Answers

Chapter 1: Gender

Sex-role stereotypes and androgyny (pages 8–10)

1. C

2. 
   a. One strength of the Bem Sex Role Inventory is that it has high reliability. For example, Bem found statistically significant test-retest correlations over a four-week period ranging from .76 to .94.
   b. However, one limitation of the Bem Sex Role Inventory is that it may not be a valid test. For example, the link between androgyny and psychological health may be explained in terms of self-esteem. Many of the items on Bem’s Sex Role Inventory are socially desirable, so someone who scored high on both masculine and feminine traits would also be higher in self-esteem than someone who chose only male or female items. This suggests that androgyny does not explain psychological healthiness at all.
   c. The Mann–Whitney test would be appropriate. The researcher was looking for a difference, and an independent groups design was used.
   d. There is a greater than 5 per cent chance that the difference would occur if there was no real difference between the conditions.

3. a. The dependent variable is the number of problems solved in a five-minute time period.
   b. It was directional. This is because the researcher predicted the direction of the difference (more problems would be solved by the androgynous participants).
   c. The Mann–Whitney test would be appropriate. The researcher was looking for a difference, and an independent groups design was used.
   d. There is a greater than 5 per cent chance that the difference would occur if there was no real difference between the conditions.

4. Possible AO1 content:
   a. Androgyny is a combination of masculine and feminine characteristics.
   b. Bem’s Sex Role Inventory involves participants rating themselves on a seven-point Likert scale, ranging from ‘never true’ or ‘almost never true’ to ‘almost always true’, in response to 40 personality traits that are considered desirable for men or women.
   c. Individuals are scored by adding up the numerical scores for the masculine items and the feminine items, and then the participant is given scores for femininity, masculinity, and androgyny.
   d. Individuals are categorised as masculine (high masculine, low feminine score), feminine (high feminine, low masculine score) or androgynous (high ratio of masculine to feminine traits).
Possible AO3 content:

- One strength of the idea of sex-role stereotypes is that there is research support for it. For example, Smith and Lloyd found that women played with babies differently in line with sex-role stereotypes, depending on whether they were told they were boys or girls. If they thought the baby was a boy, they offered more masculine toys (e.g. a squeaky hammer) rather than feminine toys (e.g. a doll).
- One strength of research into androgyny is that there are real-world applications. For example, encouraging parents to raise children so they are free to assume characteristics of either gender, and free of sex-role stereotypes.
- Another strength of this research is that there is a link between androgyny and psychological health. For example, Prakesh et al. tested married women in India and found women with a higher masculinity score had lower scores for depression, anxiety, and physical health issues. This supports the view that androgyny has a psycho-protective effect.
- One strength of the Bem Sex Role Inventory is that it is highly reliable. For example, test–retest reliability over a four-week period ranged from .76 to .94, which is a high correlation.
- However, one limitation of the Bem Sex Role Inventory is that its validity has been questioned. For example, Hoffman and Borders found that when they asked undergraduates in 2001 to rate the items on the Bem Sex Role Inventory, only the words ‘masculine’ and ‘feminine’ were still endorsed as being masculine or feminine, with all other items failing to reach 75% agreement. This suggests that the Bem Sex Role Inventory lacks temporal validity.

The role of chromosomes and hormones in sex and gender (pages 11–13)

1. D

2. People born with Turner's syndrome have XO configuration.
   - This means that they are missing the second sex chromosome.
   - They have a vagina and a womb, but they do not have monthly periods, due to underdeveloped ovaries.
   - In terms of physical appearance, they are shorter than average, and may have a small lower jaw, a webbed neck or narrow hips.

3. The male rat was given oestrogen.
   The female rat was given testosterone.
   One way in which the female rats’ behaviour would have differed is by showing more ‘tomboyish’ behaviour and greater interest in male-type behaviour, such as aggression.

4. Possible AO1 content:

   - There are several biological explanations of gender development. Genetic transmissions explain how people acquire their sex, and may also explain some aspects of gender because of the link between genes, genitalia, and hormones.
   - The sex chromosomes determine an individual’s sex. In females, this is called XX and the male chromosome pair is described as XY. They also determine which hormones are produced. Testosterone is produced in much greater quantities in males, and oestrogen and oxytocin are mainly female hormones.
   - Girls exposed to relatively large amounts of testosterone later show greater tomboyish behaviour and greater interest in male-type activities.
   - Genetic males will develop as females if they have an insensitivity to testosterone and, in extreme cases, they do not develop external male genitalia.

Possible AO3 content:

- One strength of biological explanations of gender development is that there is research support for them. For example, Reiner and Gearhart reported that out of 14 ‘intersex’ males raised as females, eight had reassigned themselves male by age 16, suggesting biological factors have a key role in gender development.
Another strength of biological explanations for gender development is that there are real-world applications of the research. For example, if identified at birth, girls with Turner Syndrome can be given growth hormone so they reach normal height and oestrogen replacement therapy helps them to develop secondary sex characteristics.

