SPECIAL PROGRAM IN TECHNICAL VOCATIONAL EDUCATION (SPTVE)
COMPUTER SYSTEMS SERVICING 8 Q3-W5

I.   Topic: OPTICAL DISK DRIVE (ODD)

II.   Objectives:

1. identify the component to be measured, ODD types, kinds and interface;
2. write the appropriate ODD specification and arrange the steps in configuring ODD in the computer system and;
3. value the importance of ODD in the computer system and the use of OHS when performing configuration.

III.   Brief Introduction of the Lesson

Optical Disk Drive (ODD) is a disk drive that uses laser light or electromagnetic waves within or near the visible light spectrum as part of the process of reading or writing data to or from optical discs. Some drives can only read from certain discs, but recent drives can both read and record, also called burners or writers.

An optical drive in a computer system allows you to use Compact discs (CDs), Digital Versatile Disc (DVDs), and Blu-ray discs to listen to music or watch a movie. Most drives also allow you to write data to a disc, so you can create your own music CDs or create a backup copy of important data. They are also very commonly used in computers to read software and consumer media distributed on disc and to record discs for archival and data exchange purposes.

Types of Optical Disk Drive

TYPES OF ODD	FUNCTION
CD-ROM	reads information in a compact disc (CD).
CD-RW / CD Writer	reads and write information in a compact disc (CD).
DVD-ROM	reads information in a compact disc (CD) and digital versatile disc (DVD)
Combo drive (CD-RW + DVD-ROM)	reads information in a compact disc (CD) & digital versatile disc (DVD) and writes information in a compact disc (CD) only
DVD-RW / DVD Writer	reads and write information in a compact disc (CD) and digital versatile disc (DVD)
BLU-RAY DRIVE	reads and write information in a compact disc (CD), digital versatile disc (DVD) and blu-ray disc (BD)

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Kinds of Optical Disk Drive

1. Internal ODD – assembled inside the system unit using a PATA or SATA interface
   PATA interface: IDE cable & Molex connector
   SATA interface: SATA data cable & SATA power cable
2. External ODD – a separate device connected in system unit using USB interface.

ODD Specification:

Brand, Model, Serial Number, Interface, Type of ODD, Reading Speed (#x)

Example:

Specification of the picture seen at the side:
Brand: TEAC
Interface: USB
Type of Drive: DVD ROM
Other Specification may be seen on the device itself

Image Source: https://tinyurl.com/yxfl96qr and https://tinyurl.com/yyvbo43u retrieved on 09/29/20

IV.   Activities:

Activity 1
Types and Parts of ODD

Directions: Select your answer from the choices in the box. Write your answers on a separate sheet of paper.

Optical Path	Optical Disk Drive	Recorder	Rewritable
DVD-RW	CD-ROM	Brand	Optical Layer
25–50Gb	4.7-8Gb	600-700Mb	Paper clip

1. It allows you to use CDs, DVDs, and Blu-ray discs to listen to music or watch a movie.
2. What is the most important part of optical disk drive?
3. It encodes (or burns) data onto a recordable blank disc by selectively heating parts of an organic dye layer with a laser.
4. What does RW mean in ODD media?
5. It is a type of ODD that reads and writes information in a compact disc (CD) and digital versatile disc (DVD).
6. Compact disc has the capacity of ____.
7. Blu-ray disc has the capacity of _____.
8. Digital versatile disc has the capacity of ____.
9. What material is use when performing a manual ejection in ODD?
10. It is a type of ODD reads and writes information in a compact disc.

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Activity 2
Writing of Specification

Directions: Write all the specifications of ODD listed below. Write your answers on a separate sheet of paper. *(See the sample writing of specification in the lesson)*

1. Dell DW316
    266MHz, USB 2.0
    Serial #:1267093564, CD-ROM

2. LG Electronics 8X (GP65NB60)
    533MHz, USB 2.0
    Serial #: 129867483, DVD-ROM

3. ASUS DRW-24B1ST
    233MHz, USB 3.0
    Serial #: 93647281, DVD-ROM

4. SEA TECH 1 Archgon Aluminum
    3733MHz, USB 4.0
    Serial #: 67495821, BLU-RAY

5. Pioneer Electronics USA
    400MHz, USB 2.0
    Serial #: 12974536, DVD-ROM

Activity 3
Disassembling and Assembling ODD in the Computer System/System Unit

Set A. *Directions:* Listed below are steps in disassembling and assembling ODD in the computer system/system unit, arrange the letters/blocks to show the proper steps in doing the activity for items number 1 to 6. Write your answers on a separate sheet of paper.

A. Make sure the holes in the ODD and drive bays are properly aligned.

B. Insert and tighten the screws to attach ODD to its drive bay.

C. Unplug the system unit, open the system case and discharge yourself.

D. Unscrew the ODD and carefully remove it from the drive bays.

E. Remove the data cable and power connector.

F. Connect the data cable and power connector.

Set B. *Directions:* Answer the following questions briefly and write your answers on a separate sheet of paper.

1. Why do you think ODD is important in the computer system?

2. Can you use the computer without ODD? Why?

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3. Where do we usually use ODD?

4. Do you think ODD is still useable nowadays? Explain your answer.

V. Assessment
Directions: Select only the letter of the correct answer and write it on a separate sheet of paper.

1. It is a disk drive that uses laser light or electromagnetic waves which read and write data to or from optical discs.
   A. floppy disk drive
   B. hard disk drive
   C. optical disk drive
   D. solid state drive

2. Which part of the ODD reads data into the CD?
   A. beam   B. light   C. laser   D. radiation

3. It is a type of ODD reads information in a CD and DVD?
   A. CD-ROM   B. CD-RW   C. combo drive   D. DVD-ROM

4. Which of the following types of ODD can read and write all types of optical disc?
   A. blu-ray   B. CD-R   C. CD-RW   D. DVD-RW

5. How to manually eject an optical disk drive?
   I. Locate the manual ejection hole
   II. Insert the paper clip into the hole
   III. Pull the tray
   A. I, II, III   B. II, III, I   C. III, I, II   D. I, III, II

VI. Reflection:
Directions: Answer the following questions briefly and write it on a separate sheet of paper. Your answer must be in paragraph form.
1. What is the most interesting or important things you have learned today and why?
2. What will be the benefits of this lesson in your daily life or in the future?
3. What do you want to learn more about ODD and why?
4. What problems did you encounter in answering the activities?

References:

- ODD definition and other information - https://en.wikipedia.org/wiki/Optical_disc_drive retrieved on 09/29/20
    - https://tinyurl.com/ycxonc3d retrieved on 09/29/20
- Configuration of ODD - https://www.wikihow.com/Install-or-Change-a-Computer%27s-Optical-Drive retrieved on 09/29/20
- Types of ODD - https://www.techwalla.com/articles/what-are-the-different-kinds-of-optical-drives retrieved on 01/11/21

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