

A-level PSYCHOLOGY

Paper 3 Issues and options in psychology

Monday 5 June 2023

Afternoon

Time allowed: 2 hours

Materials

For this paper you must have:

- an AQA 16-page Answer Book.

You may use a calculator.

Instructions

- Use black ink or black ball-point pen.
- Write the information required on the front of your answer book. The **Paper Reference** is 7182/3.
- In **Section A**, you should answer **all** questions.
- In **Section B**, choose **one** topic. Answer **all** questions on the topic you choose.
- In **Section C**, choose **one** topic. Answer **all** questions on the topic you choose.
- In **Section D**, choose **one** topic. Answer **all** questions on the topic you choose.
- Do all rough work in your answer book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 96.
- You will be marked on your ability to:
 - use good English
 - organise information clearly
 - use specialist vocabulary where appropriate.

There are no questions printed on this page

Section A**Issues and debates in psychology**

Answer **all** questions in this section.

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What is meant by androcentrism?

[2 marks]

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Suggest **two** ways in which psychologists could avoid gender bias in their research.

[2 marks]

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Bob and Mike each have a daughter. Both girls are talented swimmers.

Bob says his daughter was destined to be a good swimmer because her grandfather was a great swimmer when he was young.

Mike says it was inevitable that his daughter would be a good swimmer because she was given lots of praise in swimming lessons when she was little.

Use your knowledge of determinism to explain Bob's and Mike's comments.

[4 marks]

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There are different levels of explanation in psychology, ranging from reductionism to holism.

Discuss levels of explanation in psychology. Refer to **one or more** topics in your answer.

[16 marks]

Turn over for Section B

Turn over ►

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Androcentrism is a male-centred (male-biased) view of the world, in which male behaviour and masculine traits are taken as the norm or standard against which everyone is judged. As a result, female behaviour that differs from this male norm is seen as abnormal, deficient or less desirable, for example women's emotional expression being judged as over-reaction.

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First, use both male and female participants in the sample, and do not generalise (extrapolate) findings from all-male samples, such as Milgram's, to females.

Second, take a reflexive approach, with both male and female researchers reflecting on their own gender assumptions, so that real differences are not ignored (beta bias) and differences are not exaggerated where none exist (alpha bias).

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Both fathers are taking a hard determinist view, because they imply their daughters had no free will in becoming good swimmers: Bob says she was 'destined' and Mike says it was 'inevitable', so the outcome was predetermined by forces outside the girls' control.

Bob's comment reflects biological (genetic) determinism. He believes his daughter has inherited her swimming talent through her genes from her grandfather, who was a great swimmer, so her ability was fixed by her biology (biology is destiny).

Mike's comment reflects environmental determinism. He believes his daughter's ability was caused by her early learning experiences: the praise she received in swimming lessons acted as positive reinforcement (operant conditioning), which increased the likelihood of her repeating and improving her swimming behaviour.

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Levels of explanation is the idea that behaviour can be explained at different levels, arranged as a hierarchy. At the lowest level is extreme reductionism, which breaks complex behaviour down into its smallest component parts, as in the hard sciences of physics and chemistry (atoms and molecules). Above this is the biological level of psychology (genes, neurochemicals, brain structures), then the psychological level (cognitive processes and learning), and at the top the social and cultural level. Holism, the opposite of reductionism, is the highest level and explains behaviour by studying the whole person in context, arguing that the whole is greater than the sum of its parts.

Different approaches work at different levels. Biological reductionism is the most basic level in psychology; machine reductionism in the cognitive approach (comparing the mind to a computer) is a mid-level explanation;

environmental reductionism in behaviourism reduces learning to stimulus-response links; and the humanistic approach is holistic.

Schizophrenia can be explained at all of these levels. At the lowest level, the dopamine hypothesis explains symptoms in terms of excess dopamine activity at D2 receptors in the subcortex. At a psychological level, Frith's model explains symptoms such as derailment of speech in terms of faulty central control and metarepresentation. At the social level, family dysfunction and high expressed emotion within the family explain onset and relapse.

Similarly, gender can be explained at the level of XX/XY chromosomes and testosterone or at the social level through social learning theory.

A strength of lower-level explanations is that they are scientific. Reducing behaviour to discrete units, such as dopamine levels, produces clearly defined variables that can be operationalised and tested experimentally, allowing cause and effect to be inferred. This furthers psychology's status as a science. Reductionist explanations are also parsimonious, as the simplest explanation is often preferred.

Biological levels have also been highly useful. The dopamine hypothesis led to antipsychotics such as chlorpromazine, which block D2 receptors and reduce positive symptoms, allowing many patients to live in the community.

This shows the practical value of working at a basic physiological level.

However, the lowest level may lead to a loss of meaning. Explaining schizophrenia purely through dopamine ignores the patient's experience and the family context in which symptoms occur. Antipsychotics do not work for all patients, and relapse is greater in families with high expressed emotion (Kavanagh, 1992), suggesting the components do not add up to explain the whole condition. Some behaviours, such as the way people act in crowds, can only really be understood at the holistic, social level, because they emerge from the interaction between people.

On the other hand, the highest levels are hard to test. Holistic explanations favour case studies, diaries and interviews, which give rich, detailed information but are subjective and hard to replicate, so they are less useful for a scientific discipline.

Therefore the most valid approach is probably interactionist. The diathesis-stress model of schizophrenia combines a genetic vulnerability with environmental triggers such as family stress, so it uses several levels together. This suggests the appropriate level depends on the purpose: lower levels are best for developing treatments, while higher levels are needed for a complete understanding of human experience.

