

A-level
PSYCHOLOGY
7182/3

Paper 3 Issues and options in psychology

Mark scheme

June 2021

Version 1.0 Final Mark Scheme



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly Level 3 with a small amount of Level 4 material it would be placed in Level 3 but be awarded a mark near the top of the level because of the Level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. Answers in the standardising materials will correspond with the different levels of the mark scheme. These answers will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the standardised examples to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Section A

Issues and debates in psychology

0 1 Which of the following terms best represents the view that biology and environment work together to determine behaviour?

Write the correct letter in your answer book.

[1 mark]

Marks for this question: AO1 = 1

Answer: D – Interactionism

0 2 What are behavioural categories? Explain why it was important to use behavioural categories in this observation.

[4 marks]

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

Level	Marks	Description
2	3–4	Knowledge of behavioural categories is clear and detailed, showing sound understanding. The explanation is clear and appropriate. There is appropriate use of specialist terminology.
1	1–2	Knowledge of behavioural categories is limited/muddled, showing limited understanding. The explanation lacks detail. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible content:

- a system of behavioural categories is a list/tally chart examples of behaviour likely to occur during an observation
- these should be observable/objectively defined/operationalised/unambiguous.

Possible explanation:

- using a set of behavioural categories should enable the recordings of friendly behaviour made by the two students to be consistent (can help to establish inter-observer reliability)
- this means that the observations can be carried out reliably/be less subjective interpretations of what is friendly and what is not.

Credit other relevant material.

0 3

Suggest **two** better examples of friendly behaviours that the students could have used in their observation. Explain why these might be more valid examples of friendly behaviour than the behaviours in **Table 1**.

[4 marks]

Marks for this question: AO3 = 4

Award **1 mark each** for each of two behaviours suggested. For credit, behaviours should be both observable and friendly.

Possible suggestions: giving a toy to another child, holding hands, cuddling, playing a game that involves co-operation, sharing snacks, talking to each other, playing together.

PLUS

2 marks for a clear, coherent explanation of why/how the suggested behaviours might be more valid, showing sound understanding of the concept of validity.

1 mark for a limited/muddled explanation.

Possible content:

- how the suggested behaviours have face validity because they appear to measure what they are supposed to measure, ie friendly behaviour
- how the suggested behaviours show kindness, mutual enjoyment or similar
- whereas the behaviours in **Table 1** have no obvious friendly element – a child could be playing, sitting, standing near to another but these activities may have no friendly or even social element.

0 4 What do the students need to do with the data in **Table 1** so that they can answer their teacher’s question? Explain your answer.

[4 marks]

Marks for this question: AO3 = 4

Level	Marks	Description
2	3–4	Knowledge of what the students need to do is clear and detailed, showing sound understanding of the use of inferential testing. The explanation is clear and appropriate. There is appropriate use of specialist terminology, including the language of statistical testing.
1	1–2	Knowledge of what the students need to do is limited/muddled, showing limited understanding of the use of inferential testing. The explanation lacks detail. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible content:

- they would need to use a Chi-squared test/statistical test/inferential test with the data
- in this case there is categorical/nominal data and an independent design
- the result of the test (the observed/calculated value) would be compared to the critical table value at the 0.05 level
- if there is a less than 5% probability that the difference is due to chance, then the students could say the difference is significant
- then they can accept their research hypothesis (reject the null)

Accept other relevant material.

0 5 Name the opposite approach to the nomothetic approach. Briefly outline what this opposite approach might have involved in a study of friendly behaviour.

[3 marks]

Marks for this question: AO1 = 1, AO2 = 2

1 mark – an idiographic approach.

PLUS

2 marks for a clear and coherent outline with clear application.

1 mark for a limited/muddled outline.

Possible content:

- an idiographic approach would involve investigation of friendliness/friendly behaviour in an individual child or their parents
- eg interview/observe/carry out a case study of one child, focussing on their friendly behaviour
- results should not be used to generalise findings/propose general laws about friendly behaviour (and play space).

0 6 Discuss gender bias in psychological research. Refer to **one** topic you have studied in your answer.

[8 marks]

Marks for this question: AO1 = 3, AO2 = 2, AO3 = 3

Level	Marks	Description
4	7–8	Knowledge of gender bias in psychological research is accurate with some detail. Reference to topic is effective. 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 gender bias in psychological research is evident but there are occasional inaccuracies/omissions. Application to topic/discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3–4	Limited knowledge of gender bias in psychological research is present. Focus is mainly on description. Any application to topic/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 gender bias in psychological research is very limited. Application to topic/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:

- failure to consider adequately differences between men and women can lead to gender bias
- historically in psychology there has been predominance of research based on samples of men
- researchers might have different expectations of men and women, which might then affect research outcomes
- alpha bias – overemphasises differences between men and women
- beta bias – underestimates differences between men and women
- overemphasis on importance of biology as the driver of behaviour.

