1. A bank uses magnetic tapes to update their customer account data at the end of each day. New data is stored on a Transaction File (TF) and this is combined with the Master File (MF) to produce a New Master File (NMF).

The data is stored in account order and part of the TF and MF are shown below:

MF:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 6 | 8 | 9 | 11 | 12 |

TF:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 4 | 5 | 7 | 8 | 10 | 13 | 14 |

* 1. Show how the data is stored on the merged NMF and indicate which file (TF or MF) the data came from.

NMF:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

TF or MF?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

* 1. Indicate which of the following is the largest memory size by ticking (**✓**) the appropriate box on the fight.

|  |  |
| --- | --- |
| 1GB |  |
| 1KB |  |
| 1TB |  |
| 1MB |  |

* 1. Music files are 4MB in size. Calculate how many music files could be stored on a memory stick with 4GB capacity.

……………………………………………………………………………………………………………………………………………………………………………[2 marks]

1. Storage media can be classified as magnetic, optical or solid state. Six types of storage media are shown in the table. Tick (**✓**) the appropriate column in the table to indicate the type of media used in each case.

|  |  |  |  |
| --- | --- | --- | --- |
| **Storage device** | **Magnetic** | **Optical** | **Solid state** |
| Hard disk |  |  |  |
| Flash memory card |  |  |  |
| Blu-ray disk |  |  |  |
| CD-ROM |  |  |  |
| Memory stick |  |  |  |
| DVD-RAM |  |  |  |

[6 marks]

1. Describe the main difference between Blu-ray discs and DVDs.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………[4 marks]

1. 1. Discuss the main advantages of using SSD rather than HDD in laptop computers.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………[4 marks]

* 1. Name **two** other devices which would make use of SSD and give a reason for your choice; a different reason should be given in each case.

Name 1 …………………………………………………………………………………

Reason 1 ………………………………………………………………………………

…………………………………………………………………………………………..

Name 2 …………………………………………………………………………………

Reason 2 ………………………………………………………………………………

………………………………………………………………………………[4 marks]

1. Place each of the following storage and memory devices into their correct category:

|  |  |
| --- | --- |
| Blu-ray disc | Flash memory/memory stick |
| DVD-RAM | RAM |
| Fixed hard disk drive (HDD) | Removable hard disk drive (HDD) |
| Fixed solid state drive (SSD) | ROM |

|  |  |  |
| --- | --- | --- |
| **Primary** | **Secondary** | **Off-line** |
|  |  |  |

[6 marks]

1. Indicate which type of access each of the following storage media use by ticking (**✓**) the appropriate box.

|  |  |  |
| --- | --- | --- |
| **Media** | **Serial** | **Direct** |
| Magnetic tape |  |  |
| Magnetic disk |  |  |
| CD-RW |  |  |

[3 marks]

1. A student wrote ‘the future of optical media is one of obsolescence in the next 5 years’. Discuss this statement by referring to modern technologies. (obsolescence: the process of becoming obsolete or outdated and no longer used)

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………[6 marks]