Section B**Relationships or Gender or Cognition and development**

Choose **one** topic from **Section B**. Answer **all** questions on the topic you choose.

Topic: Relationships

- 0 5** What is meant by self-disclosure? **[2 marks]**
- 0 6** Outline **one** strength **and one** limitation of self-disclosure as an explanation for attraction in romantic relationships. **[6 marks]**
- 0 7** Discuss Duck's phase model of relationship breakdown. **[8 marks]**
- 0 8** Outline and evaluate the absorption addiction model of parasocial relationships. **[8 marks]**
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Topic: Gender

- 0 9** What is meant by gender dysphoria? **[2 marks]**
- 1 0** Outline **one** strength **and one** limitation of biological explanations for gender dysphoria. **[6 marks]**
- 1 1** Discuss the effects of media on the development of gender roles. **[8 marks]**
- 1 2** Outline and evaluate Kohlberg's theory of gender development. **[8 marks]**

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Self-disclosure is revealing personal information about ourselves to a partner. It can vary in breadth (many low-risk topics such as work) and depth (intimate, high-risk information such as fears and aspirations). Appropriate, reciprocal self-disclosure increases attraction and closeness in a relationship.

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One strength is supporting research evidence. Sprecher and Hendrick (2004) studied dating couples and found strong positive correlations between levels of self-disclosure and relationship satisfaction. This supports Altman and Taylor's social penetration theory, which claims that partners must keep disclosing increasingly intimate information for a romantic relationship to develop, so self-disclosure is a valid explanation for attraction.

One limitation is that the explanation is culturally biased. Tang et al. (2013) found that American couples self-disclosed more sexual thoughts and feelings than Chinese couples, yet both groups reported similar satisfaction. This shows the link between depth of disclosure and attraction may only apply to individualist cultures, so the theory cannot be generalised. Also, the research is correlational, so we cannot tell whether disclosure causes attraction or attraction causes disclosure.

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Duck (1982) proposed that relationship breakdown is a process with four phases, each triggered by a threshold. In the intra-psychic phase one partner is dissatisfied but keeps it to themselves, ruminating on the partner's faults. In the dyadic phase the problem is raised and discussed openly between the partners. In the social phase the breakdown is made public: friends and family are told, take sides and practical arrangements are negotiated. In the grave-dressing phase each partner creates a story of the breakup that

protects their reputation. Rollie and Duck (2006) later added a fifth phase, resurrection, in which people prepare for future relationships.

A strength is that the model recognises breakdown as a process rather than a single event, and it takes account of the social context: friends and family can help to repair a relationship or speed up its end.

The model also has practical value for relationship counsellors. Someone in the intra-psychic phase could be helped with cognitive therapy to re-evaluate negative thoughts, while couples in the dyadic phase can be helped to improve communication.

Grave-dressing is supported by Tashiro and Frazier (2003), who found students often reported personal growth after a breakup, showing it can be a positive time of reflection and learning. The addition of resurrection, however, shows the original model was incomplete.

A limitation is that the model describes rather than explains: it does not account for why the initial dissatisfaction arises. In addition, people do not always move through the phases in a fixed order and may return to earlier phases. Finally, the evidence is largely retrospective self-report, which may be distorted by memory and social desirability, and the model reflects Western individualist relationships, so it may not apply to cultures where relationships involve wider families.

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The absorption addiction model (McCutcheon et al., 2002) states that parasocial relationships make up for deficiencies in a person's own life, such as a weak sense of identity. Absorption: the person becomes preoccupied with the celebrity and identifies with them. Addiction: like a drug, the person needs ever greater involvement, so the relationship becomes all-consuming and can lead to extreme behaviour such as stalking.

Levels of involvement are measured with the Celebrity Attitude Scale (CAS): entertainment-social (discussing celebrities with friends), intense-personal (feeling a personal connection and obsessive thoughts) and borderline-pathological (uncontrollable fantasies and behaviours).

A strength is supporting evidence. Maltby et al. (2003) found that entertainment-social scores were linked to extraversion, intense-personal to neuroticism and borderline-pathological to psychoticism, showing the levels are distinct and linked to personality. Maltby et al. (2006) found female adolescents with intense-personal relationships with celebrities they admired for their bodies had poorer body image.

The CAS is a useful measure with good reliability, and includes distractor items to reduce response bias. This allows a distinction between normal and pathological parasocial relationships.

However, the research is correlational, so it cannot show that a weak identity causes absorption; poor mental health could be an effect of an intense parasocial relationship rather than a cause. Also, the model describes the levels rather than explaining why they occur. The attachment explanation offers an alternative, suggesting insecure-resistant individuals are more likely to form parasocial relationships, but McCutcheon et al. (2006) found no link between attachment type and celebrity worship, which supports absorption addiction as the better explanation. Data rely on self-report, which may be affected by social desirability bias.

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Gender dysphoria is when there is a mismatch between a person's biological sex assigned at birth (based on external sexual characteristics) and the gender they psychologically identify with. For example, a person who is biologically male may feel female, and this incongruence causes significant distress, often described as feeling 'trapped in the wrong body'.

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One strength is research support from brain and genetic studies. Zhou et al. (1995) found that the BSTc, a sexually dimorphic area of the brain, was female-sized in trans women (male-to-female) in post-mortem studies. Heylens et al. (2012) found a concordance rate for gender dysphoria of 39% in MZ twins compared with 0% in DZ twins, suggesting a genetic component. This supports the view that gender dysphoria has a biological basis.