A third strength of biological explanations is that testosterone has been shown to affect gender development in non-humans. For example, Quadagno et al. found that female monkeys who were deliberately exposed to testosterone during prenatal development later engaged in more rough-and-tumble play than other females, and they were more aggressive.

However, one limitation of biological explanations of gender development is that they ignore the role of culture. For example, Imperato–McGinley et al. described four XY males born with female genitalia, due to androgen sensitivity, and raised as girls. The large amount of testosterone produced during puberty meant that their male genitalia appeared, and the ‘girls’ accepted their new male role. This suggests that the ease of transition from female to male highlights the importance of culture; in communities prepared to accept more fluidity in gender roles, it seemed to be relatively easy to move between roles.

A second limitation of biological explanations for gender development is that experience, personal qualities, and socialisation (nurture) also play a role. For example, XX females with congenital adrenal hyperplasia have unusually high levels of androgens and may be assigned male gender at birth. Some accept their gender role, but others don’t, suggesting that gender development is partially biologically determined, but nurture also plays a role.

Cognitive explanations of gender development: Kohlberg’s theory (pages 14–16)

1. B

2. 
   - Stage one is called gender labelling.
   - Children in this stage think that gender labels change as appearances change. For example, a man with long hair must now be a girl.
   - Stage two is called gender stability.
   - Children in this stage think that gender is something that is consistent over time; for example, boys will grow into men. However, they do not understand that gender is consistent across situations; for example, they believe that males might change into females if they do female activities.
   - Stage three is called gender constancy.
   - Children in this stage think that gender is constant across both time and situations. For example, a girl playing football is still a girl. This is when they start to learn about gender-appropriate behaviour.

3. 
   - Pete is at the gender labelling stage.
   - Tom is at the gender constancy stage.
   - Steven is at the gender stability stage.
   - His age is approximately six years old.

4. Possible AO1 content: 
   - The first stage is called Gender Labelling.
   - Children at this stage think that gender labels change as appearances change. For example, a man with long hair must now be a girl.
   - The second stage is called Gender Stability.
   - Children at this stage think that gender is something that is consistent over time, for example, boys will grow into men. However, they do not understand that gender is consistent across situations. For example, they believe that males might change into females if they do female activities.
   - The third stage is called Gender Constancy.
   - Children at this stage think that gender is constant across both time and situations. This is when they start to learn about gender-appropriate behaviour.
Possible AO3 content:

- One strength of Kohlberg’s theory of gender development is that there is research support for it. For example, Thompson found that two year olds were 76 per cent correct in identifying their sex, whereas three year olds were 90 per cent correct. This shows an increasing ability to label themselves, as Kohlberg’s theory predicts.

- However, one limitation of Kohlberg’s theory is that there are methodological problems with the research. For example, Bem criticised the way children’s gender constancy is measured, arguing that the basic task is nonsense, and when children are asked to resolve a contradiction between genitals and clothing, the child goes for the most relevant cue in our society. This means that the validity of the findings is weakened, which in turn weakens the theory.

- Another limitation of this theory is that children may develop gender constancy at a younger age than Kohlberg suggested. For example, Slaby and Frey found that gender constancy appeared as young as five years of age. This means that, while the evidence still supports the stages, the age bands may be younger than Kohlberg proposed.

- A third limitation of Kohlberg’s theory is that children can have gender stereotypes without gender constancy. For example, Martin and Little showed that children under the age of four display strong stereotypes about male and female behaviour. This is before they have developed gender stability, which contradicts Kohlberg’s theory.

- A final problem with Kohlberg’s theory is that social learning theory may be a better explanation of gender development. For example, Slaby and Frey found that boys tend to exhibit gender constancy before girls, which may be because boys are more likely to be punished for gender-inappropriate behaviours than girls. This means Kohlberg’s theory is incomplete, as principles of social learning theory are also involved.

Cognitive explanations of gender development: Gender schema theory (pages 17–19)

1. B

2.

- One problem with gender schema theory is that research suggests gender identity may form earlier than the theory says.
- For example, Zosuls et al. recorded samples of children’s language and observed them at play, in order to identify when they first started labelling themselves as a girl or boy.
- They found that they were using gender labels by 19 months.
- This means that the age-related predictions of gender schema theory may be incorrect.

3. a. Boys high on gender constancy spent a greater time on average than boys low on gender constancy looking at a man in a film containing a man and a woman. However, in the boys high on gender constancy group, there was greater variation in the time spent looking.

b. The mean is easily distorted by one (or a few) extreme values and so is not representative of the data as a whole.

c. Median. Arrange the data in ascending order and select the central value.

