Name: Class: Mark:

1. A list contains the following items:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Antelope | Baboon | Cheetah | Emu | Giraffe | Hippo | Jackal | Lion | Okapi | Warthog |

(a) A binary search is performed to find the item **Okapi**. State the items which will be examined.[3]

(b) State the items that will be examined when performing a binary search for **Monkey**, which is not in the list. [3]

(c) A linear search is performed to find the item **Emu**. State the items which will be examined. [1]

(d) Give **one** advantage and **one** disadvantage of the binary search algorithm. [2]

2. Describe briefly **one** scenario where records stored in a computer frequently need to be searched. State why the searches may be carried out. [3]

[Total 12 Marks]