

Candidate Index Number: \_\_\_\_\_

## Physics, Case 1

Topic: The Mirror Paradox

Marks: 60

The image you see when you look in a mirror appears reversed left/right, but not up/down.

If you are right-handed, your mirror image is left-handed. If you touch your right ear, your image touches its left ear. But your image is not standing on its head.

At first this seems paradoxical as the mirror is symmetric about its normal. You can rotate the mirror around its normal axis, and the image does not rotate.

So why isn't the image also symmetrical about this normal? Resolve this confusion with a simple argument. You must be careful and precise in your use of language. **(Max: 500 words)**