4. Possible AO1 content:

- Schemas are a cognitive framework that helps organise and interpret information in the brain. A schema helps us to make sense of new information.
- Ingroup schemas are schemas about the gender you are. For example, a girl will learn which toys are appropriate for girls, and girls will identify with this ingroup, which leads them to positively evaluate their own group. In turn, this evaluation motivates a child to be like their own group.
- Outgroup schemas are schemas about groups that you do not identify with. Once a child has identified with any ingroup schemas, they will negatively evaluate the outgroup.
- Gender beliefs lead children to hold very fixed gender attitudes because they ignore any information they encounter that is not consistent with ingroup information.
- Children believe that same-sex peers are ‘like me’ and therefore more fun to play with, whatever they are doing.
They also learn to avoid negative consequences of ignoring schemas, such as being teased for playing with members of the opposite sex.

Possible AO3 content:
- One strength of gender schema theory is that there is research support for it. For example, Martin and Little found children under four had strong gender stereotypes about what boys and girls are allowed to do.
- Another strength of this theory is that research suggests children pay greater attention to ingroup schemas. For example, Bradbard et al. told 4–9 year olds that gender-neutral items were boy or girl items. They found that children took greater interest in items labelled as ‘ingroup’ and remembered more of them a week later. This shows how gender schemas help children to organise new information in memory.
- A third strength of gender schema theory is that research supports the idea that gender schemas may distort inconsistent information to maintain ingroup schemas. For example, Martin and Halverson found children under six remembered more gender-consistent pictures (e.g. male firefighter, female teacher) than gender-inconsistent ones (e.g. male nurse, female chemist).
- However, one limitation of gender schema theory is that gender stereotypes may not be entirely fixed. For example, Hoffman reported that children whose mothers work have less stereotyped views of what men do, showing that children are receptive to non-stereotyped ideas of gender roles.
- Another limitation of this theory is that research suggests gender identity may form earlier than gender schema theory says. For example, Zosuls et al. found that children were using gender labels by 19 months. This means that the age-related predictions of gender schema theory may be incorrect.

Psychodynamic explanations of gender development (pages 20–22)

1. C
2. One problem with the psychoanalytic explanation is that the Oedipus and Electra complexes depend on children having an awareness of genitals.
- However, many children aged 3–5 years don’t know what opposite sex genitals look like.
- Conversely, some research indicates a link between exposure to parental sexual activity at a young age, teenage pregnancy, and sexually transmitted infections.
- This means that gender development does not depend on the Oedipus or Electra complexes.

3. The Oedipus complex is when boys in the phallic stage desire their mother and want her whole attention. They see their father as a rival, and wish he were dead. They develop anxiety about their wish for their father to die, and this leads to castration anxiety, which is repressed.
- The complex is resolved when the boy identifies with the father, internalises his gender identity, and takes this as his own.
- It is important in understanding gender development because it is only through successfully resolving the Oedipus complex that boys can internalise appropriate gender identity and sex-role stereotypes.

4. Possible AO1 content:
- The psychoanalytic theory says that we develop in psychosexual stages, where the libido is focused on different body parts. Gender development occurs in the phallic stage.
- In the phallic stage, boys develop their gender identity through the Oedipus complex. This is when boys in the phallic stage desire their mother and want her whole attention. They see their father as a rival, and wish he were dead. They develop anxiety about their wish for their father to die, and this leads to castration anxiety, which is repressed.
- The complex is resolved when the boy identifies with the father, internalises his gender identity, and takes this as his own.
Girls develop their gender identity through the Electra complex. This is when girls are initially attracted to their mother, but discover she doesn’t have a penis. They then transfer this attraction to their father. Girls blame their mother for their lack of penis, believing they were castrated. This penis envy is later converted into the wish to have a baby, resolving anger against the mother.

The complex is resolved when the girl eventually identifies with the mother, and internalises her gender identity as her own.

If the phallic stage is not resolved, then a person may develop a fixation in the phallic stage. This will lead to an individual incapable of intimacy. Freud also claimed that fixation at this stage could be a root cause of amoral behaviour.

Possible AO3 content:

One strength of the psychodynamic explanation of gender development is that there is research support for it. For example, Freud’s Little Hans study found that Little Hans developed a fear of horses due to repressing his desires for his mother.

However, one limitation of this explanation is that there are methodological issues with case studies. For example, they are fraught with problems of subjective interpretation and selective reporting.

A second limitation of the psychodynamic explanation of gender development is that the Oedipus and Electra complexes depend on children having an awareness of genitals. However, many children aged 3–5 years don’t know what opposite sex genitals look like. Conversely, some research indicates a link between exposure to parental sexual activity at a young age, and teenage pregnancy, and sexually transmitted infections. This means that gender development does not depend on the Oedipus or Electra complex.