One limitation is that biological explanations cannot fully account for gender dysphoria. The twin concordance is far from 100%, and twins share environments, so genetic and environmental influences cannot be separated. Also, many of the trans women in Zhou's study had received hormone therapy, which may itself have changed the size of the BSTc, so biological differences may be an effect rather than a cause. Psychological explanations, such as childhood trauma, may also play a role.

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The media provides children with role models. Social learning theory suggests children observe and identify with same-sex characters on TV, in films and online, and imitate their gender role behaviour, especially when they see it vicariously reinforced. Gender schema theory adds that once children know their gender, they seek out media information that matches their gender

schema, so stereotyped portrayals strengthen gender roles.

Content analyses show the media is stereotyped. Furnham and Farragher (2000) found men in TV adverts were shown in autonomous, professional roles while women were shown in domestic, dependent roles.

Evidence that media affects gender roles comes from Williams (1986), who studied a Canadian town ('Notel') before and after TV was introduced and found children's sex-typed attitudes became stronger after two years of TV. This natural experiment suggests the media has a causal effect.

However, the evidence is mixed. Stevens Aubrey and Harrison (2004) found limited evidence of traditional gender stereotyping in children's TV programmes, so the media may not be as stereotyped as claimed. Also, much of the research is correlational, and children who already hold traditional gender attitudes may choose to watch stereotyped programmes, so the direction of cause and effect is unclear.

A further issue is that the media is only one influence among many: parents, peers and schools also model gender roles, so it is difficult to isolate its effect. Biological explanations argue that gender roles are partly innate, influenced by hormones such as testosterone, which the media explanation ignores.

On the other hand, there are useful applications. If the media shapes gender roles, it can be used to promote counter-stereotypes, for example showing women as scientists, which could raise girls' aspirations towards male-dominated careers. This also suggests limiting young children's exposure to stereotyped media.

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Kohlberg (1966) proposed that children's understanding of gender develops through three stages driven by cognitive maturation. Gender identity (around

2 to 3 years): the child can correctly label their own and others' sex.

Gender stability (around 4 years): the child understands their gender stays the same over time, but may think it changes with appearance. Gender

constancy (around 6 years): the child understands gender is consistent across situations and changes in appearance. Only at this stage do children actively seek out same-sex role models to imitate.

A strength is research support. Slaby and Frey (1975) found that children high in gender constancy spent more time watching a same-sex model in a film than children low in constancy, supporting Kohlberg's claim that constancy leads children to attend to same-sex models.

Cross-cultural research by Munroe et al. (1984) found the same sequence of stages in different cultures, suggesting they are universal and driven by maturation rather than culture.

A further strength is that the theory focuses on the active cognitive processes underlying gender development, rather than just behaviour as in social learning theory.

However, there is contradictory evidence. Martin and Little (1990) found children under four showed strong gender stereotypes and preferences for same-sex toys and playmates long before reaching constancy. This supports gender schema theory, which argues that a basic gender identity is enough for children to start learning gender-appropriate behaviour.

Kohlberg's theory is better at describing the process of gender development than explaining its causes, and it cannot easily explain why boys show stronger sex-typing than girls. Finally, earlier studies may have underestimated constancy because of the way questions were asked.

Topic: Cognition and development

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 Outline what Piaget meant by conservation. [2 marks]
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 Outline **one** strength **and one** limitation of Piaget's research into conservation. [6 marks]
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 Discuss research into violation of expectation. [8 marks]
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| 1 | 6 |
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 Outline and evaluate theory of mind as an explanation for autism. [8 marks]

Turn over for Section C

Turn over ►

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Conservation is the understanding that the quantity of an object or substance, such as its number, mass or volume, stays the same even when its appearance changes. For example, the volume of water poured from a short wide glass into a tall thin glass stays the same. Piaget claimed children in the pre-operational stage cannot conserve until about 7.

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One strength is that Piaget's research used carefully standardised and well-documented procedures, such as the counters and liquid tasks, which lend themselves to replication. They have been repeated many times, and his innovative methods paved the way for later research on cognitive development and informed education, for example the use of water play with measuring cups.

One limitation is that Piaget may have underestimated children's ability by asking the question twice: children may assume their first answer was wrong. McGarrigle and Donaldson (1974) used 'naughty teddy' to accidentally change the counters, and found 62% of 6-year-olds could conserve compared with only 16% in the standard task. This suggests Piaget confused performance with understanding, so conservation develops earlier than he claimed.

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Violation of expectation (VoE) research tests infants' understanding of the physical world. In the familiarisation stage the infant watches a possible event several times; in the test stage they see a possible or an impossible event. The dependent variable is looking time: longer looking (preferential looking) at the impossible event is taken to show surprise, implying the infant expected something different.

Baillargeon, Spelke and Wasserman (1985) showed 5-month-olds a drawbridge rotating back towards a block; infants looked longer when it appeared to pass through the block. Baillargeon and DeVos (1991) showed 3.5-month-olds a short and a tall carrot moving behind a screen with a window. Infants looked longer when the tall carrot did not appear in the window, suggesting they understood it still existed behind the screen. This research is important because it suggests object permanence develops far earlier than Piaget claimed (about 8 months), since he relied on infants' manual searching, which requires motor skills they lack. VoE is now a standard paradigm for testing infant cognition. Physiological evidence supports this interpretation: Kaufman et al. (2003) found increased neural activity in the right temporal region when infants watched an impossible event, suggesting they are processing the hidden object. However, the validity of looking time as a measure is questionable. Infants may look longer at impossible events because they are more novel or interesting rather than because they understand that the event breaks physical rules. Schöner and Thelen (2006) argued that the perceptual features of the displays could explain the results, so we cannot be sure surprise reflects knowledge of object permanence. Studying infants is also difficult because factors such as tiredness or arousal level affect attention, so findings may be unreliable. Even so, the paradigm has been replicated widely.

