

Mark schemes

Q1.

[AO1 = 3 AO3 = 5]

Level	Mark	Description
4	7-8	Knowledge of the role of the mirror neuron system in social cognition is accurate with some detail. Discussion is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5-6	Knowledge of the role of the mirror neuron system in social cognition is evident but there are occasional inaccuracies/omissions. Discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3-4	Knowledge of the role of the mirror neuron system in social cognition is present. Focus is mainly on description. Any discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-2	Knowledge of the role of the mirror neuron system in social cognition is very limited. Discussion is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- mirror neurons are brain cells activated when we observe another person's actions
- cell activation is the same as if we carry out the action ourselves
- thought to allow for shared understanding on intention and emotional experience
- early studies by Di Pellegrino (1992) and Rizzolatti (1996) involved use of electrodes to measure brain activity of macaques observing other macaques reaching for peanuts
- findings showed mirror neurons only fire when the actor interacts with the object
- investigated using scanning technology – cells are most prevalent in the pars opercularis and Brodman's area (frontal lobe).

Possible discussion:

- theory has application: deficits in mirror neuron function may account for social cognition deficits such as in perspective taking and empathy, eg Dapretto (2006) found impaired mirror neuron activity in cases of ASD
- evidence of link with empathy: Gazzola (2006) mirror neuron system is less active in people with low empathy scores

- existence is controversial – cells can only be identified by their function – invasive cell recording techniques carried out with monkeys cannot be used in human participants
- scanning reveals activity in a general area/region, not specific cells
- cells may be a result of social interaction rather than cause
- links to broader concepts, eg biological reductionism – social cognition involves highly complex social behaviours that take place in a complex societal context.

Credit other relevant material.

[8]

Q2.

[AO1 = 6 AO3 = 10]

Level	Marks	Description
4	13-16	Knowledge of theory of mind and Selman's levels of perspective-taking in the development of social cognition is accurate and generally well detailed. Discussion is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	9-12	Knowledge of theory of mind and Selman's levels of perspective-taking in the development of social cognition is evident but there are occasional inaccuracies/omissions. Discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	5-8	Limited knowledge of theory of mind and Selman's levels of perspective-taking in the development of social cognition is present. Focus is mainly on description. Any discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. OR one aspect at Level 3/4.
1	1-4	Knowledge of theory of mind and Selman's levels of perspective-taking in the development of social cognition is very limited. Discussion is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used. OR one aspect at Level 1/2.
	0	No relevant content.

Possible content:

- theory of mind (ToM) – the idea that children develop an understanding of what others are thinking, eg their beliefs, intentions, motives etc
- ToM is investigated using various 'mind reading' tasks, eg false belief

- tasks, the Sally-Anne studies, the eyes task
- perspective-taking or role-taking was investigated by Selman using interpersonal dilemmas requiring multiple perspectives/social and moral understanding, eg Holly's kitten
- involves ability to take the view of others, five levels showing age-related shift from egocentric view to understanding other people's points of view
- Selman's levels: egocentric, social informational role-taking, self-reflective role-taking, mutual/third-party role-taking, social and conventional system (societal) role-taking.

Possible discussion:

- use of evidence for theory of mind, eg Baron-Cohen (1985), Wimmer and Perner (1983)
- use of evidence to support/contradict Selman's theory, eg Gurucharri and Selman (1982) – longitudinal evidence for age-related change; Selman and Byrne (1974) – viewpoint of characters in a dilemma, changes with age; Fitzgerald and White (2003) – linked parenting style and perspective taking
- parallels between Selman's work (eg Holly's dilemma) and ToM research (eg Sally-Anne studies) and how they relate to Piaget's findings on egocentrism
- status of ToM as an explanation for ASD and alternative explanations
- practical applications, eg in assessment of ASD, family therapy, mediation etc
- biological underpinnings, eg role of mirror neurons in social cognition
- implications, eg for age of responsibility, apportioning responsibility, blame etc.

Credit other relevant material.

Q3.**[AO2 = 4]**

Level	Mark	Description
2	3-4	Knowledge of theory of mind in autism and the Sally-Anne study is explained and applied appropriately, with some detail. The answer shows sound understanding and appropriate use of specialist terminology.
1	1-2	There is limited/muddled explanation and application of theory of mind in autism and the Sally-Anne study. The answer shows limited understanding. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible application:

- Conrad may respond by saying that 'Dad will look for the ball in the bucket'
- Conrad has autism so may not be able to see things from his father's point of view/perspective; he may not have a 'theory of mind'
- Conrad may not realise that, being indoors, his father did not see Leonard put the ball in the bucket
- autistic people are sometimes described as 'mind-blind' and this may be the case with Conrad, he may be unaware of his father's point of view and just responds according to what he knows himself
- Credit appropriate links between the Sally-Anne scenario and the scenario involving Leonard and Conrad.

Credit other relevant material.

[4]