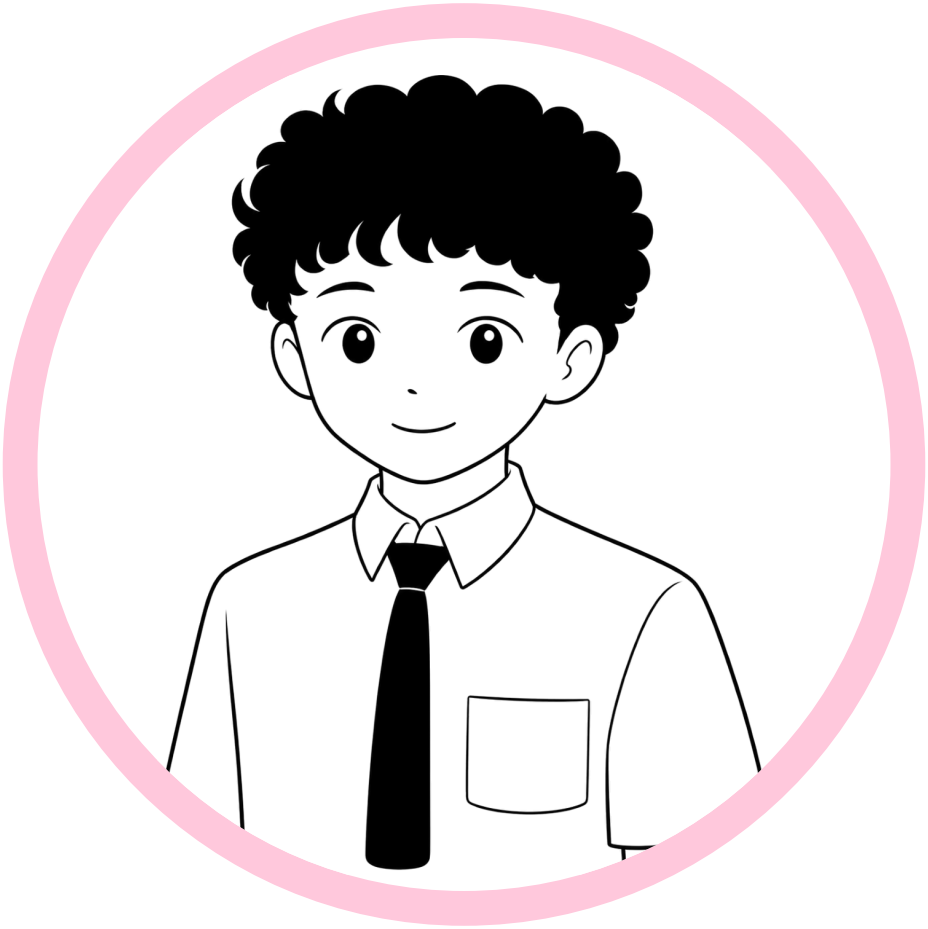
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



MARK SCHEME

3.3.4 PIAGET

SCORE	PERCENTAGE
/97	%

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Q1.

[AO1 = 2]

2 marks for a clear, coherent outline of the term with some elaboration.

1 mark for a limited or muddled outline.

Content:

ability to understand the difference between subordinate classes / subcategories and superordinate classes / more global / broader categories (or similar)

OR

any object can at the same time be an example of a subordinate group / subcategory (e.g. apple) and also an example of a superordinate group / global category (e.g. fruit).

[2]

Q2.

[AO2 = 4]

Level	Marks	Description
2	3 – 4	Outline of Piaget's theory of schema development is mostly clear and accurate. The knowledge is applied appropriately to both cases. The answer is generally coherent with effective use of terminology.
1	1 – 2	There is limited/partial knowledge of Piaget's theory of schema development. There is some appropriate application. The answer may lack coherence. Use of terminology may be either absent or inappropriate. OR one process at Level 2.
	0	No relevant content.

Application to Billy and Milo

- Billy is using existing schema to interact with everything he meets
- Billy is showing assimilation – applying an existing schema, in this case a sucking schema, to a new situation or object, which explains why he puts everything in his mouth
- Milo's understanding of the world has adapted through development of a separate rattle schema, he has learned through experience that some objects rattle and others do not
- Milo is showing accommodation – he has formed a new rattle schema distinct from his sucking schema.

Credit relevant applications based on adaptation, equilibrium and disequilibrium.

Q3.

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[AO1 = 1]

D

Q4.