A third limitation of Freud’s explanation is that it does not adequately explain female gender development. For example, many feminists dismiss Freud’s idea of inferior female development due to penis envy. However, Lacan has suggested that penis envy can be considered as a symbolic envy of male power in a male-dominated society, rather than being taken literally.

A final limitation of Freud’s explanation of gender development is that there are alternative explanations for gender development. For example, Chodorow suggested that mothers and daughters are closer because they are the same sex, whereas sons are able to become more independent as they are different to their mothers.

Social learning theory as applied to gender development (pages 23–25)

1. D

2.

- Social learning theory says we learn by watching other people and imitating their behaviour.
- Children observe the gender behaviour of others from home, school, or the media.
- They learn whether a behaviour should be imitated by observing the consequences of an action, which is called vicarious reinforcement.
- Girls identify with other females and are more likely to imitate their behaviour.
- Boys may observe their mother, but are less likely to imitate the behaviour.
- This gendered behaviour is maintained by direct reinforcement, such as praise for doing gender-appropriate behaviours. This increases the likelihood that a child will repeat those behaviours.

3.

a. There will be a positive correlation between the amount of time children spend watching television and their knowledge of adult sex-role stereotypes.

b. Spearman’s rho. Reasons why it would be an appropriate test: looking for a relationship; data is at least at the ordinal level.

c. Administer the Sex Stereotype Measure again. If it is reliable, participants’ scores on the two occasions they complete it should be highly correlated.
4. **Possible AO1 content:**

- Social learning theory says we learn by watching other people and imitating their behaviour.
- Children observe the gender behaviour of others from home, school or the media.
- They learn whether a behaviour should be imitated by observing the consequences of an action, which is called vicarious reinforcement.
- Girls identify with other females and are more likely to imitate their behaviour.
- Boys may observe their mother, but are less likely to imitate the behaviour.
- This gendered behaviour is maintained by direct reinforcement, such as praise for doing gender-appropriate behaviours. This increases the likelihood that a child will repeat those behaviours.

**Possible AO3 content:**

- One strength of social learning theory as an explanation for gender development is that there is research support for it. For example, Perry and Bussey showed 8–9 year olds films of other children selecting apples or pears, and the children preferentially selected the fruit they had observed a same-sex model choosing.
- Another strength of this explanation is that research suggests children learn to evaluate others’ behaviour, and then their own. For example, Bussey and Bandura showed 3–4 year olds videos of other children playing with masculine or feminine toys. The younger children disapproved of others, but not themselves, for gender-inconsistent behaviour, whereas older children disagreed with both. This shows how self-regulation increases with age.
- However, one limitation of social learning theory as an explanation for gender development is that direct instruction may be more effective than modelling. For example, Martin et al. found that boys played with toys labelled ‘boys’ toys’ even if they saw girls playing with them. However, they didn’t play with toys labelled ‘girls’ toys’ even when they saw boys playing with them.
- Another limitation of this explanation is that peers may not be important in early childhood when gender is being formed. For example, it seems that peer behaviour does not create gender role stereotypes, but simply reinforces existing ones.
- A final limitation of social learning theory as an explanation for gender development is that it focuses too much on social processes and ignores the role of biology. For example, testosterone during prenatal development creates a more ‘masculine’ brain and behaviours. Cross-cultural research (e.g. Mead) confirms that men are more aggressive, suggesting that biology plays an important role in gender development.

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**Cultural and media influences on gender roles (pages 26–28)**

1. D

2. Gender expectations vary between cultures. For example, Mead found cultural role differences between three social groups in Papua New Guinea. Arapesh men and women were gentle and cooperative, Mundugumor men and women were violent and competitive, and Tchambuli women were dominant.
   - These expectations also change over time. For example, UK women continue to perform more domestic duties than men and tend to occupy less powerful positions. However, Alleye found that this gender gap has been decreasing.

3. Bussey and Bandura found that the media portrays men as independent and directive, pursuing engaging occupations and recreational activities.
   - However, women are more likely to be portrayed as acting in dependent, unambitious, and emotional ways.
   - This may be why Jane couldn’t think of such a film.
4. **Possible AO1 content:**

- Gender expectations vary between cultures. For example, Mead found cultural role differences between three social groups in Papua New Guinea. Arapesh men and women were gentle and cooperative, Mundugumor men and women were violent and competitive, and Tchambuli women were dominant.
- These expectations also change over time. For example, UK women continue to perform more domestic duties than men and tend to occupy less powerful positions. However, Alleye found that this gender gap has been decreasing.
- The media portrays men as independent and directive, pursuing engaging occupations and recreational activities. However, women are more likely to be portrayed as acting in dependent, unambitious, and emotional ways.
- The media can maintain stereotypes, but it can also change them. For example, Pingree found that stereotyping was reduced when children were shown commercials with women in non-traditional roles.