Possible application to topic:

- research into mental illness that labels anxiety as a typically ‘female’ symptom – hysteria (Freud)
- research into moral development that suggests women’s morality might be less sophisticated than that of men (Kohlberg)
- evolutionary theory might suggest promiscuity in men is normal and acceptable whilst promiscuity in women is abnormal and unacceptable
- much work on the fight or flight response is focused on men – women’s stress reaction can be different – tend and befriend
- traditional social psychological research, eg Milgram, Asch, tended to use largely male samples.

Possible discussion:

- gender bias might result in androcentrism – belief that men’s behaviour represents the norm and therefore that any behaviour typical of women might be judged abnormal
- implications for interpretation of the findings and conclusions from psychological research/how the research might be used in society, eg creating/reinforcing prejudice and stereotypes

- need to reinforce views that men and women are more similar than they are different – notion of universality
- promoting the idea that not all members of a sex are the same
- ways of avoiding gender bias, eg studying women in a women only environment.

Credit other relevant material.

Section B

Relationships

0 7 Describe Duck's phase model of relationship breakdown.

[4 marks]

Marks for this question: AO1 = 4

Level	Marks	Description
2	3–4	Description of Duck's model is clear, accurate and detailed, showing sound understanding. The answer is coherent with appropriate use of specialist terminology.
1	1–2	Description of Duck's model 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:

- a model that describes the four phases of relationship breakdown
- intra-psychic phase – a partner thinks about his/her dissatisfaction with the relationship but this is not disclosed to others/partner
- dyadic phase – both partners are aware of the problem – there is confrontation, discussion
- social phase – partners disclose their problems to others – friends, family become aware of the breakdown of the relationship
- grave dressing phase – each partner comes to terms with the breakdown and rationalises it by constructing a narrative of events.

0 8 Use your knowledge of self-disclosure in virtual relationships to explain the advice given by Anji's friends.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	Description
2	3–4	Knowledge of self-disclosure in virtual relationships is applied appropriately with some detail. The answer shows sound understanding and appropriate use of specialist terminology.
1	1–2	There is limited/muddled knowledge and application of the role of self-disclosure in virtual relationships. The answer shows limited understanding. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible application:

- friend A's advice is in line with the hyper personal model of online relationships (Walther, 2011), suggesting greater/more rapid self-disclosure than in face-to-face relationships
- greater self-disclosure, as recommended by friend A, is said to lead to virtual relationships developing more quickly, being more intense
- friend A's advice seems to reflect the stranger-on-a-train effect (Bargh 2002)
- friend B warns against disinhibition which can occur in virtual relationships because of the anonymity/deindividuation
- disinhibition might lead to critical/aggressive/unkind comment about Anji's personal disclosures.

Credit other relevant material.

0 9 Discuss what psychological research has told us about why people develop parasocial relationships.

[16 marks]

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

Level	Marks	Description
4	13–16	Knowledge of what psychological research has told us about why people develop parasocial relationships 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 why people develop parasocial relationships 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 why people develop parasocial relationships 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 why people develop parasocial relationships 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:

- at a superficial level such relationships provide a source of entertainment (entertainment social – McCutcheon 2002)
- at more extreme levels, such relationships are explained as due to absorption-addiction or attachment problems
- absorption-addiction: such relationships are due to personal inadequacies (eg weak personal identity, poor real-life relationships, desire to escape real life). This leads to desire for complete psychological involvement in the celebrity’s life and mistaken belief/delusion that the attention/feeling is reciprocated
- attachment explanation: insecure-resistant types feel need for fulfilment through relationships that do not involve chance of rejection.

Possible discussion:

- use of evidence to support contradict the explanation, eg McCutcheon (2006) insecure types had no increased likelihood of parasocial relationships; Meloy (1998) links between stalking and social incompetence
- basis of attachment explanation in Bowlby’s attachment theory – issues with evidence
- links between absorption-addiction model and the three levels
- links between personality type and level of parasocial relationships: entertainment social linked to extraversion; McCutcheon (2014) links with impulsivity and sensation-seeking – traits linked to other addictive behaviours

- absorption-addiction model is more descriptive than explanatory
- tendency is culturally universal – may be a universal need
- discussion of how methodology of specific studies might limit what studies can tell us, eg correlations/self-report.

Credit other relevant material.

Section B

Gender

1 0 Describe the role of chromosomes in sex and gender.

