**Outline the role of mirror neurons in social cognition (6 marks)**

The mirror neuron system was identified in \_\_\_\_\_\_\_\_\_ in the 1990s. Rizzolatti found that the \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_(in the frontal lobe) of the monkeys he was observing were activated when they observed a researcher grab their lunch. Thus Rizzolatti claimed these neurons \_\_\_\_\_\_\_when an animal makes a meaningful \_\_\_\_\_\_\_\_\_\_ and also when it observed another animal making the same \_\_\_\_\_\_\_\_\_\_\_\_. Humans are also assumed to have a mirror neuron system, so that neurons involved in, for instance, producing facial expressions, fire when facial expressions are observed in others. Mirror neuron have therefore been used to explain how we \_\_\_\_\_\_\_\_\_\_ the actions of those around us.

Furthermore Mirror neurons have also been found to be more active when the \_\_\_\_\_\_\_\_\_\_\_\_ of an action is clear, as shown in Iacoboni’s research. Participants shown \_\_\_\_\_\_\_\_ with clues about whether someone was about to enjoy their tea, or was about to clean up afterward. Had \_\_\_\_\_\_\_\_\_ activity in their frontal cortex than those that did not have clues. This higher rate of activity suggests that mirror neurons are not only involved in imitation of action but also in understanding \_\_\_\_\_\_\_\_\_\_\_.

Consequently by understanding the intention of others, the firing of MN’s is thought to activate the appropriate \_\_\_\_\_\_\_\_\_\_\_\_ associated with what we observe in other actions or expresssions. The Mirror neuron system allows us to experience the same feelings we identify in others, it allows us to take the \_\_\_\_\_\_\_\_\_\_\_\_ of other people. Therefore It is assumed that this could be the foundation of our abilities to understand and \_\_\_\_\_\_\_\_\_\_\_ with others ie the mirror neuron system is basic to \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_.

Now Evaluation. We will consider each point in turn. Simply summarise after we have discussed each one.

**Research:**

P - The existence of mirror neurons is supported by empirical evidence.

E Haker conducted research by:

E She found:

L: Therefore / this demonstrates / this shows / ….

**Issues – Gender differences**

P – There is evidence that suggests there are gender differences in the mirror neuron system:

E: Cheng found….

E: these differences might explain why men and women have different abilities in….

L: Therefore research into Mirror Neurons has contributed in our understanding of sex differences in social development.

**Application – autism**