[AO1 = 6 AO2 = 4 AO3 = 6]

Level	Marks	Description
4	13 – 16	Knowledge of Piaget's and Vygotsky's views is accurate and generally well detailed. Discussion is thorough and effective. Application to the stem is appropriate and links between views of the two researchers and stem content are explained. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and/or expansion of argument sometimes lacking.
3	9 – 12	Knowledge of Piaget's and Vygotsky's views is evident. Discussion is apparent and mostly effective. There are occasional inaccuracies. Application to the stem is appropriate although links to the views of the researchers are not always explained. The answer is mostly clear and organised. Specialist terminology mostly used effectively. Lacks focus in places.
2	5 – 8	Knowledge of Piaget's and Vygotsky's views is present but is vague/inaccurate **or** one view only is present. Focus is mainly on description. Any discussion is only partly effective. Application to the stem is partial. The answer lacks clarity, accuracy and organisation in places. Specialist terminology used inappropriately on occasions.
1	1 – 4	Knowledge of Piaget's and/or Vygotsky's views is limited. Discussion is limited, poorly focused or absent. Application is limited or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Possible content:

- Piaget – cognition develops as a result of active discovery; action on the world; child as scientist; schema development via assimilation and adaptation and striving for equilibrium; development takes place in stages (description of Piaget's stages is neither necessary nor expected); language as a byproduct of cognitive development
- Vygotsky – cognition is socially and culturally determined; child as apprentice learning tools of the culture; scaffolding as a support structure provided by more knowledgeable others and gradually withdrawn as child becomes more capable; peer learning; language as the key to cognitive development

Possible applications:

- Piaget – discovery learning 'students worked alone'
- Piaget – teacher's role is to provide the materials and environment 'they were given tasks and materials … had to sort out the problem by trial and error'

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- Vygotsky – child as apprentice and peer tutoring ‘worked in pairs of different abilities so they could help each other’
- Vygotsky – scaffolding by more knowledgeable other ‘teacher demonstrated ….. until they could manage on their own’
- Vygotsky’s views on language and thought ‘talk it through’

Possible discussion points:
- Use of evidence for/against Piaget’s view
- Use of evidence for/against Vygotsky’s view
- Contrast/comparison of the two views
- Implications of the two views eg for education

Credit other relevant information.

Q5.

[AO1 = 3 AO3 = 5]

Level	Marks	Description
4	7 – 8	Outline of Piaget’s research into object permanence is accurate and generally well detailed. Evaluation is effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and/or expansion of argument sometimes lacking.
3	5 – 6	Outline of Piaget’s research into object permanence is evident. There are occasional inaccuracies. There is some effective evaluation. The answer is mostly clear and organised. Specialist terminology mostly used effectively.
2	3 – 4	Outline of Piaget’s research into object permanence is present. Focus is mainly on description. Any evaluation is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology used inappropriately on occasions.
1	1 – 2	Outline of Piaget’s research into object permanence is limited. Evaluation is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Possible content:

- Object permanence (object concept) is the understanding that an object still exists even when out of sight
- Piaget’s study involved a child playing with a toy which was then covered in a blanket/cloth
- Children under 8 months would not continue to search for the toy
- Children over 8 months would continue to search for the toy

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- In variations on the original research, the toy would be hidden in place A or place B – children show the A not B error

Possible evaluation points:

- Piaget may have underestimated children's cognitive ability in relation to object permanence
- Object permanence tasks lack human sense – response may be a reaction to the deliberate removal of the toy
- Possible confusion of lack of performance with lack of understanding - failure to search does not necessarily mean child did not understand that the toy still existed
- Counter-evidence shows that children do continue to search if object is made to disappear in more subtle ways eg Bower and Wishart
- Contrast with infants' performance in violation of expectation studies

Credit other relevant information.

Q6.

[AO2 = 2]

Up to two marks for application of knowledge of Piaget's theory of cognitive development to Amy's behaviour as follows:
Amy is showing egocentrism / cannot decentre / cannot understand that other people's view is different. (1)
She is unable to see her brother, and therefore she does not understand that her brother can see her. (1)

Q7.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.

1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Relevant theories of cognitive development in the Specification are Piaget and Vygotsky. There is no requirement for students to cover both. Credit can be awarded for outlines of applications of theories to education. For Piaget this might be stage-specific learning, 'readiness', discovery learning or the concepts of assimilation and accommodation. For Vygotsky, key ideas include the zone of proximal development, scaffolding, the role of language, and collaborative learning. Examiners should be sensitive to depth-breadth trade-offs in answers covering both.