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Theory of mind (ToM) is the ability to understand that other people have their own thoughts, beliefs, intentions and emotions, which may differ from our own. Baron-Cohen (1993) proposed that people with autism lack or have

an impaired ToM, called 'mind-blindness'. This explains social difficulties in autism such as limited social interaction, poor communication, lack of pretend play and poor joint attention.

A strength is supporting evidence from false belief tasks. Baron-Cohen, Leslie and Frith (1985) used the Sally-Anne test and found 80% of autistic children failed, saying Sally would look where Anne moved the marble, while 86% of children with Down syndrome passed. This suggests a specific ToM deficit in autism, not a general learning difficulty.

Further support comes from the Eyes Task (Baron-Cohen et al., 1997), where autistic adults were worse at judging emotions from photographs of eyes, showing the deficit continues into adulthood.

However, ToM cannot explain all the features of autism. It does not explain non-social characteristics such as islets of ability in savants, an obsession with detail (weak central coherence) or problems with executive functioning. Also, failure on false belief tasks may be due to poor language or memory rather than a lack of understanding of others' minds. Not all autistic individuals fail ToM tasks, so ToM deficits cannot be the sole cause.

Finally, ToM describes a cognitive deficit but does not explain its cause: biological explanations such as genetics or mirror neuron dysfunction may underlie the ToM deficit, so it may be an effect rather than a cause.

Section C

Schizophrenia or Eating behaviour or Stress

Choose **one** topic from **Section C**. Answer **all** questions on the topic you choose.

Topic: Schizophrenia

1 7

For each description in **Table 1**, choose a term from **Table 2** which best represents that description.

For **each** description, write the correct letter alongside the relevant term in your answer book.

[4 marks]

Table 1 Descriptions

A	When a diagnosis is consistent between psychiatrists
B	When a person has more than one condition at the same time
C	When a psychiatrist diagnoses a condition correctly
D	When two conditions have some effects in common

Table 2 Terms

Classification	Co-morbidity	Reliability	Symptom overlap	Validity
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In a study into the effectiveness of a new drug therapy for schizophrenia, researchers gave one group of patients the new drug and another group of patients a placebo (a pretend drug).

The researchers were concerned that the outcome of the study might be influenced by the problems of demand characteristics **and** investigator effects.

Explain what the researchers could do to eliminate or reduce demand characteristics **and** investigator effects in this study.

[4 marks]

1 9

Jay has schizophrenia. His speech is rapid and confused and he changes constantly from one idea to something completely different. Jay's father was treated for mental health problems when he was younger. Jay's mother worries excessively about Jay. She often criticises his behaviour and tells him what to do. Jay's doctor prescribes medication which seems to reduce his symptoms.

Discuss **one or more** explanations for schizophrenia. Refer to Jay in your answer.

[16 marks]

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Reliability: A

Co-morbidity: B

Validity: C

Symptom overlap: D

1	8
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To reduce demand characteristics, the researchers could use a single-blind procedure in which patients are not told whether they are receiving the new drug or the placebo. The placebo pill would look identical to the drug, so all patients believe they are taking the new drug and cannot change their behaviour (for example reporting fewer symptoms) to fit the aim.

To reduce investigator effects, they could use a double-blind procedure: patients are given code numbers, so the researcher who gives the drug and assesses symptoms does not know who is in which condition. This means they cannot unconsciously treat the groups differently or be biased in rating symptoms.

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One biological explanation is genetics. Schizophrenia runs in families, and the risk increases with genetic similarity to a sufferer. Gottesman (1991) found a concordance rate of about 48% for MZ twins compared with 17% for DZ twins. The disorder is polygenic: Ripke et al. (2014) identified 108 separate genetic variations associated with increased risk. Jay's father was treated for mental health problems, which suggests Jay may have inherited a genetic vulnerability from his father's side of the family.

A second biological explanation is the dopamine hypothesis. The original version claimed that excess dopamine activity (hyperdopaminergia) in the subcortex, especially at D2 receptors, causes positive symptoms. The revised

version adds that low dopamine activity (hypodopaminergia) in the prefrontal cortex causes negative symptoms. Jay's medication seems to reduce his symptoms, suggesting an antipsychotic is correcting a neurochemical imbalance.

A psychological explanation is family dysfunction. High expressed emotion (EE) involves hostility, criticism and emotional over-involvement from relatives, which creates stress that may trigger onset or relapse in a vulnerable person. Jay's mother worries excessively (emotional over-involvement) and often criticises him and tells him what to do, which is typical of high EE.

A cognitive explanation is Frith's (1992) model of dysfunctional thought processing. Faulty central control means people cannot suppress automatic thoughts, which leads to derailment of speech. Jay's rapid, confused speech and his constant switching from one idea to another fits this.

There is strong evidence for a genetic basis, but concordance in MZ twins is less than 50%, so genes cannot be the whole explanation. Twins also share an environment, so the role of genes may be exaggerated. Jay's father's problems could therefore reflect a shared family environment.

