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**ОТЧЕТ**

**UNIT 4**

«Peripherals»

по дисциплине:

**Профессиональная подготовка на английском языке**

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**Starter**

1. Identify the peripherals in this computer application. Divide them into input and output devices.

In Fig 1. are present the following peripherals:

1. A Barcode scanner;
2. Displays on the till
3. A Keyboard

2. Link the inputs on the left and the outputs on the right with the appropriate peripherals in the centre.

|  |  |  |
| --- | --- | --- |
|  | Input | Peripherals |
| 1 | Flowers | A digital camera |
| 2 | Documents | A scanner |
| 3 | Barcodes | A barcode scanner |
| 4 | Human voices | A .microphone |
| 5 | Bank cards | A card reader |

|  |  |  |
| --- | --- | --- |
|  | Output | Peripherals |
| 1 | Sounds | A speaker |
| 2 | Documents | A printer |
| 3 | Images | A monitor |

**Listening**

3. Study this description and answer these questions.

1. How do digital cameras differ from conventional cameras?

The main difference is a digital camera works without a film. It uses the CCD instead.

1. How do they work?

The camera lenses focus an image on the CCD unit. The CCD converts the image into digital signals so it can be stored on a memory card. Then the image can be upload from the memory card on a computer.

1. What are their advantages and disadvantages compared to conventional cameras?

The advantage of a digital camera is that it does not need a film.

The disadvantage of a digital camera is that it is more expensive than a conventional camera.

4. Listen to Part 1 of this discussion between A and B and complete this table of similarities and differences between conventional and digital cameras. Tick or cross the boxes.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Feature | Digital | Conventional |
| 1 | lens | Yes | Yes |
| 2 | viewfinder | Yes | Yes |
| 3 | requires chemical processing film | No | Yes |
| 4 | transfer images directly to PC | Yes | No |
| 5 | can delete unsatisfactory images | Yes | No |

5. Listen to Part 2 of the dialogue to list the disadvantages of digital cameras.

The disadvantages of the digital camera are

1. High price;
2. The quality of pictures is worse than a 35 mm conventional camera has;
3. If it needs to print the pictures, it needs to invest in an expensive high quality color printer;
4. Digital cameras are power-hungry so their battery runs out very fast.

6. Now listen to both parts again to find the answers to these questions:

1. What does a CCD contain?

A CCD contains a set of thousands photo-transistors.

1. What is a pixel?

A pixel is a color dot. The pixels make up an image on a screen.

1. How can you view pictures before they are downloaded to a PC?

There is an LCD display on the back of the camera. The taken pictures can be watched on this display before downloading it to a computer.

1. When you have downloaded the images, what can you do with them?

The images can be retouched, manipulated or printed out.

1. Is special software required?

Yes, it is, but it comes with the camera and can be easily installed on the computer.

1. Why is the resolution important?

The high resolution allows making pictures with high quality and with more details on them.

1. What does the capacity of a digital camera depend on?
2. The capacity of a digital camera depends on a picture resolution, higher resolution lead to less amount of pictures, and on memory capacity.
3. Why is it worth getting a rechargeable battery?

If the battery is rechargeable, it doesn’t need to buy another one every time when the battery runs out.

**Language work**

7. Study this data about storage devices. Then complete the blanks in the following sentences comparing and contrasting the different types.

|  |  |
| --- | --- |
| 1 | You can write to hard disks like to optical disks. |
| 2 | Floppy disks have a lower capacity unlike other devices. |
| 3 | CD-ROMs and floppy disks are both low priced. |
| 4 | DVD-RAM has a very high capacity unlike other optical disks |
| 5 | CD-ROMs cannot be re-recorded whereas some other optical disks can be. |
| 6 | Like hard disks, you can read from and write to CD-MO drivers. |
| 7 | Unlike CD-ROMs, CD-Rs are recordable. |
| 8 | Magnetic tape is much slower unlike other devices. |
| 9 | Both DVD-RAM and fixed hard disks have very high media capacity. |
| 10 | Floppy disks are cheap whereas DVD-RAM is expensive. |

8. Write your own comparison of printer types.

Dot-matrix printers have a low cost unlike other types of printer.

Ink-Jet printers speed is medium to fast like thermal transfer and Solid ink printers have.

Laser printers have excellent text quality whereas dot-matrix printers not.

Both a thermal transfer printer and a solid ink printer have good to excellent graphics capability. Electro-static printers have fair to good graphics capability however dot-matrix printers have limited.