**Possible AO3 content:**

- One limitation of cross-cultural research is that observers may be biased in their interpretation of behaviour. For example, Freeman criticised Mead's research as invalid, as the indigenous people had told her what she wanted to hear. This means that evidence from cross-cultural studies may be flawed, limiting the conclusions that can be drawn.
- A problem with the idea that culture influences gender roles is that these roles may be a product of biological differences. For example, Eagly and Wood argue that the biologically-based physical differences between men and women allow them to perform certain tasks more efficiently.
- One strength of the idea that exposure to the media influences gender attitudes is that there is research support for it. For example, Williams found that after television arrived in a remote Canadian valley, the children's views became significantly more sex-stereotyped, showing that exposure to the media can affect gender attitudes.
- However, one limitation of the idea that media can change expectations is that research doesn’t always support it. For example, Pingree found that stereotyping was reduced when children were shown commercials with women in non-traditional roles.
- Another limitation of the idea that the media affects gender roles is that this effect may be insignificant. For example, Charlton et al. looked at the effects of introducing television to a community and found no changes in aggressive behaviour, and concluded that pre-existing community values reduced the effects of media exposure. This means that the media may simply reinforce existing attitudes.

**Atypical gender development (pages 29–31)**

1. D

2. **Brain-sex theory says that transsexuals’ brains do not match their genetic sex.**
- For example, the size of the BSTc correlates with preferred gender rather than sex. On average, the BSTc contains twice as many neurons in heterosexual men than in heterosexual women. However, the number of neurons in the BSTc of male to female transsexuals is similar to that of most women, and the number of neurons in a female to male transsexual was found to be in the male range.
- Gender identity disorder may be due to innate cross-wiring, in which the sensory cortex is connected differently.
- For example, Ramachandran et al. propose that in gender dysphoria, the image of the sex organs is innately hardwired in the brain in a manner opposite to the person’s biological sex. Such cross-wiring means that some males feel they should not have a penis, and some females feel they should have one. It is estimated that two-thirds of FtM transsexuals report the sensation of a phantom penis from childhood onwards.
3. Research suggests that gender identity disorder can be a result of childhood trauma. For example, Coates et al. produced a case history of a boy who developed GID, proposing that this was a defensive reaction to his mother's depression following an abortion when the boy was three years old. Coates et al. suggest that the trauma may have led to a cross-gender fantasy as a means of resolving the ensuing anxiety.

- Research also suggests that gender identity disorder is caused by experiencing distorted parental attitudes.
- For example, in clinical interviews with individuals diagnosed with GID, Stoller observed that they displayed overly close and enmeshed mother–son relationships, and this would be likely to lead to greater female identification and confused gender identity.

4. a. Reliability refers to the consistency of a measurement, whereas validity refers to whether something measures what it says it measures.

b. Compare it with a test that is known to measure gender disorders; if the test has concurrent validity, scores on it should correlate strongly with scores on the established test.

c. Face validity is whether something looks like it is going to measure what it says it is going to measure. Ecological validity is the ability to generalise a research effect beyond the particular setting in which it is demonstrated to other settings.

5. Possible AO1 content:

- Research suggests there might be a transsexual gene. This is a longer version of the androgen receptor gene, which reduces sensitivity to testosterone and may under-masculinise the brain. Hare et al. found MtF transsexuals are more likely to have this gene.

- Brain-sex theory says that transsexuals’ brains do not match their genetic sex. For example, the size of the BSTc correlates with preferred gender rather than sex. On average, the BSTc contains twice as many neurons in heterosexual men than in heterosexual women. However, the number of neurons in the BSTc of MtF transsexuals is similar to that of most women, and the number of neurons in a FtM transsexual was found to be in the male range.

- Gender identity disorder may be due to innate cross-wiring, in which the sensory cortex is connected differently. For example, Ramachandran et al. propose that in gender dysphoria, the image of the sex organs is innately hardwired in the brain in a manner opposite to the person’s biological sex.

- Distorted parental attitudes may lead to confused gender identity. For example, in clinical interviews with individuals diagnosed with GID, Stoller observed that they displayed overly close and enmeshed mother-son relationships, and this would be likely to lead to greater female identification and confused gender identity.

- Gender identity disorder may be a result of childhood trauma. For example, Coates et al. produced a case history of a boy who developed GID, proposing that this was a defensive reaction to his mother’s depression following an abortion when the boy was three years old. Coates et al. suggest that the trauma may have led to a cross-gender fantasy as a means of resolving the ensuing anxiety.

Possible AO3 content:

- One strength of biological explanations of gender identity disorder is that there is research support for cross-wiring. For example, Ramachandran and McGeech report that 60 per cent of non-GID men experience a phantom penis after penis amputation, but only 30 per cent of GID men experience this. This suggests that there was no wiring to a ‘penis representation’ in their brain in the first place.