Support for the dopamine hypothesis comes from the effectiveness of antipsychotics. Typical antipsychotics such as chlorpromazine block D2 receptors and reduce positive symptoms, and Leucht et al. (2013) found antipsychotics were more effective than placebos. However, this does not prove excess dopamine causes schizophrenia. Glutamate dysfunction is also implicated.

There is evidence that high EE predicts relapse: Kavanagh (1992) found patients returning to high EE families relapsed far more often than those in low EE families. However, family dysfunction may be an effect rather than a cause: Jay's mother may be critical because she is stressed by caring for

him, so it is hard to establish cause and effect.

Frith's model is supported by Stirling et al. (2006), who found people with schizophrenia were slower on the Stroop task, showing poor suppression of automatic responses. However, this describes the cognitive deficit without explaining its origin.

Each explanation alone is reductionist and deterministic. Biological explanations may be seen as more scientific, but family explanations can lead to blaming parents. The diathesis-stress model offers an interactionist view: Jay may have inherited a vulnerability (diathesis) from his father, and the stress of his mother's criticism may have triggered the disorder. This also has practical value: combining Jay's medication with family therapy to reduce EE is likely to be more effective than either alone.

Topic: Eating behaviour

2	0
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For each description in **Table 3**, choose a term from **Table 4** which best represents that description.

For **each** description, write the correct letter alongside the relevant term in your answer book.

[4 marks]

Table 3 Descriptions

A	When someone has an innate fear of unfamiliar foods
B	When someone regulates their food consumption
C	When someone shows unrestrained eating
D	When someone tends to dislike certain flavours

Table 4 Terms

Boundary	Disinhibition	Neophobia	Restraint	Taste aversion
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In a study into the effectiveness of a new drug therapy for limiting appetite, researchers gave one group of patients the new drug and another group of patients a placebo (a pretend drug).

The researchers were concerned that the outcome of the study might be influenced by the problems of demand characteristics **and** investigator effects.

Explain what the researchers could do to eliminate or reduce demand characteristics **and** investigator effects in this study.

[4 marks]

2	2
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Elliot is very underweight but believes that he is fatter than actors on TV. He thinks a lot about his looks, often checking himself in the mirror. At mealtimes he likes arranging and counting pieces of food on his plate. Elliot's mother once had eating problems. She is extremely anxious about him. She watches him constantly and is always telling him what to do. His doctor has prescribed medication which seems to help with Elliot's condition.

Discuss **one or more** explanations for anorexia nervosa. Refer to Elliot in your answer.

[16 marks]

Turn over ►

2	0
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Neophobia: A

Restraint: B

Disinhibition: C

Taste aversion: D

2	1
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To reduce demand characteristics, the researchers could use a single-blind procedure where patients are not told whether they are receiving the new appetite drug or the placebo. The placebo pill would look identical to the drug, so all patients believe they are taking it and cannot change how much they eat, or how hungry they report feeling, to fit the expected outcome.

To reduce investigator effects, they could use a double-blind procedure: patients are given code numbers, so the researcher who gives the pills and measures food intake does not know who is in which condition. This prevents them from unconsciously influencing the patients or being biased when recording appetite.

2	2
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One biological explanation for anorexia nervosa (AN) is genetics. AN runs in families, and Holland et al. (1984) found a concordance rate of 56% for MZ twins compared with 5% for DZ twins. AN is polygenic, with candidate genes such as OPRD1 implicated. Elliot's mother once had eating problems, which suggests he may have inherited a genetic vulnerability.

A second biological explanation is neurochemical. Reduced serotonin activity has been linked to AN, shown by lower levels of 5-HIAA, and serotonin dysfunction is linked to anxiety and obsessional thinking. Elliot's obsessive arranging and counting of food could reflect this, and the fact that his medication helps suggests his condition has a neurochemical basis.

A psychological explanation is family systems theory (Minuchin, 1978).

Families of people with AN show enmeshment, overprotectiveness, rigidity and conflict avoidance. The child does not develop autonomy, so controlling food becomes a way of gaining control. Elliot's mother is extremely anxious, watches him constantly and always tells him what to do, suggesting overprotectiveness and enmeshment.

Social learning theory suggests people model the behaviour of thin media role models they identify with. Elliot compares himself to actors on TV, suggesting he identifies with them. Cognitive theory explains AN through distortions, such as overestimating body size. Elliot believes he is fatter than actors, despite being underweight, and checks his appearance, showing a distorted body image.

Twin studies support a genetic role, but MZ concordance is not 100%, so environmental factors must also be involved. Twins share an environment, so Elliot's mother's history may have influenced him through modelling rather than genes.

The serotonin explanation is supported by drug treatments, but SSRIs are often ineffective for AN in the underweight phase, which suggests serotonin is not the whole cause. Also starvation itself alters neurochemistry, so serotonin changes may be an effect of AN rather than a cause.

Family systems theory has practical value: family therapy based on it is recommended for adolescents with AN. However, the evidence is mostly from case histories, which are subjective. Families may also become controlling because they are anxious about the child's illness, so Elliot's mother's behaviour could be an effect rather than a cause. Blaming parents raises ethical issues.

Social learning theory is supported by Becker et al. (2002), who found that disordered eating among girls in Fiji increased after Western TV was

introduced. It can also explain cultural and temporal differences in the incidence of AN, which biological explanations struggle to do. However, almost everyone is exposed to thin media models, yet few develop AN, so it cannot explain individual differences.

Overall, biological explanations are reductionist and determinist, while psychological explanations ignore biology. A diathesis-stress approach is best: Elliot may have inherited a vulnerability from his mother, which was triggered by family pressure and media influences. This suggests combining medication with family therapy and CBT to challenge Elliot's distorted beliefs.