**Problem solving**

9. Study this list of needs. Which type of peripheral would you advise in each case?

|  |  |  |
| --- | --- | --- |
| 1 | inputting printed graphics | A laser or ink-jet printer |
| 2 | building cars | An industrial robotic manipulator |
| 3 | controlling the screen cursor in a fast action game | A gaming mouse |
| 4 | making choices on a screen in a public information terminal | A touchscreen |
| 5 | recording moving images | A movie camera |
| 6 | recording a book loan in a library | A barcode scanner and a keyboard |
| 7 | printing very high quality text and graphics | A color laser printer |
| 8 | creating drawings | A tablet computer |
| 9 | printing building plan drawings | A plotter |
| 10 | recording sound | A microphone |
| 11 | listening to music without disturbing others | A headphones |
| 12 | storing programs and data | A flash drive |
| 13 | inputting a lot of text | An industrial printer |
| 14 | backing up large quantities of data | A large capacity hard disk |

**Writing**

10. Describe the EPOS till shown in Fig 1. Explain the function of each peripheral using the structures studied in Unit 2.

The till in Fig.1 is a device aimed at a fast serving of the store customers. It is equipped with a barcode scanner that identifies goods by their barcode marks. A server computer gets this information about a good, finds the price in the store database and receives it back to the till. The till shows the price and total sum on its screen. Once the buy is completed the till prints a receipt on its embedded printer.

11. Check these websites for the latest digital cameras. Compare the newest cameras with the one described in Fig 3. You will find its specifications on www.canon.com.

The camera presented in Fig. 3 is a Canon Powershot G1. It is a pretty old camera now. According to the specification, it has a resolution of its matrix 3 Mpx only. It has a small 3-time optical zoom. The newest cameras from leading manufacturers have a resolution that exceeds 50 Mpx and a very wide dynamic range that allows getting pictures superior in quality.

**Specialist reading**

A. Find the answers to these questions in the following texts.

|  |  |  |
| --- | --- | --- |
|  | Question | Answers |
| 1 | What is Currie Munce's main aim? | Currie Munce's main aim is to build bigger storage. |
| 2 | How quickly did the possible areal density of hard disks increase in the 1990s? | During the 1990s, areal density doubled every 18 months. |
| 3 | How long does Munce think magnetic  recording technology will continue to make.  rapid advances in capacity? | Munce think that magnetic recording technology will continue to make rapid advances 5 to 10 years. |
| 4 | What problem does he predict for magnetic storage? | The problem is that highly densely packed magnetic bits become unstable because of a phenomenon called ‘superparamagnetism’. |
| 5 | What is the predicted limit for discrete bit magnetic storage capacity? | The predicted limit for magnetic storage capacity is 10 terabits per square inch. |
| 6 | What storage technologies might replace current magnetic systems? | There are two possible technologies to replace the present magnetic storage technology – atomic force microscopy and holographic storage. |
| 7 | What is the advantage of holographic storage being three-dimensional? | The advantage is that the pages of data can be superimposed on a single volume. |
| 8 | What improvements are predicted due to the fast access rates and transfer times of holographic storage? | Due to advantages that the holographic storage technology gives may be improved network searches, video on demand, high-end servers, enterprise computing, and supercomputing. |
| 9 | What is predicted to be the most important high capacity removable storage media in the next 10 years? | Recordable CD-ROMs and DVDs will remain the most important high capacity removable storage media in the next 10 years. |
| 10 | What method of software distribution is likely to replace optical disks? | The online delivery method of software distribution can replace optical disks. |

B1. Match the terms in Table A with the statements in Table B.

Table A

|  |  |
| --- | --- |
| a | Big Blue |
| b | Areal density |
| c | Moore's Law |
| d | Superparamagnetism |
| e | Terabit |
| f | AFM |
| g | Angstrom |

Table B

|  |  |
| --- | --- |
| I | Atomic force microscopy |
| II | The approximate radius of an atom |
| III | IBM |
| IV | The data capacity of a storage device measured in bits per square inch |
| V | Prediction that the number of transistors that can be incorporated into a processor chip will double every 18 months |
| VI | A phenomenon that threatens to make densely packed bits unstable in magnetic storage devices |
| VII | One thousand gigabits |

Answers

|  |  |
| --- | --- |
| Atomic force microscopy | AFM |
| The approximate radius of an atom | Angstrom |
| IBM | Big Blue |
| The data capacity of a storage device measured in bits per square inch | Areal density |
| Prediction that the number of transistors that can be incorporated into a processor chip will double every 18 months | Moore's Law |
| A phenomenon that threatens to make densely packed bits unstable in magnetic storage devices | Superparamagnetism |
| One thousand gigabits | Terabit |

B2. Mark the following statements as True or False:

|  |  |  |
| --- | --- | --- |
| a | The development of AFM is more advanced than holographic storage. | False |
| b | The predicted maximum storage density of AFM is 400 gigabits per square inch. | True |
| c | Holography works in 3D. | True |
| d | Univac I was the first computer to use tape storage devices. | True |
| e | Users want higher capacity storage devices than technology can provide. | True |