[4 marks]

Marks for this question: AO1 = 4

Level	Marks	Description
2	3–4	Description of the role of chromosomes in sex and gender is clear, accurate and detailed, showing sound understanding. The answer is coherent with appropriate use of specialist terminology.
1	1–2	Description of the role of chromosomes in sex and gender 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:

- usual sex chromosome patterns for 23rd pair are XY for males and XX for females
- chromosome pattern determines levels of various hormones
- SRY gene on Y chromosome confers male sexual characteristics (eg development of testes) through production of androgens, especially testosterone
- in XX pattern, female sexual development is governed primarily by oestrogen
- brain sex is also governed by chromosomes and hormones – difference in size of sexually dimorphic nucleus in the hypothalamus between males and females
- atypical patterns include XXY – male with Klinefelter’s syndrome and XO – female with Turner’s syndrome
- indirect effects on gender eg gender roles, stereotyping etc

Credit other relevant material.

1 1 Use your knowledge of gender schema theory to explain Beatrix’s behaviour at nursery and at home.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	Description
2	3–4	Gender schema theory 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 gender schema theory. The answer shows limited understanding. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible application:

- Beatrix is three years old so will have developed a gender identity of herself as a girl, and along with that, is developing a ‘girl’ schema
- her ‘girl’ schema is an organised group of concepts which consists of all the knowledge she has of girls and how they look/behave
- at nursery, Beatrix plays mostly with toys that fit with her ‘girl’ schema, such as dolls and the kitchen
- at home, Beatrix talks mainly about what the girls have been doing as she pays more attention to ‘girl’ behaviour (because she is actively trying to expand her girl schema or in-group knowledge)
- Beatrix talks rarely about what boys do because she disregards information that is not part of her ‘girl’ schema (ie out-group knowledge about boys).

Credit other relevant material.

1 2

Discuss what psychological research has told us about the influence of social learning on gender development.

[16 marks]

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

Level	Marks	Description
4	13–16	Knowledge of what psychological research has told us about the influence of social learning on gender 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 the influence of social learning on gender 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 the influence of social learning on gender 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 the influence of social learning on gender 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:

- children learn ideas about gender/gender-related behaviour through observation, imitation, identification, modelling, direct and vicarious reinforcement
- influence of model depends on model’s attractiveness, status, and the appropriateness of their gender-related behaviour
- opportunities for social learning about male/female roles/behaviours from parents, peers and media, including TV, advertising, books, computer games etc
- role of mediational processes in learning and performance – attention, retention, motivation, capacity for reproduction
- knowledge of specific research findings, eg children prefer to imitate own sex behaviour (Perry and Bussey 1979); fathers appear to reinforce sex-typed behaviour more than mothers (Quiry 1998); girls are more likely to be chastised for aggressive behaviour than boys (Huston 1983); young children disapprove of gender-inconsistent play (Bussey and Bandura 1992); influence of gender stereotyped portrayals of TV characters (Steinke 2008).

Possible discussion:

- use of evidence to support/contradict the influence of social learning on gender, eg evidence for cross-cultural differences in gender roles versus evidence for pancultural male and female gender stereotypes
- use of findings from media research into gender
- does not explain gender as a developmental process that occurs with age – tends to assume gender happens all at once

- can explain changes in gender roles over time – minority views are observed, imitated and eventually become mainstream
- differences in notion of identification between social learning theorists (SLT) and psychodynamic theorists – significance of same-sex parent is much greater in Freudian theory. SLT suggests influences can be much more varied
- comparison with other explanations, eg view that gender is largely innate.

Credit other relevant material.

Section B

Cognition and development

1 3 Describe what Piaget meant by equilibration.

[4 marks]

Marks for this question: AO1 = 4

Level	Marks	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.

1 4 Use your knowledge of theory of mind and the Sally-Anne study to explain Conrad's likely response.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	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.

1 5

Discuss what psychological research has told us about children’s understanding of object permanence.

[16 marks]

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

Level	Marks	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 Baillargeon.

Section C

Schizophrenia

1 6 What terms are used by psychologists to describe **A** and **B** below?

A When a person has two or more disorders at the same time.

B When two different disorders have a symptom in common.

In your answer book, write the relevant term alongside each letter.

[2 marks]

Marks for this question: AO1 = 2

1 mark for A: co-morbidity.

1 mark for B: symptom overlap.

1 7 Evaluate **one** psychological explanation for schizophrenia.