Topic: Stress

2	3
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For each description in **Table 5**, choose a term from **Table 6** which best represents that description.

For **each** description, write the correct letter alongside the relevant term in your answer book.

[4 marks]

Table 5 Descriptions

A	Perceiving changes as opportunities
B	Possessing traits that enable you to cope well with stress
C	Preferring to get involved and make an effort
D	Thinking that you can determine what happens in your life

Table 6 Terms

Challenge	Commitment	Control	Hardiness	Hassles
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2	4
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In a study into the effectiveness of a new drug therapy for stress, researchers gave one group of patients the new drug and another group of patients a placebo (a pretend drug).

The researchers were concerned that the outcome of the study might be influenced by the problems of demand characteristics **and** investigator effects.

Explain what the researchers could do to eliminate or reduce demand characteristics **and** investigator effects in this study.

[4 marks]

2	5
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Carrie is so stressed that she lies awake at night listening to her heart pounding. She works in a large, noisy warehouse sorting packages that come along a conveyor belt. Workers who do not meet their daily target receive only the minimum wage. Carrie has failed to meet her target every day this week. The factory workers have been trying for weeks to organise a meeting to discuss working conditions and work-related illness with the manager.

Discuss what psychologists have found out about workplace stress. Refer to Carrie in your answer.

[16 marks]

2	3
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Challenge: A

Hardiness: B

Commitment: C

Control: D

2	4
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To reduce demand characteristics, the researchers could use a single-blind procedure where patients are not told whether they are receiving the new stress drug or the placebo. The placebo pill would look identical, so all patients believe they are taking the new drug and cannot change how stressed they report feeling to fit what they think the researchers expect.

To reduce investigator effects, they could use a double-blind procedure: patients are given code numbers, so the researcher who gives the pills and measures stress (for example cortisol or questionnaires) does not know who is in which condition and so cannot unconsciously influence patients or bias the results.

2	5
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Psychologists have identified workload and control as key sources of workplace stress. Karasek's (1979) job demand-control model states that stress is greatest when jobs combine high demands (workload) with low control (decision latitude), and that high control can offset the negative effects of a heavy workload. Karasek developed the Job Content Questionnaire to measure these job stressors.

Workload: too much work leads to chronic physiological arousal, raised stress hormones and stress-related illness. Johansson et al. (1978) studied a Swedish sawmill and found that 'finishers', whose work was repetitive, machine-paced and highly skilled, had higher adrenaline levels and more

stress-related illness and absenteeism than cleaners. Kivimaki et al. (2006) found that high job strain was associated with an increased risk of coronary heart disease (CHD).

Control: Marmot et al. (1997) studied over 7000 civil servants in the Whitehall II study and found those in lower grades with low job control were more likely to develop CHD, even when other risk factors were controlled.

Carrie is suffering from the physiological effects of stress: she lies awake listening to her heart pounding, which shows chronic sympathetic arousal. She has no control over the pace of her work, as packages arrive on a conveyor belt, just like the machine-paced finishers in Johansson's study. She cannot control the noise in the warehouse. She has failed to meet her target every day, suggesting the workload is unrealistic. According to Karasek, this combination of high demand and low control explains her high stress. The workers' attempt to organise a meeting with the manager can be seen as an attempt to gain some control over their working conditions, and the mention of work-related illness suggests others suffer the health effects of high strain.

A strength is that the research has strong real-world application. If low control causes stress, employers can reduce it by giving workers more say, for example in pace or targets, which could reduce absenteeism and illness. Carrie's employer could hold the meeting the workers want.

However, much of the evidence is correlational and carried out in the field, so extraneous variables cannot be controlled. For example, lower-grade civil servants in Marmot's study may also have had poorer diets or more smoking, so we cannot be sure low control caused CHD.

Individual differences also mediate the effects of workplace stress. Hardy individuals see a heavy workload as a challenge and feel in control, whereas

Type A personalities may respond badly. Schaubroeck et al. (2001) found that some people actually cope better with low control, suggesting control is not always beneficial. Perceived control may matter as much as actual control.

Workload and control are not the only sources of stress. Physical factors such as noise and temperature, the home-work interface, relationships with co-workers and pay can all contribute; Carrie may also be stressed by the threat of minimum wage. Daily hassles at work may add up. This means Karasek's model may be too simple. Overall, psychologists have found that high demands with low control are damaging, but this depends on the individual and the wider work environment.

Section D**Aggression or Forensic psychology or Addiction**

Choose **one** topic from **Section D**. Answer **all** questions on the topic you choose.

Topic: Aggression

In an experiment into the effects of cognitive priming, 20 participants played an unfamiliar computer game. Half of the participants watched a violent film before playing the computer game. The other half watched a neutral film before playing the computer game. After playing the computer game, each participant was classified as showing High Aggression or Low Aggression.

The researcher decided to use a Chi-Squared test to analyse the data from this study. One reason for choosing this test was that each participant only took part in one condition of the experiment.

2	6
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Referring to information about the study, explain **two other** reasons why it was appropriate to use a Chi-Squared test in this case.

[4 marks]

2	7
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Using your knowledge of research into cognitive priming, explain the likely outcome of the study.

[4 marks]

2	8
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Different participants were used in each condition of the experiment, which might have affected the results.

Explain **one** way in which the experiment could be changed to control for the problem of using different participants in each condition.

