ B
(iii) Ctrl + C (iv) Ctrl + D

(i) Which command is used to get the current date only?
(i) Date (ii) Time
(iii) Second (iv) All of the above

(j) Generally, the DATE is entered in the form
(i) DD-YY-MM (ii) YY-DD-MM
(iii) MM-YY-DD (iv) MM-DD-YY

10. State whether the following are true or false:
 $(10 \times 1 = 10)$

(a) Different user-level threads of the same process can have different scheduling priorities

(b) All kernel-scheduled threads of a process share the same virtual address space

(c) The optimal page replacement algorithm is the best choice in practice

(d) The Challenge-Response authentication protocol is susceptible to replay attacks by intruders snooping on the network

(e) Threads are cheaper to create than processes

(f) Kernel-scheduled threads are cheaper to create than user-level threads

- (g) System calls do not change to privilege mode of the processor
 - (h) A blocking user-level thread blocks the process
 - (i) A scheduler favouring, I/O-bound processes usually does not significantly delay the completion of CPU-bound processes
 - (j) The operating system is not responsible for resource allocation between competing processes.
11. Discuss briefly logical drive and volume.
 12. Explain about the Determining hardware model and manufacturer.
 13. Write in detail about the uninstalling Software.
 14. Explain details about malware viruses and preventing virus's infections.
 15. Discuss about the Repairing lost and cross linked files.
 16. Discuss about the Dealing with accidental or mistakenly cloned drive.
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