[6 marks]

Marks for this question: AO3 = 6

Level	Marks	Description
3	5–6	Evaluation of one psychological explanation for schizophrenia is detailed and effective. The answer is clear and coherent. Specialist terminology is used effectively.
2	3–4	Evaluation of one psychological explanation for schizophrenia is mostly appropriate but lacks detail and/or clarity in places. There is some appropriate use of specialist terminology.
1	1–2	Evaluation of one psychological explanation for schizophrenia is limited/very limited. The answer lacks clarity. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible evaluation:

- use of evidence to support/contradict psychological explanation, eg Read et al (2005) link between family history of abuse and schizophrenia; Leeson et al (2010) memory impairments in people with schizophrenia
- social explanations, eg family dysfunction can lead to blaming the family
- cognitive explanations can lead to blaming the individual/making them actively responsible
- usefulness when there is often limited scope for change, eg if the family is part of the problem it is difficult to change
- problem of cause and effect – does the family or faulty cognitive processing cause schizophrenia or is it the other way round?
- contrast with alternative explanations.

Credit other relevant material.

1 8 Describe and evaluate family therapy **and** cognitive behaviour therapy as treatments for schizophrenia. Refer to Jay and Mary in your answer.

[16 marks]

Marks for this question: AO1 = 6, AO2 = 4, AO3 = 6

Level	Marks	Description
4	13–16	Knowledge of family therapy and cognitive behaviour therapy for schizophrenia is accurate and generally well detailed. Application to the stem is effective. Evaluation 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 family therapy and cognitive behaviour therapy for schizophrenia is evident but there are occasional inaccuracies/omissions. Application/evaluation 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 family therapy and cognitive behaviour therapy for schizophrenia is present. Focus is mainly on description. Any evaluation/application is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. OR one therapy at L3/4.
1	1–4	Knowledge of family therapy and cognitive behaviour therapy for schizophrenia is very limited. Application/evaluation 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 therapy at L1/2.
	0	No relevant content.

Possible content:

Family therapy:

- aim is to reduce anger, frustration and expressed emotion
- therapist meets family members and patient for open, productive discussion
- educates family members about the disorder and what to expect
- encourages the family to develop problem-solving and communication skills to support the patient.

Cognitive behaviour therapy:

- delivery of techniques to identify and manage intrusive or delusional thoughts
- patient is encouraged to develop rational interpretations or alternative perceptions, eg viewing voices as interesting rather than threatening
- promotes increase in social activity and use of relaxation strategies.

Possible application:

Family therapy:

- Jay is referring to family therapy when he speaks of involving close relatives
- Jay's reference to 'less tension' is a reference to the key aim of family therapy, ie reduction in anger/frustration/expressed emotion.

Cognitive behaviour therapy:

- Mary is referring to cognitive behaviour therapy (CBT) when she speaks about ‘understanding own thoughts’, for example, patients might be trained to identify delusional thoughts
- Mary’s reference to developing ‘strategies’ is a reference to a key part of CBT which is about challenging/mastering intrusive thoughts.

Possible evaluation:

- use of evidence to support/contradict the therapy in terms of effectiveness, ethical issues, effect on compliance with medication routines, practicalities etc
- suitability for different patient groups, eg need for a degree of insight, attitude of family etc
- availability of skilled practitioners and appropriate context
- comparison with alternative therapies/treatments
- broader issues, eg holism versus reductionism.

Credit other relevant material.

Section C

Eating behaviour

1 9

What terms are used by family systems theorists to describe **A** and **B** below?

- A** Being free to decide how to behave, and feeling in control of one’s own life.
- B** When a family is over-protective and distinctions between family members are blurred.

In your answer book, write the relevant term alongside each letter.

[2 marks]

Marks for this question: AO1 = 2

- 1 mark** for A: autonomy/autonomous.
- 1 mark** for B: enmeshment/enmeshed.

2 0

Evaluate **one** psychological explanation for anorexia nervosa.

[6 marks]

Marks for this question: AO3 = 6

Level	Marks	Description
3	5–6	Evaluation of one psychological explanation for anorexia is detailed and effective. The answer is clear and coherent. Specialist terminology is used effectively.
2	3–4	Evaluation of one psychological explanation for anorexia is mostly appropriate but lacks detail and/or clarity in places. There is some appropriate use of specialist terminology
1	1–2	Evaluation of one psychological explanation for anorexia is limited/very limited. The answer lacks clarity. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible evaluation:

- use of evidence to support/contradict psychological explanation, eg Cooper et al (2007) negative cognitions in anorexia nervosa (AN) participants; Brockmeyer et al (2013) desire for autonomy in AN patients
 - social explanations, eg family systems can lead to blaming the family
 - cognitive explanations can lead to blaming the individual/making them feel responsible
 - usefulness when there is often limited scope for change, eg if the family or media is part of the problem it is difficult to change
 - problem of cause and effect – does the family or faulty cognitive processing cause AN or is it the other way round?
 - contrast with biological explanations.
- Credit other relevant material.

2 1 Describe and evaluate **two** explanations for food preferences. Refer to Arya and Neela in your answer.