- However, one problem with the brain-sex theory is that it is hard to see whether differences are an effect, or a cause, of gender identity disorder. For example, Chung et al. noted that the BSTc is the same size in males and females until adulthood, but most transsexuals report gender dysphoria from early childhood.

- One strength of social explanations of gender identity disorder is that there is research support for them. For example, Zucker et al. found that 64 per cent of boys with GID were also diagnosed with
separation anxiety, compared to 38 per cent of boys who had some gender concerns but were not diagnosed with GID.

- However, one issue with trying to explain gender identity disorder is that there are two distinct groups of male to female transsexuals. For example, Furuhashi studied 27 males with GID and found that some had longed to be female since childhood (the ‘core’ group), but some males’ discomfort did not appear until adolescence (the ‘periphery’ group). This suggests there may be different explanations for different types of GID.

- Another issue with trying to explain gender identity disorder is that it has potential social consequences for individuals with the disorder. For example, if a biological cause is identified, it might help society to be more accepting; however, it may also cause harm to individuals if it is assumed that transsexualism is inevitable.
Chapter 2: Issues and debates

Gender in psychology: Gender bias (pages 32–34)

1. B

2. a. Androcentrism refers to research that is centred, or focused, on men, often to the neglect or exclusion of women. For example, the researchers developed a ‘life structure’ theory of adulthood, but they only conducted the research for it on men.

b. • The sample in this research is made up exclusively of male participants.
• However, the researchers developed a ‘life structure’ theory of adulthood, which they applied to both genders.
• This is an example of beta bias because it assumes that how men experience adulthood is also true for women, and so minimises any differences between males and females.

3. a. Quasi experiment
b. Nominal
c. They used an independent groups design, and they were looking for a difference between men and women’s ability to draw where the water line would be in a bottle tipped to the right.

4. Possible AO1 content:
• A gender bias occurs when men and women are treated or represented differently, based on stereotypes rather than real differences.
• Psychology has tended to have an androcentric gender bias. This is when research is centred or focused on men, often to the neglect or exclusion of women.
• Alpha bias occurs when a theory assumes there is a real and enduring difference between males and females. There is a tendency to exaggerate the difference between men and women, and therefore devalue one gender.
• Beta bias occurs when a theory ignores or minimises the differences between males and females. There is a tendency to assume that insights derived from studies of men will apply equally well to women.

Possible AO3 content:
• One way to reduce gender bias is to take a feminist approach. This agrees that there are real, biologically based sex differences, but that socially determined stereotypes make a far greater contribution to perceived differences. A prerequisite for any social change with regard to gender roles must be a revision of our ‘facts’ about gender.
• A criticism of psychology research is that its methods are gender biased because they disadvantage women. For example, laboratory experiments sometimes find differences between men and women, but the controlled world of the laboratory tells us very little about the experiences of women outside of this setting.
• Another way to reduce gender bias is to develop theories that emphasise the value of women. For example, Cornwell et al. found that women are better at learning because they are more attentive, which challenges the stereotype that in any gender differences the male position must be better, and helps to change people’s misconceptions.
• One issue with beta bias is that it ignores important differences between genders. For example, by minimising the differences between men and women, it ignores the biological demands of pregnancy and childbirth.
• A final issue with gender research is that examples of gender bias remain unchallenged. For example, Darwin’s theory of sexual selection portrays women as choosy when it comes to mate selection. However, recent DNA evidence suggests that women are equally competitive when the need arises.
1. B

2. 
   - Universality is when something applies to all people irrespective of their gender and culture. For example, without an underlying set of universal psychological mechanisms, it is unclear how the adaptation of Asian children to a new culture would be able to take place.

3. 
   - Ethnocentrism refers to using our own ethnic or cultural group as a basis for judgements about other groups. Asch's American participants are seen as the 'standard' against which other groups are compared.
   
   a. One strength of conducting research in a laboratory is that it is high in internal validity. This is because variables are tightly controlled, so we can be more certain that any change in the dependent variable is due to the independent variable.
   
   b. One limitation of conducting research in a laboratory is that it may be lower in ecological validity. This is because the independent or dependent variables may be operationalised in ways that don’t represent everyday life.

4. 
   **Possible AO1 content:**
   
   - A cultural bias is the tendency to judge all people in terms of your own cultural assumptions, which distorts or biases your judgement.
   
   - There are different types of cultural bias, including alpha bias and beta bias. An alpha bias refers to theories that assume there are real and enduring differences between cultural groups. Beta bias refers to theories that ignore, or minimise, cultural differences by assuming that all people are the same.
   
   Ethnocentrism is when things are seen from the point of view of ourselves and our culture, and we evaluate other groups of people using the standards and customs of our own cultural group.
   
   Cultural relativism is the view that behaviour cannot be judged properly unless it is viewed in the context of the culture in which it originates.