Although not on the specification, other theories of cognitive development, such as Bruner's, would also be relevant to this question.

AO3

Research studies have investigated the effectiveness of, eg scaffolding or stage specific learning ('readiness'). Note that methodological evaluation of such studies can only earn credit if explicitly linked to discussion of application of theories. General points include the role of the teacher and the significance of individual differences between children. Observations on the overall significance of Piaget and / or Vygotsky to education may also earn marks.

Further relevant commentary might include some direct comparison of Piaget and / or Vygotsky's theories in relation to education, although this is not essential. Alternative theories, such as Bruner, may earn credit if used either as part of effective commentary on Piaget and / or Vygotsky, or discussed in their own right.

Note that students are not required to evaluate their chosen theory(ies) beyond their applications to education. Classic studies (naughty teddy, three mountains, etc) will not earn credit unless the implications of findings are directly linked to the discussion of applications to education.

Relevant points include cultural and historical issues, with Vygotsky's views in particular shaped by the socio-political environment he was working in.

Q8.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application through use of

		examples is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application through use of examples is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application through use of examples is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application through use of examples is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

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AO1

Marks for an outline of how schema develop. Candidates should outline relevant concepts: schema is a unit of knowledge / cognitive structure; through experience / interaction with the physical world the child's knowledge adapts; schema can be extended via assimilation / accommodation; assimilation – adding information to an existing schema / applying a schema to a new situation; accommodation – forming a new schema / where an existing schema has to change because incoming information conflicts with what is already known (ie disequilibrium); equilibration – where there is a mental balance / cognitive harmony between what is already known and incoming information. Credit reference to Piaget's stages only if focused on the question ie development of schema.

AO3

Marks for discussion and application via examples. Likely content: discussion of Piagetian concepts: the general notion of constructivism; existence of hypothetical structures and processes as a way of explaining the cognitive processes involved; falsifiability issues in relation to hypothetical structures / processes; biological basis – parallels in cognitive neuroscience; comparison with nativist view that certain abilities are innate and therefore do not need to be constructed through experience (the work of Baillargeon); the importance of discovery learning and 'action on the world' for adaptation / disequilibrium; implications for education eg how teachers provide opportunities for equilibration and consequent development of new schema / altered schema and extension of knowledge; alternative explanations for cognitive

development – whether the notion of schema is compatible with Vygotsky's view about the importance of the social world.

Credit use of relevant evidence. Credit evaluation of evidence only where used to discuss schema development.

Q9.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

For marks in the top band candidates should be able not only to describe the key stages of Piaget's theory but also to outline underlying processes such as assimilation and accommodation. Accuracy in describing the characteristics of each stage and their age ranges will also be important.

AO3

Credit is most likely to be accessed through use of the many relevant research findings available, either from Piaget or by later researchers. Methodological evaluation, especially of Piaget's studies, is likely to be popular but may only earn marks if implications for the theory / explanation are clear eg by explicit reference to a lack of ecological validity affecting the generalisability of findings and hence of the

theory / explanation.

Comparison with alternative theories, such as Vygotsky, would be another effective route to marks, as long as the focus is on the question rather than the alternative theory.

Other relevant discussion points might include the application of Piaget's ideas to education eg 'readiness' and 'critical periods', cultural differences and biases.

Q10.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

(a) **[AO3 = 2]**

Independent groups / unrelated – 1 mark.
Where different people / children / groups take part in each condition – 1 mark.
Where name repeated, other or no design can still gain outline mark.

(b) **[AO3 = 1]**

DV – whether the child gives a correct or an incorrect answer / type of answer / whether they say same or more.

(c) **[AO1 = 2]**

Conservation (1). Also accept ability to decentre and reversibility.
Accept valid explanations, eg conservation - the ability to understand that properties of objects (number) stay the same, despite changes in appearance (spatial arrangement) (1).

(d) **[AO1 = 1, AO2 = 2]**

AO1

Award 1 mark identification (named or described) of another difference between pre-operational and concrete operational thinkers. Likely answers: class inclusion; egocentrism. Accept also animism, seriation and centration. Differences between formal operational thinking and pre / concrete operational thinking should be credited.

AO2

Up to 2 marks for brief discussion. Possible content: criticisms of Piaget's assumptions in relation to the difference cited; evidence in the form of research findings to support Piaget's claim; counterevidence for Piaget's claims / alternative findings; methodological criticism of Piaget's work in relation to the concept under discussion.

Q11.