[16 marks]

Marks for this question: AO1 = 6, AO2 = 4, AO3 = 6

Level	Marks	Description
4	13–16	Knowledge of two explanations for food preferences is accurate and generally well detailed. Application to the stem is effective. Evaluation 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 two explanations for food preferences is evident but there are occasional inaccuracies/omissions. Application/evaluation 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 two explanations for food preferences is present. Focus is mainly on description. Any evaluation/application is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. OR one explanation at L3/4.
1	1–4	Knowledge of two explanations for food preferences is very limited. Application/evaluation 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 explanation at L1/2.
	0	No relevant content.

Possible content:

- evolutionary explanation – preference and avoidance aid survival and beneficial traits/behaviours are therefore bred into a population and become prevalent – specific genes code for specialised taste receptors (eg T1r2, T1r3 genes code for sweetness)
- learning theory explanation – we learn to prefer certain foods though observation, imitation and modelling (social and cultural learning) or through direct reinforcement (operant conditioning) or through temporal association (classical conditioning)
- classical conditioning can also explain avoidance of foods after a bad experience, eg vomiting can become a conditioned response (the Garcia effect)
- specific examples of how preferences/aversions evolve or are learned, eg for sugar, salt, fat, bitterness etc.

Possible application:

- Arya’s reference to preference for sweet foods – foods that are sweet such as peas and biscuits may have evolutionary value – sugar provides body with fast-acting energy needed for survival
- Arya’s reference to neophobia – avoidance of new tastes – may have evolutionary value as any new food could be harmful/poisonous
- Neela’s reference to eating as a family refers to social/cultural learning through modelling – her child will observe and imitate behaviours/preferences of the parents and adopt the family norms
- Neela’s reference to roast dinners – foods high in fat have a survival value as they are high in calories.

Possible evaluation:

- use of evidence to support/contradict explanations
- gut microbe theory – preferences evolve to the benefit of gut microbes and not to the benefit of the host human
- individual differences in taste experience, eg some people are genetically more/less sensitive to bitterness which does not support the evolutionary explanation
- links with fight or flight – anxiety leads to greater preference for fuel foods to provide more energy
- larger number of receptors to distinguish bitter than sweet – perhaps because bitter food can be dangerous so need for fine discrimination
- classical conditioning explains aversions better than preferences
- power of innate influences versus culture and learning – chilli exposure
- discussion of competing influences of parents, peers and media/advertising – implications including economic implications.

Note: if two of the following are presented as separate explanations they can be credited as such: neophobia, taste aversion, preference for sweet, salt and fat.

Credit other relevant material.

Section C

Stress

2 2 What terms are used by psychologists to describe **A** and **B** below?

- A** A stage-based process of adapting to a stressor which can end with damage to the immune system.
- B** When a person's immune system becomes compromised so that it cannot protect the individual against disease.

In your answer book, write the relevant term alongside each letter.

[2 marks]

Marks for this question: AO1 = 2

1 mark for A: general adaptation syndrome.

1 mark for B: immunosuppression.

2 3 Evaluate personality type as an explanation for stress.

[6 marks]

Marks for this question: AO3 = 6

Level	Marks	Description
3	5–6	Evaluation of personality type as an explanation for stress is detailed and effective. The answer is clear and coherent. Specialist terminology is used effectively.
2	3–4	Evaluation of personality type as an explanation for stress is mostly appropriate but lacks detail and/or clarity in places. There is some appropriate use of specialist terminology
1	1–2	Evaluation of personality type as an explanation for stress is limited/very limited. The answer lacks clarity. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible evaluation:

- use of evidence to support/contradict personality type explanation, eg Friedman and Rosenman (1950s) research into Type A personality and stress-related illness; Temoshok et al (1985) Type C and cancer; Forshaw (2002) hostility is a key trait rather than general Type A
- problems with notion of Type A – comprised of many traits, some more relevant than others, eg hostility linked to CHD
- usefulness when there is limited scope for change eg if personality type is part of the problem it is difficult to change
- problem of cause and effect – does the personality type cause stress or are there other mediating variables, eg Type A people may expose themselves to more stressful experiences
- contrast with alternative explanations, eg physiological explanations.

Credit answers based on the hardy personality.

Credit other relevant material.

2 4 Discuss gender differences **and** the role of social support in coping with stress. Refer to Oscar and Beth in your answer.

[16 marks]

Marks for this question: AO1 = 6, AO2 = 4, AO3 = 6

Level	Marks	Description
4	13–16	Knowledge of gender differences and the role of social support is accurate and generally well detailed. Application to the stem is effective. 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 gender differences and the role of social support is evident but there are occasional inaccuracies/omissions. Application/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 gender differences and the role of social support is present. Focus is mainly on description. Any discussion/application is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. OR one aspect at L3/4.
1	1–4	Knowledge of gender differences and the role of social support is very limited. Application/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 L1/2.
	0	No relevant content.