   **Possible AO3 content:**
   
   - One strength of cultural research is the development of indigenous psychologies. This is the development of different groups of theories in different countries. For example, Afrocentrism disputes the view that European values are universally appropriate descriptions of human behaviour that apply equally to Europeans and non-Europeans alike.
   
   - However, one issue with cultural research is the development of culturally specific theories. For example, Afrocentric research findings are only significant to understanding behaviour in one culture. An etic approach, however, uses indigenous researchers in different cultural settings to look for universal theories of behaviour, while avoiding cultural bias.
   
   - Cultural bias can be dealt with by using better, more representative, sampling methods. For example, Smith and Bond surveyed a European textbook on social psychology and found that 66 per cent of studies were American, suggesting that non-American psychological research is severely unrepresentative, and can be improved by simply selecting different cultural groups.
   
   - One issue that can arise from culturally biased research is the formation of stereotypes. For example, before the Second World War, the US Army used a culturally biased IQ test that showed African-Americans were at the bottom of the scale, with the lowest mental age. This had a profound effect on the attitudes held by Americans towards other groups of people.
   
   - One strength of psychological research today is that researchers are more culturally aware. For example, academics often hold international conferences where researchers from different countries and cultures exchange ideas. This has helped to reduce ethnocentrism and has enabled a greater understanding of cultural relativism.
Free will and determinism (pages 38–41)

1. B

2. • Determinism is the view that a person’s behaviour is controlled by internal or external forces.
   • For example, when Stuart shows the symptoms associated with Tourette’s disorder, his behaviour is controlled by internal forces.
   • However, free will is the view that everyone has the power to make choices about their behaviour. Stuart does not appear to have free will over his behaviour.

3. • Biological determinism is the view that our behaviour is determined by our genes.
   • For example, phobias are acquired as a result of genetic factors.
   • However, environmental determinism is the view that behaviour is caused by previous learned experience.
   • For example, phobias are acquired through classical conditioning.

4. • Scientific research is based on the assumption that all events have a cause.
   • In experiments, an IV is manipulated in order to observe the causal effect on a DV.
   • Causal explanations are important in scientific research because we need to know whether an independent variable (in this case an experimental drug) really does have an effect on a dependent variable (in this case some aspect of behaviour).

5. • Hard determinism is the view that all behaviour can be predicted and there is no free will.
   • However, soft determinism is the view that, while behaviour may be predictable, individuals are free to choose their behaviour, but this is usually from within a fairly limited repertoire.

6. a. Statistical tests work out the probability of certain results occurring. They enable researchers to make a decision about whether to accept or reject a null hypothesis.
   b. $s = 1$. This is because one student who previously judged the man to be guilty changed his mind, so is the least frequently occurring sign.

7. Possible AO1 content:
   • Determinism is the view that a person’s behaviour is controlled by internal or external forces.
   • There are different types of determinism. Biological determinism is the view that our behaviour is governed by our genes. For example, research on intelligence has identified particular genes found in people with high intelligence.
   • Environmental determinism is the view that behaviour is caused by previous learned experience. For example, phobias are acquired through classical conditioning.
   • Psychic determinism is the view that our behaviour is caused by innate drives and early experiences. For example, Freud’s psychoanalytic theory of personality says that behaviour is driven by the libido, which is innate, but if it is frustrated or overindulged at a particular stage of development, then this will dominate the adult personality.
   • Free will is the view that everyone has the power to make choices about their behaviour.

Possible AO3 content:
   • One issue with determinism is that no behaviour is completely environmentally determined. For example, concordance rates for intelligence or depression suggest that genetic factors also play a role in these behaviours. This suggests that environmental determinism is unable to fully explain any behaviour.
   • Another issue with determinism is that no behaviour is completely biologically determined. For example, twin studies have found a concordance rate of 40 per cent for depression. However,
identical twins share 100 per cent of their genes, and even though there is a 40 per cent similarity, the results suggest that 60 per cent is caused by other factors, such as the environment.

- A third issue with the idea of determinism is that it provides an excuse for unacceptable behaviours. For example, Stephen Mobley killed a pizza shop manager and claimed that he was ‘born to kill’ due to a history of violence in his family. While this was rejected, it does show the wider legal issues with taking a determinist position.
- One issue with the idea of free will is the lack of support from cognitive neuroscience. For example, Libet et al. recorded activity in motor regions of the brain before a person had conscious awareness of the decision to move their finger. This shows that behavioural responses are biologically determined and humans do not always have free will.
- Another issue with the idea of free will is that free will may just be an illusion. For example, Skinner claimed that just because we can decide between different actions does not mean that we have free will. Any choices we make are determined by previous reinforcement experiences, suggesting our behaviour is environmentally determined, and free will is just an illusion.

### The nature–nurture debate (pages 42–44)

1. D

2. (Specimen answer is supplied in the exam workbook.)

