

Cognitive Approach - Mark Scheme

Q1.

[AO1 = 4]

2 marks for a clear and coherent explanation why using schema might be useful with some elaboration.

1 mark for a limited / muddled explanation why using schema might be useful.

Possible content:

- schema help us predict what will happen in our world based on our experiences
- schema enable us to process vast amounts of information rapidly
- schema prevent us from becoming overwhelmed by environmental stimuli.

Credit other relevant explanations.

Plus

2 marks for a clear and coherent explanation why using schema might **not** be useful with some elaboration

1 mark for a limited / muddled explanation why using schema might **not** be useful.

Possible content:

- schema can distort our interpretation of sensory information
- schema lead to perceptual errors or inaccurate EWT / memories
- schema can cause biased recall / see what we expect
- negative / faulty schema may have a negative impact on mental health

Credit other relevant explanations.

Note: Definitions of schema in isolation are not creditworthy.

[4]

Q2.

Marks for this question: AO1 = 2, AO2 = 2

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

One mark for each assumption clarified. Allow one mark for two identified. Likely content: thought acts as mediational processes between stimulus and behavioural response; mental processes can be regarded as information processing; computer analogy / mind operates a similar way to a computer; the use of models to represent mental processes; mental processes can be scientifically studied; the brain affects cognitions and cognitive processes; the findings and methods of cognitive

psychology can be applied to other areas of psychology.

AO2

One mark for each application. Accept a wide range of topics.

For 'thought acts as mediational processes between stimulus and behavioural response' relevant topics might be: trial and error learning vs. observational learning or insight learning; depression.

For 'mental processes can be regarded as information processing' relevant topics might be: memory.

For 'mental processes can be scientifically studied' relevant topics might be: stress eg locus of control; memory.

For 'the brain affects cognitions and cognitive processes' relevant topics might be forensic psychology.

For applications to other areas of psychology, relevant topics might be: child development eg schemas; social cognition.

Q3.

[AO2 = 2]

1 mark for an explanation of inference: going beyond the immediate evidence to make assumptions about mental processes that cannot be directly observed.

Plus

1 mark for a sound application to the study with clear description about what is being inferred (problem difficulty / more difficult processing) on the basis of what is being measured (time taken to solve the problem in the different conditions). Award **1 mark** only for answers where knowledge of inference and application are only partially clear.

Q4.

[AO2 = 2]

2 marks for a clear explanation of inference suitable for a new psychology student: make assumptions about mental processes that cannot be directly observed/going beyond the immediate research evidence.

1 mark for a limited or muddled explanation of inference

Accept explanations that are embedded in examples.

Q5.

(a) **[AO2 = 2]**

2 marks for a clear and coherent explanation of the usefulness of the standard deviation in this study.

1 mark for a weak or muddled answer in which the impact of the difference in the SDs is alluded to.

- Useful to inform about the spread of scores.

- Indicates participant variables – as a group the people in Condition 1 are quite different / are more variable than those in Condition 2.

Credit answers which suggest that the SDs can be used to look for similarity or differences in variance.

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

2 marks for a clear, coherent outline of a relevant problem.

1 mark for a weak, muddled or very limited outline.

Possible problems:

- Direct observation of memory is not possible and must be inferred from the results / behaviour of the participants – this inference could be mistaken.
- The task given is rarely how normal memory functioning occurs because it is specifically designed to make measurement possible – the researcher therefore collects data that is only related to memory processing under experimental conditions.

Credit other valid problems.

Q6.

[AO1 = 4 AO3 = 4]

Level	Marks	Description
4	7 – 8	Knowledge of two features of the cognitive approach is accurate with some detail. Explanation of two limitations is effective. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and/or expansion of argument sometimes lacking.
3	5 – 6	Knowledge of one or two features of the cognitive approach is evident but there are occasional inaccuracies/omissions. There is some effective explanation of at least one limitation. The answer is mostly clear and organised. Specialist terminology is mostly used appropriately.
2	3 – 4	Limited knowledge of at least one feature of the cognitive approach is present. Focus is mainly on description. Any explanation of limitation(s) is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. OR just limitations done well.
1	1 – 2	Knowledge of at least one feature of the cognitive approach is very limited. Explanation of limitation(s) 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. OR just limitation(s) answered at Level 2.
	0	No relevant content.

Possible features:

- Behaviour is influenced by thoughts that can be both conscious and non-conscious – internal mental processes.
- Schema are the mental representation of experience and knowledge and understanding.
- Mental processes are information processing and the processing can be compared to that of a computer.
- Models can be used to provide testable theories about mental processing and these can be studied scientifically and inferences made.
- Cognition and biological processes can be integrated leading to cognitive neuroscience as a way forward to understanding human behaviour.
- Methodology - use of controlled experimentation – inference about mental processes on the basis of observed behaviour.

Possible Limitations:

- The approach can be seen as mechanical in regarding human thinking as processing like the computer leaving little room for the irrationality seen in emotional behaviours.
- The focus on detail of exactly what can be recalled by participants in controlled environments means an understanding of everyday use of memory, for example, is missing from explanations. This leads to issues of generalisation.
- The process of inference may be a 'leap too far' in explaining thinking.
- Issue of soft determinism and little room for processes other than internal mental events affecting behaviour such as biology.
- Research findings indicate factors other than internal mental events as cause of behaviour.
- Use of self-report as a method of data collection and the subsequent issues of reliability.
- The focus on individual mental processes such as attention, leaves little room for how these mental events work together.

Limitations may overlap, one may be taken as an elaboration of another. Award credit for two limitations to the best advantage of the student.

Credit other relevant limitations.

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 / valuation / 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.

A01

Marks for knowledge in detail of features and / or assumptions of the cognitive approach. These might include: the requirement that cognitive processes must be studied if human behaviour is to be understood; mental processes mediate between the stimulus and response; human information processing is analogous to the way a computer works – input, storage and retrieval systems, hardware and software; the use of models to explain internal / mental processes; propose stage-based processing; human behaviour should be studied scientifically. Credit description of models to illustrate features.

A03

Marks for evaluation of the strengths and limitations of methods used by cognitive psychologists. Candidates are likely to refer to the use of laboratory-based experiments. Credit evaluation of use of models and evaluation of methods used in cognitive neuroscience.

Likely strengths which might be expanded by discussion: there is a high degree of control over variables which means that a cause and effect relationship can be established; variables are operationalised to make measurements accurate and objective; standardisation of procedures means research can be replicated to enhance reliability; as participants are usually aware they are participating there is a measure of ethical treatment; participants are usually human rather than animal research. Credit reference to field experiments and the inclusion of observation as part of the research method in some instances with resulting increased ecological validity. Credit reference to the use of case studies and their impact on theory and the suggestion that these may be more scientific in cognitive psychology than in psychodynamic.

Likely limitations which might be expanded by discussion: artificiality of the situation impacts on ecological validity; ecological validity often affected by narrowness of dependent variables so that sight is lost of behaviour as a whole; use of artificial stimuli – eg nonsense words / ambiguous figures affect generalisability; awareness of participation means people taking part may exhibit demand characteristics which could affect reliability and / or validity of the research. Credit contrast with methods used in other approaches where the relevance to strength or limitation is made clear.

Credit use of evidence to illustrate discussion of strengths and limitations of the research methods used in the cognitive approach.