Possible content:

- differences in men’s and women’s responses to stress – fight and flight versus tend and befriend
- differences in men’s and women’s coping strategies – emotion-focussed versus problem-focussed
- types of social support: instrumental (practical assistance), emotional (listening to/empathy), esteem (positive bolstering to increase self-esteem), informational (provision of knowledge), appraisal (enhancing understanding)
- interaction between gender and preferred type of social support.

Possible application:

- Beth and Oscar have different stressors – hers is family, his is work
- Beth and Oscar have different reactions to their stress – her response is emotional - she worries, his response is more problem-focused – he plans
- Oscar uses instrumental support – practical help from friends
- Beth uses emotional support – friends cheer her up.

Possible discussion:

- use of evidence to support discussion – eg findings that men and women react to stress differently or use different types of social support; evidence for tend and befriend
- role of oxytocin to explain differences in men’s and women’s responses
- cultural/age-related differences in social support, eg role of extended family versus peers

- appropriateness of social support depends on context/circumstances – role constraint theory differences occur because men and women have different stressors
- buffering hypothesis – indirect link between social support and stress
- mediating effect of social skills – individuals with better social skills are more able to benefit from social support.
- Research may exaggerate differences between men's and women's responses to stress and how they cope with stress (alpha bias)

Credit other relevant material.

Section D

Aggression

2 5 Psychology students sometimes propose hypotheses that are untestable.

Which **one** of the following is essential for a testable hypothesis? Write the correct letter in your answer book.

[1 mark]

Marks for this question: AO3 = 1

Answer: B – The hypothesis should include fully operationalised variables.

2 6 Which explanation for institutional aggression assumes that aggression is due to the institutional environment?

[1 mark]

Marks for this question: AO1 = 1

1 mark for the situational explanation/deprivation model.

2 7 Referring to your answer to Question **26**, describe what the expert could recommend to reduce institutional aggression at Sharksville prison.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	Description
2	3–4	Outline of recommendation is clear and detailed. Application shows sound understanding of the situational explanation/deprivation model for institutional aggression. The answer is coherent with appropriate use of specialist terminology.
1	1–2	Outline of recommendation is limited/muddled. Detail is lacking. Application shows some misunderstanding or lack of clarity. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible content

- ways of reducing the negative effects of five types of deprivation (Sykes 1958) – liberty, autonomy, heterosexual relationships, goods/services, security
- recommend prisoners have more space/liberty, eg fewer prisoners per cell, individual cells, use of open prisons, avoidance of over-crowding
- recommend allowing access to material goods, services, visits etc to avoid deprivation
- recommend more interesting daily routines, eg activities (learning/study opportunities, for the acquisition of new skills) to avoid boredom/aimlessness
- recommend the prisoners be given some choice/influence over their daily routine to allow autonomy/control eg use prisoner representatives to contribute to decision-making.

Credit other relevant material.

Note: can still credit relevant material for Q27 even if the answer to Q26 is incorrect or Q26 is not answered.

Note: if answer to Q26 is incorrect can credit Q27 in respect of incorrectly identified explanation eg if answer to Q26 is ‘dispositional’ then can credit any relevant application of dispositional in answer to Q 27.

2 8

Outline **one** limitation of the explanation for institutional aggression you have used to answer Question **27**.

[2 marks]

Marks for this question: AO3 = 2

2 marks for a clear and coherent limitation with some elaboration.

1 mark for a limited/muddled explanation.

Possible limitations:

- use of counter-evidence showing that institutional aggression might be at least partly dispositional
- problem of showing cause and effect – difficult to carry out controlled research manipulating the prison conditions
- implications of accepting the situational explanation, eg cost of improving prison accommodation and prisoner education opportunities.

Credit other relevant limitations.

Note: credit limitations that match the answer to Q27

2 9 Describe and evaluate **one or more** of the following biological explanations for human aggression: neural, hormonal, genetic.

[16 marks]

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

Level	Marks	Description
4	13–16	Knowledge of one or more biological explanations for human aggression is accurate and generally well detailed. Evaluation 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 one or more biological explanations for human aggression is evident but there are occasional inaccuracies/omissions. Evaluation 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 one or more biological explanations for human aggression is present. Focus is mainly on description. Any evaluation 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 one or more biological explanations for human aggression is very limited. Evaluation 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:

- faulty MAOA gene leading to higher than usual levels of serotonin; evidence from disabling the MAOA gene on the X chromosome in mice
- role of serotonin in inhibiting amygdala activity – low levels of serotonin linked to aggression
- selective breeding studies and twin studies indicate that aggression can be inherited, passed on through DNA
- Y chromosome and role of testosterone (an androgen) secreted by the testes
- neural mechanisms, eg limbic system – role of the hypothalamus (ventromedial nuclei) and amygdala; orbitofrontal cortex and impulse control.

