Name: Class: Mark:

1. Give **two** examples where Artificial Intelligence was successfully used before   
the year 2000. [2]

Example 1:

Example 2:

2. AI is used in facial recognition on a mobile phone.

(a) Give **one** use for facial recognition on a phone. [1]

To unlock the phone.

To place an animal/character over your face in realtime.

Look at the three images of teenagers below:

|  |  |  |
| --- | --- | --- |
|  | A person in a blue shirt  Description automatically generated | A person posing for the camera  Description automatically generated |
| **Image 1** | **Image 2** | **Image 3** |

(b) Write **three** rules for identifying a face in an image. [3]

Rule 1:

Rule 2:

Rule 3:

(c) Image 1’s eyes are not pointing forward. Image 2’s head is not pointed forward. Image 3’s teeth have braces.

Explain any difficulties that these factors would have in detecting a face with   
the rules you gave in part (b). [2]

3. Explain why an AI program to classify Lego® bricks into different colours would   
be easier to create than one which checks if apples are ripe. [4]

4. A new product is being created for a car that will detect a cyclist and alert the driver if they are too close.

A person riding a motorcycle down a road

Description automatically generated

(a) Give **two** rules that could be used in identifying a cyclist. [2]

Rule 1:

Rule 2:

(b) What difficulties with the rules have in distinguishing a cyclist from other   
objects such as a pedestrian, horse, dog or pigeon? [2]

[Total 16 marks]