[4 marks]

2	9
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Describe how de-individuation is involved in aggression.

[6 marks]

3	0
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Evaluate the role of de-individuation in aggression.

[6 marks]

Turn over ►

2	6
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First, the data are nominal (categorical): each participant's behaviour is classified into one of two categories, High Aggression or Low Aggression, rather than measured on a scale.

Second, the researcher is looking for a difference in aggression levels between two groups: those who watched the violent film (primed) and those who watched the neutral film (unprimed).

2	7
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The likely outcome is that more participants who watched the violent film will be classified as High Aggression than Low Aggression, and more participants who watched the neutral film will be classified as Low Aggression than High Aggression.

Cognitive priming explains this because watching violent images activates aggressive thoughts and scripts stored in memory. When participants then play the unfamiliar computer game, these primed scripts are readily triggered, so they are more likely to respond aggressively, as in Josephson's (1987) hockey study.

2	8
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The experiment could use a repeated measures design, where all 20 participants take part in both conditions, watching the violent film before playing the game on one occasion and the neutral film on another. This removes participant variables, such as natural aggressiveness, experience of computer games or of violent films, because each participant is compared with themselves.

To control order effects such as practice or boredom, the order would be counterbalanced: half watch the violent film first and half the neutral film first (ABBA), with a time gap between conditions.

2	9
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De-individuation is a psychological state in which a person loses their sense of personal identity and individuality, usually when they are part of a crowd or anonymous, for example wearing a uniform or mask. According to Zimbardo, factors such as anonymity, arousal and altered consciousness (alcohol or drugs) reduce private self-awareness and the sense of personal responsibility.

As a result, the inhibitions and social norms that normally restrain aggressive behaviour are weakened, and the individual is governed by the norms of the group, so they may behave aggressively, for example in rioting or football violence. They feel that responsibility is shared across the group and that they are less likely to be identified and punished.

Zimbardo (1969) found that female students wearing hoods and lab coats gave twice as many electric shocks to a confederate as those with name tags. The social identity model of de-individuation (SIDE, Reicher) explains how anonymity can also occur in private situations, such as online, where it may lead to trolling and cyberbullying.

3	0
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A strength is supporting evidence. Mann (1981) analysed newspaper reports of suicide attempts and found crowds were more likely to bait a person to jump when the crowd was large, the person was far away, or it was dark, all factors that increase anonymity. Diener et al. (1976) found anonymous children on Halloween were more likely to steal sweets.

However, anonymity does not always lead to aggression; it depends on the norms of the group. Johnson and Downing (1979) found that participants dressed in nurses' uniforms gave fewer shocks than controls, whereas those dressed like the Ku Klux Klan gave more. This supports the SIDE model: de-individuation increases conformity to group norms, which can be prosocial or antisocial.

Postmes and Spears (1998) conducted a meta-analysis of 60 studies and found little consistent support for the claim that de-individuation leads to antisocial behaviour, again suggesting group norms are more important.

Finally, the explanation has practical applications: increasing self-awareness, for example through CCTV and police body cameras, could reduce aggression in crowds.

Topic: Forensic psychology

In an experiment into the effectiveness of the top-down approach to offender profiling, 20 participants were asked to build a profile of an offender using information from real life cases. Half of the participants were given information about a murder case and asked to produce a profile. The other half were given information about a robbery and asked to produce a profile. After the profiling session, each profile was classified as High Accuracy or Low Accuracy.

The researcher decided to use a Chi-Squared test to analyse the data from this study. One reason for choosing this test was that each participant only took part in one condition of the experiment.

3	1
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Referring to information about the study, explain **two other** reasons why it was appropriate to use a Chi-Squared test in this case.

[4 marks]

3	2
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Using your knowledge of the top-down approach to offender profiling, explain the likely outcome of the study.

[4 marks]

3	3
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Different participants were used in each condition of the experiment, which might have affected the results.

Explain **one** way in which the experiment could be changed to control for the problem of using different participants in each condition.

[4 marks]

3	4
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Describe how cognitive distortions might be involved in offending behaviour.

[6 marks]

3	5
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Evaluate the role of cognitive distortions in offending.

[6 marks]

3 1

First, the data are nominal (categorical): each profile is classified into one of two categories, High Accuracy or Low Accuracy, rather than given a score. Second, the researcher is looking for a difference in the accuracy of profiles between two groups: participants who profiled the murder case and those who profiled the robbery case.

3 2

The likely outcome is that more participants who profiled the murder case will be classified as High Accuracy than Low Accuracy, and more of those who profiled the robbery will be classified as Low Accuracy than High Accuracy.

This is because the top-down approach was developed by the FBI from interviews with serial killers and is most suited to serious crimes such as murder, where the crime scene reveals personal details, such as whether the offender is organised or disorganised. Property crimes such as robbery reveal less about the offender's personality, so profiles are less accurate.

3 3

The experiment could use a matched pairs design. Participants would be assessed on a variable likely to affect profile accuracy, such as years of profiling experience or knowledge of criminal behaviour, and paired with someone of a similar level.

One member of each pair would be randomly allocated to the murder condition and the other to the robbery condition. This controls participant variables because each member of the pair acts as a control for the other, so any difference in accuracy is more likely to be due to the type of crime.

3	4
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Cognitive distortions are errors or biases in information processing that cause offenders to perceive themselves, others and the world in irrational ways.

These distortions help offenders legitimise their behaviour and maintain a positive self-image, reducing feelings of guilt and making reoffending more likely.