Possible evaluation:

- use of evidence to support/contradict biological explanation(s)
- problems with some evidence, eg based on animal studies so might not tell us much about human aggression
- problems demonstrating cause and effect – altered biological functioning may be a consequence of aggressive behaviour rather than a cause
- links to approaches, eg aggression may have evolved as it is evolutionarily advantageous
- implications of biological explanation(s), eg moral responsibility and behaviour change
- evaluation in relation to broader issues, eg determinism, reductionism, gene-environment interaction etc
- comparison with alternative explanations, eg social psychological explanations.

Credit other relevant material.

Section D

Forensic psychology

3 0 Psychology students sometimes propose hypotheses that are untestable.

Which **one** of the following is essential for a testable hypothesis? Write the correct letter in your answer book.

[1 mark]

Marks for this question: AO3 = 1

Answer: B – The hypothesis should include fully operationalised variables.

3 1 Which way of dealing with offending involves victims?

[1 mark]

Marks for this question: AO1 = 1

1 mark for restorative justice programmes.

3 2 Referring to your answer to Question **31**, describe what a case worker might recommend in order for Jack to deal with his offending.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	Description
2	3–4	Outline of recommendation is clear and detailed. Application shows sound understanding of the way of dealing with offending. The answer is coherent with appropriate use of specialist terminology.
1	1–2	Outline of recommendation is limited/muddled. Detail is lacking. Application shows some misunderstanding or lack of clarity. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible content:

- case worker would recommend Jack and victim meet for restorative justice sessions then Jack will see the consequences – encouraging empathy in Jack
- case worker should encourage the burglary victim to explain to Jack what effect the burglary has had, eg loss of confidence, fear of people breaking into the house – this is to empower the victim and promote healing
- case worker could arrange for Jack to provide some form of restitution, eg returning the burgled goods or mending broken window etc.

Credit other relevant material.

Note: can still credit relevant material for Q32 even if the answer to Q31 is incorrect or Q31 is not answered.

Note: if answer to Q31 is incorrect can credit Q32 in respect of incorrectly identified way eg if answer to Q31 is 'anger management' then can credit any relevant application of anger management in answer to Q 32.

3 3 Outline **one** limitation of the way of dealing with offending you have described in your answer to Question **32**.

[2 marks]

Marks for this question: AO3 = 2

2 marks for a clear and coherent limitation with some elaboration.

1 mark for a limited/muddled explanation.

Possible limitations:

- limited appropriateness – some victims may refuse to meet with the offender because they fear intimidation
- restorative justice programmes differ widely so are very difficult to evaluate – there is no one model so every case is different
- seen as a soft option where offenders might pretend to show remorse when they do not really; does not satisfy the public demand for retribution/punishment.

Credit other relevant limitations.

Note: credit limitations that match the answer to Q32

3 4

 Describe and evaluate **one or more** of the following biological explanations for offending: atavistic form, genetics, neural.

[16 marks]
Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13–16	Knowledge of one or more biological explanations for offending is accurate and generally well detailed. Evaluation 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 one or more biological explanations for offending is evident but there are occasional inaccuracies/omissions. Evaluation 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 one or more biological explanations for offending is present. Focus is mainly on description. Any evaluation 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 one or more biological explanations for offending is very limited. Evaluation 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:

- Lombroso's atavistic form (criminal individuals are evolutionarily ill-suited to modern society)
- genetic explanations – faulty MAOA gene leading to higher than usual levels of serotonin; evidence from disabling the MAOA gene on the X chromosome in mice
- role of serotonin in inhibiting amygdala activity – low levels of serotonin linked to aggression
- neural explanations – reduced prefrontal cortex activity in people with antisocial personality disorder; impaired executive functioning in the prefrontal cortex; lowered EEG arousal
- role of mirror neurons – possible neural switching in people with antisocial personality disorder.

Possible evaluation

- use of evidence to support/contradict biological explanation(s)
- problems with some evidence, eg based on animal studies so might not tell us much about human offending
- problems demonstrating cause and effect – altered biological function may be a consequence of offending behaviour rather than a cause
- mediating variables – social factors, eg childhood experiences, education etc may mediate the effects of biological influences
- links to approaches, eg offending may be better explained through social learning (SLT) and reward systems (behaviourism)
- implications of biological explanations, eg moral and legal responsibility and behaviour change
- implications for treating offenders – if offending is biological therapy may not work

- evaluation in relation to broader issues, eg determinism, reductionism etc
- comparison with alternative explanations, eg differential association theory, psychodynamic theory, cognitive explanations.

