Mark schemes

Q1.

[AO1 = 1]

C Understanding that things are the same even though they look different.

[1]

Q2.

[AO2 = 2]

Award **1 mark** for **each** relevant suggestion (up to a maximum of 2 marks).

To be creditworthy, the example must be an example of a task involving physical transformation of material, with the material and transformation explicitly specified, eg:

- lump of clay rolled into a different shape
- counters spread further apart/closer together
- water poured into a different shaped container.

Credit other relevant examples.

[2]

Q3.

[AO1 = 2]

2 marks for a clear and coherent outline with some detail.

1 mark for a limited/muddled outline.

- The ability to understand that properties of an object such as mass, volume and number remain constant despite changes in appearance, which arises during the pre-operational stage.

Credit alternative valid outlines and answers embedded in examples.

[2]

Q4.

[AO3 = 6]

For both the strength and the limitation, award marks as follows:
3 marks for a clear, coherent and detailed outline.
2 marks for an outline which lacks some detail.
1 mark for a very limited/muddled outline.

Possible strengths:

- innovative method that informed our understanding of cognitive development and paved the way for further research
- carefully constructed and well-documented procedures that lend themselves to replication; how others have replicated the studies
- informed the curriculum by stimulating interest in furthering children's understanding of conservation through the use of specialist play materials, eg water play with measuring cups.

Possible limitations:

- Piaget confused understanding with performance – children may well have understood the post-transformation volume was the same even though they said it was different
- asking the same question twice led children to assume they had given an incorrect answer the first time around – modifications using only one question showed children could conserve earlier than Piaget said
- evidence shows children under 7 years can understand conservation using a more child-friendly approach, eg McGarrigle and Donaldson (1974) naughty teddy research
- limitations of the original sample.

Credit other relevant strengths and limitations.

[6]

Q5.

[AO2 = 8]

Level	Marks	Description
4	7-8	Application of knowledge of theories of cognitive development is detailed and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5-6	Application of knowledge of theories of cognitive development is evident and mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3-4	Application of knowledge of theories of cognitive development is present but of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-2	Application of knowledge of theories of cognitive development 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. Answers without explicit application − Max 2 marks
	0	No relevant content.

Possible application:

- Leonard refers to how children learn through making mistakes until they get things right - Piaget's theory of cognitive development suggests a child learns by active exploration and by trial and error
- Leonard refers to the child being able to learn by experimenting - Piaget saw children as scientists
- Leonard refers to 'the right sort of tasks' - Piaget says schema development will occur if we provide appropriate materials that encourage active exploration
- Felix refers to 'more able children' as effective partners - Vygotsky sees the child as an apprentice to a more knowledgeable other
- Felix refers to 'levels of guidance' eg demonstration, specific prompts etc Vygotsky's theory rests on the notion of scaffolding – where other people provide various levels of support
- Felix refers to achievement of potential, an idea fundamental to Vygotsky's view of the zone of proximal development ZPD.

Credit other relevant material eg links between stem and schema development.

[8]

Q6.

[AO1 = 4]

Level	Mark	Description
2	3-4	Description of what Piaget meant by equilibration is clear, accurate and detailed, showing sound understanding. The answer is coherent with appropriate use of specialist terminology.
1	1-2	Description of what Piaget meant by equilibration is limited/muddled. Detail is lacking, there is some misunderstanding or lack of clarity. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible content:

- equilibration refers to the process of restoring cognitive/mental equilibrium (balance)
- it follows a state of disequilibrium or cognitive imbalance where incoming information is inconsistent with existing schema or understanding
- involves striking a balance between existing schema (information already stored) and new incoming information
- part of the process of adaptation to new experiences
- equilibration results through the processes of accommodation – whereby existing schema changes to take account of new information and assimilation – whereby new information is incorporated into an existing schema.

Credit other relevant material.

[4]

Q7.

[AO1 = 6 AO3 = 10]

Level	Mark	Description
4	13-16	Knowledge of what psychological research has told us about children's understanding of the object permanence 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 what psychological research has told us about children's understanding of the object permanence 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 what psychological research has told us about children's understanding of the object permanence 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	1-4	Knowledge of what psychological research has told us about children's understanding of the object permanence 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:

- object permanence is the ability to understand that objects (and people) continue to exist even though they are out of sight
- first studied by Piaget and later studied by Baillargeon
- Piaget's view – object permanence arises at approximately 8/9 months – he demonstrated object permanence by covering a toy in full view of a child and observing the age at which the child would search for the toy
- Piaget also investigated errors in searching original locations
- knowledge of Piaget's specific studies of object permanence
- Baillargeon's view – object perception and object permanence evident in very young infants – from 2/3 months – demonstrated in violation of expectation studies involving measurement of looking time as dependent variable to infer surprise, with familiarisation stage followed by impossible event stage

- knowledge of Baillargeon's specific studies including tall/short rabbit and window; tall/short carrot; Minnie Mouse; truck and ramp; box and drawbridge.

Credit other relevant knowledge of psychological research into object permanence.

Possible discussion:

- discussion and/or comparison of Piaget's and/or Baillargeon's research on object permanence
- methodological evaluation linked to object permanence, eg sophistication of Baillargeon's methods versus Piaget's more naive measurements of object permanence
- discussion of the scientific value of techniques linked to object permanence, eg use of inference; measurement of looking and surprise as DVs
- alternative interpretation of Piaget's and/or Baillargeon's findings, eg Bower and Wishart's use of darkness to hide objects; Cashon and Cohen (2000) alternative views on use of surprise as a DV – results indicate attraction to novel stimuli
- age of children as a possible confounding factor in both Piaget's and Baillargeon's studies
- general points re object permanence and broader issues, eg Nativism versus constructivism, determinism.

Credit other relevant material.

Note: full credit can be awarded for different possible approaches to this question, eg primary focus on Piaget, primary focus on Baillargeon, equal focus on both Piaget and Baiilargeon.

[16]