One distortion is hostile attribution bias: the tendency to misread ambiguous social cues, such as a look or an accidental push, as aggressive or threatening. The offender then justifies violence by blaming the victim, for example 'he was staring at me, so he started it'. Schönenberg and Justye (2014) found violent offenders were more likely to perceive ambiguous facial expressions as angry and hostile.

Another is minimisation: downplaying the seriousness of an offence, for example describing a burglary as 'just borrowing' or claiming a victim of a violent assault was only mildly hurt. This reduces guilt. Barbaree (1991) found that among rapists, 54% denied any offence and 40% minimised the harm they caused.

3	5
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A strength is that the role of cognitive distortions has practical application in treating offenders. Cognitive behavioural treatment programmes encourage offenders to face up to their offence and challenge minimisation, for example by reconstructing the crime, and these programmes are associated with reduced reoffending in some research.

Evidence also supports the existence of distortions in offenders, such as Schönenberg and Justye's finding that violent offenders perceived ambiguous faces as angry, and Barbaree's findings on minimisation.

However, distortions describe how offenders interpret their crimes but do not explain why they offended in the first place. Hostile attribution bias explains

reactive, impulsive aggression better than planned, premeditated offending.

In addition, much of the research uses hypothetical vignettes or images, which are unlike real situations, so findings may lack ecological validity.

Finally, cognitive distortions are only one factor: biological factors, such as the MAOA gene, and social factors, such as differential association with offending peers, also contribute, so focusing only on cognition is reductionist.

Topic: Addition

In an experiment into the effect of reinforcement on gambling, 20 participants played 10 practice card games on a computer. The computer system was pre-programmed so that half of the participants won in games 1, 2, 6, 8 and 10 and the other half won no practice games. After the 10 practice games, each participant played a test game and the amount of money each participant bet in the test game was classified as High Stakes (gambled more money) or Low Stakes (gambled less money).

The researcher decided to use a Chi-Squared test to analyse the data from this study. One reason for choosing this test was that each participant only took part in one condition of the experiment.

3	6
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Referring to information about the study, explain **two other** reasons why it was appropriate to use a Chi-Squared test in this case.

[4 marks]

3	7
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Using your knowledge of learning theory as applied to gambling, explain the likely outcome of the study.

[4 marks]

3	8
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Different participants were used in each condition of the experiment, which might have affected the results.

Explain **one** way in which the experiment could be changed to control for the problem of using different participants in each condition.

[4 marks]

3	9
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Describe cue reactivity as an explanation for nicotine addiction.

[6 marks]

4	0
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Evaluate cue reactivity as an explanation for nicotine addiction.

[6 marks]

END OF QUESTIONS

3	6
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First, the data are nominal (categorical): each participant's bet in the test game is classified into one of two categories, High Stakes or Low Stakes, rather than recorded as an exact amount.

Second, the researcher is looking for a difference in the stakes bet between two groups: participants who won practice games (reinforced) and those who won none (not reinforced).

3	7
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The likely outcome is that more participants who won five practice games will be classified as High Stakes than Low Stakes, and more of those who won no practice games will be classified as Low Stakes than High Stakes. Learning theory explains this through operant conditioning: winning acts as positive reinforcement for gambling. The wins were also on a partial (intermittent) schedule in unpredictable games, which makes the betting behaviour strong and resistant to extinction. With no wins, betting is not reinforced, so they bet less.

3	8
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The experiment could use random allocation to conditions. Each of the 20 participants would be given a number, and a random number generator would be used to decide which 10 are in the winning condition and which 10 are in the no-win condition.

This means participant variables likely to affect betting, such as previous gambling history, risk-taking personality or age, are likely to be spread evenly across both conditions, so any difference in stakes is more likely to be caused by reinforcement.

3	9
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Cue reactivity explains nicotine addiction through classical conditioning.

Nicotine (the unconditioned stimulus) produces pleasure and a rush of dopamine in the brain's reward pathways (unconditioned response). Through repeated pairing, environmental cues present when smoking, such as being with friends in a pub, holding a drink, finishing a meal, the smell of smoke or the ritual of lighting a cigarette, are associated with the effects of nicotine.

These cues become conditioned stimuli, so that on their own they trigger a conditioned response of arousal and craving for a cigarette. As a result, exposure to smoking-related cues makes it very hard for smokers to resist and can trigger relapse even after a long period of abstinence.

Smoking is maintained because lighting a cigarette relieves this craving, which is negatively reinforcing (operant conditioning), strengthening the addiction. Over time, more and more cues become linked to smoking through higher-order conditioning, so the smoker encounters triggers for craving almost everywhere.

4	0
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A strength is supporting evidence. Carter and Tiffany (1999) carried out a meta-analysis of cue reactivity studies and found smokers showed strong craving and physiological arousal when exposed to smoking-related cues compared with neutral cues, supporting the role of conditioned cues.

The explanation is consistent with biological evidence that classical conditioning involves dopamine reward pathways, which are activated when smokers see smoking cues. This shows the psychological explanation can be integrated with a biological account, giving a more complete explanation of nicotine addiction.

It also has practical applications in therapy. Cue exposure therapy repeatedly

presents smoking cues without nicotine so that the conditioned craving is extinguished, and smokers can be taught to avoid situations containing cues, reducing relapse.

However, cue reactivity explains why smoking is maintained and why relapse occurs, rather than why people start smoking, which may be better explained by social learning theory. Self-efficacy may also mediate the effect of cues: smokers who are confident they can resist are less affected by cues, so the explanation ignores important cognitive factors and individual differences.

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