Credit other relevant material.

Section D

Addiction

3 5 Psychology students sometimes propose hypotheses that are untestable.

Which **one** of the following is essential for a testable hypothesis? Write the correct letter in your answer book.

[1 mark]

Marks for this question: AO3 = 1

Answer: B – The hypothesis should include fully operationalised variables.

3 6 Which therapy for addiction relies on changing the way the person thinks about his or her addictive behaviour?

[1 mark]

Marks for this question: AO1 = 1

1 mark for cognitive behaviour therapy.

3 7 Referring to your answer to Question **36**, describe what the staff at the centre might do to help Warren’s gambling addiction.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	Description
2	3–4	Outline of what the staff might do is clear and detailed. Application shows sound understanding of cognitive behaviour therapy as a way of dealing with addiction. The answer is coherent with appropriate use of specialist terminology.
1	1–2	Outline of recommendation is limited/muddled. Detail is lacking. Application shows some misunderstanding or lack of clarity. Use of specialist terminology is either absent or inappropriate.
	0	No relevant content.

Possible content:

- Warren would be taught to identify triggers for his gambling behaviour, eg being alone in the evening so going online to bet, passing by a betting shop, reading articles about people who have won the lottery
- Warren would be encouraged to develop alternate thought patterns to help him cope in trigger situations, eg thinking about how much money the online gambling firms make from people who lose; thinking about the tiny odds of winning at poker
- Warren would be taught new skills to cope in trigger situations: social and assertiveness skills: “No, I do not want to buy a lotto ticket”; positive self-talk/mantra “I am strong, I do not bet”; relaxation strategies eg breathing exercises; role play of situations where he does not gamble
- Warren would be introduced to new activities to substitute the time he habitually spent gambling, eg going to the gym in the evening instead of playing poker on the computer.

Credit other relevant material.

Note: can still credit relevant material for Q37 even if the answer to Q36 is incorrect or Q36 is not answered.

Note: if answer to Q36 is incorrect can credit Q37 in respect of incorrectly identified therapy eg if answer to Q36 is ‘aversion therapy’ then can credit any relevant application of aversion therapy in answer to Q 37.

3 8 Outline **one** limitation of the way of reducing addiction you have described in your answer to Question **37**.

[2 marks]

Marks for this question: AO3 = 2

Possible limitations:

- only suitable for clients who can engage fully with the process – must be motivated and articulate
- use of evidence to contradict the effectiveness of cognitive behaviour therapy, eg evidence that effects are short-term rather than long-term (Cowlshaw et al, 2012)
- high drop-out rates in comparison to other forms of therapy (Cuijpers et al, 2008).

Credit other relevant limitations.

Note: credit limitations that match the answer to Q37

Note: answer does not have to focus on gambling.

3 9 Describe and evaluate **one or more** of the following explanations for nicotine addiction: brain neurochemistry, learning theory.

[16 marks]

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

Level	Marks	Description
4	13–16	Knowledge of one or more explanations for nicotine addiction is accurate and generally well detailed. Evaluation 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 one or more explanations for nicotine addiction is evident but there are occasional inaccuracies/omissions. Evaluation 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 one or more explanations for nicotine addiction is present. Focus is mainly on description. Any evaluation 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 one or more explanations for nicotine addiction is very limited. Evaluation 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:

Neurochemistry:

- the common reward pathway and role of ACh nicotinic receptors, dopamine and the nucleus accumbens in the limbic system – the brain’s reward system
- processes of nicotine regulation, withdrawal and tolerance
- possible genetic determinants – DRD2 gene.

Learning theory:

- operant conditioning processes and positive reinforcement of pleasure due to physiological effect
- negative reinforcement via avoidance of unpleasant withdrawal symptoms; tension reduction theory
- classical conditioning and the role of cue reactivity – learning through association with environmental/situational cues and secondary reinforcement social learning theory – observation imitation, modelling and vicarious reinforcement.

Possible evaluation:

- use of evidence to support/contradict explanation(s)
- problems with some evidence, eg ethical difficulty carrying out experimental research
- complexity of neurochemical evidence – other neurotransmitters are involved (eg GABA, serotonin), not just dopamine
- problems demonstrating cause and effect
- usefulness of explanation(s) in relation to various stages of nicotine addiction, eg initiation and maintenance
- mediating variables, eg social factors such as childhood experiences, education etc may mediate the effects of biological influence

- implications of explanations, eg if smoking is biological then attempts to reduce smoking might need to focus on physiology, eg patches; if it is learned then perhaps it can be unlearned
- evaluation in relation to broader issues, eg determinism, reductionism, nature vs nurture
- interactionism and comparison with alternative explanations, eg cognitive explanations.

Credit other relevant material.