Marks for this question: AO1 = 8

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Level	Marks	Description
4	7 – 8	Knowledge is accurate and generally well detailed. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	5 – 6	Knowledge is evident. There are occasional inaccuracies. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	3 – 4	Some knowledge is present but the answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 2	Knowledge is limited but there is some relevant material on one theory of cognitive development.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

A01

Candidates are able to choose from Piaget, Vygotsky, and Baillargeon. Descriptions must be accurate, for instance, Piaget's stages, Vygotsky and the role of the ZPD, or Baillargeon's explanation of early infant abilities. Answers may present studies as a way of illustrating aspects of the theory.

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Q1.

Students who evidently knew the concept often presented answers in the form of illustrative examples rather than giving a clear definition, and thereby gained limited credit. Class inclusion was sometimes confused with other Piagetian ideas such as centration, whereby children can deal with only one property of an object at a time. Some answers indicated that students had no idea of the meaning at all, for example, where they stated it was about sharing and being kind to everyone in the class.

Q2.

This was probably the most badly answered of the 4-mark application questions in Section B. Sound understanding of Piagetian concepts and a good grasp of terminology were necessary to enable effective application to the cases of Billy and Milo. Many students did not even refer to assimilation and accommodation, or completely confused the two. Whilst assimilation and accommodation were probably the most obvious concepts to apply to the stem material, some capable students managed to achieve credit by appropriate application of alternative Piagetian notions, such as equilibrium and disequilibrium. Completely irrelevant descriptions of Piaget's stages were sometimes presented.

Q6.

In this question, most students correctly identified the concept of egocentrism, although, a few tried, unsuccessfully, to formulate an answer based around Amy's lack of object permanence. Application was usually quite straightforward, 'she cannot see him, so she thinks he cannot see her', except where students simply re-iterated the stem.

Q7.

This question was done reasonably well, especially the AO1 outline of applications. Although a few students could not resist describing the actual models of cognitive development and evaluating them (which was not relevant to the question), most answers showed good breadth in relation to applications. Most popular were 'readiness' and critical periods, discovery learning, the zone of proximal development, scaffolding, and collaborative learning. At the top end some students introduced the concepts of assimilation and accommodation and showed how they might be used in the classroom. There was also an encouraging trend towards the use of research studies as evaluation of the success or failure of applications (e.g. studies on 'readiness', scaffolding, and collaborative learning).

Further AO2 / 3 credit was earned through comparison of the ideas of Piaget and Vygotsky on education, their influence on educational practice and Government policy, and their relation to the nature-nurture debate.

Q8.

This question offered students the opportunity to write at length on various aspects of Piaget's theory of cognitive development, schema development being what underlies all of cognitive development according to Piaget. Unfortunately, many answers were limited to definitions of relevant Piagetian terms (assimilation, accommodation, equilibration, etc) interspersed with real-life examples of schema development. As a result, many answers failed to score above average marks. Better answers considered the status of Piaget's notion of schema in relation to other theories and broader developmental issues such as

the debate about nature and nurture.

Q9.

Although this was not a popular question, it was answered well. Most students were able to outline the stages of Piaget's theory, in varying degrees of detail and accuracy. The better answers also outlined the processes of assimilation, accommodation and equilibration. Evaluation consisted mainly of the findings of Piaget's original studies, methodological evaluation of these studies and attempts to demonstrate that Piaget underestimated the cognitive abilities of young children. Better answers were able to discuss the role of language and demand characteristics in Piaget's studies. Further evaluation included the application of Piaget's theory to education, although this often lacked the detail to demonstrate complete understanding. Some students tried to compare Piaget's theory with Vygotsky's, and again there was substantial variation in the level of focus and detail. Some answers provided accurate detail of Vygotsky but failed to bring out how this reflected on Piaget. Overall, answers to this question were generally quite impressive.

Q10.

Some students failed to gain full marks for part (a) because they omitted to outline the experimental design. The dependent variable was sometimes incorrectly identified, most usually as either 'age of child' or 'arrangement of beads'. Most students could identify conservation correctly in part (c), although a small number confused this with class inclusion. The instruction to 'briefly discuss' one other difference in part (d) yielded some very poor answers. In fact, the modal mark for this part was 1 because most students failed to provide any discussion.

Q11.

This was done very well, with an impressive proportion of candidates achieving full marks. Piaget's theory was most popular, and at the top end answers covered the basic assumptions and processes of accommodation and assimilation, and then provided outline accounts of the developmental stages. Some candidates introduced evaluations of the theory, which were not creditable in this question part. A few answers presented reasonable accounts of Vygotsky's theory.

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