3.
   - The interactionist approach in the nature–nurture debate refers to the view that the processes of nature and nurture work together rather than in opposition.
   - For example, in the area of gender it has been proposed that chromosomes and hormones are important in determining your gender.
   - However, it has also been proposed that gender develops as a result of nurture. For example, as a result of watching and imitating the same-sex parent’s gendered behaviour.
   - The interactionist approach would say that both nature and nurture work together to develop someone’s gender.

4.
   a. The outcome seems to suggest that nurture plays the most important role in learning the violin. The findings indicate that the more the violinists practise, the more able they become. Also, no ‘naturally gifted’ performers were found, which also supports the role played by nurture in learning the violin.
   b. For example, the ability to play a piece of music without making any mistakes.
   c. The violinists might have reported practising the violin more (or less) because they wanted to impress the psychologists, or for some other reason.
   d. Spearman’s rho OR Pearson’s r

5. **Possible AO1 content:**
   - The nature-nurture debate is the argument as to whether a person’s development is mainly due to their genes or to environmental influences.
   - Nature refers to innate influences. This does not refer just to characteristics determined by genes.
   - For example, in the area of gender, it has been proposed that chromosomes and hormones are important in determining your gender.
   - Nurture refers to environmental influences that are acquired through interactions with the environment. This includes both the physical and social world.
   - For example, our gender is the result of watching and imitating the same-sex parent’s gendered behaviour.

**Possible AO3 content:**
- One consideration in the nature–nurture debate is the idea that nature affects nurture. For example, a child who is genetically more aggressive might provoke an aggressive response in others. This response becomes part of the child’s environment and affects the child’s development.
• A second consideration in the nature–nurture debate is the idea that nurture affects nature. For example, Maguire et al. found that the hippocampi of London taxi drivers were larger in comparison to those of non-taxi drivers, suggesting that driving a taxi (nurture) can affect nature (the size of the hippocampi).

• One strength of the nature–nurture debate is the development of the diathesis-stress model. This suggests that you can be born with a biological vulnerability for a disorder; however, the disorder will only develop if it is triggered from a stressor in the environment as has been suggested with schizophrenia. This highlights the importance of taking an interactionist approach in psychology.

• Another consideration in the nature–nurture debate is the role of epigenetics. This is the material in each cell of the body, which acts as a ‘switch’ to turn genes on or off. Life experiences, such as nutrition or stress, control these switches. This provides further support to the idea that genes and the environment are much less separate than previously thought.

• One issue with the nature–nurture debate is that the debate has become meaningless. This is because most psychologists believe that an interactionist approach, which considers both nature and nurture, is more suitable. The interdependence of nature and nurture makes adaptive sense, as a flexible biological system that responds to the environment ensures that each individual makes maximum use of their innate qualities.

Holism and reductionism (pages 45–47)

1. D

2.
• Biological reductionism is the view that complex behaviours can be reduced to the actions of neurons, neurotransmitters, and hormones.
• For example, the biological approach attempts to explain gender as being a result of chromosomes and hormones, such as testosterone and oestrogen.
• However, environmental reductionism is the view that behaviours can be reduced to simple stimulus-response links.
• For example, the behaviourist approach attempts to explain phobias as being a result of someone associating a neutral stimulus with a painful unconditioned stimulus.

3.
• One issue with biological reductionism is that it breaks down complex phenomena into more simple components.
• For example, to say that we are ‘no more than the behaviour of a vast assembly of nerve cells’, fails to acknowledge the context and function of behaviour.
• This means that psychological explanations may be better because they take more account of these factors.

4.
a. ‘Levels of explanation’ is the reductionist belief that behaviour can be explained at different levels. For example, memory can be explained at the biological level (brain structures and brain chemicals).

b. Nominal

c. Directional. She predicted that people would be more likely to agree with the second statement than the first, so she is predicting the direction the results will take.

5.
Possible AO1 content:
• A reductionist approach involves breaking a complex behaviour into more simple components.
• There are different types of reductionism. Biological reductionism is the view that complex behaviours can be reduced to the actions of neurons, neurotransmitters, and hormones. For example, the biological approach attempts to explain gender as being a result of chromosomes and hormones, such as testosterone and oestrogen.
• Environmental reductionism is the view that behaviours can be reduced to simple stimulus-response links. For example, the behaviourist approach attempts to explain phobias as being a result of someone associating a neutral stimulus with a painful unconditioned stimulus.

• Experimental reductionism is the view that reducing complex behaviours to isolated variables is a useful strategy for conducting research. Behaviours are reduced to operationalised variables that can be manipulated and measured to determine causal relationships.

Possible AO3 content:
• A strength of biological reductionism is the development of drug therapies. For example, these have led to treatments which have resulted in a considerable reduction in institutionalisation.

• An issue with environmental reductionism is that the experiments may not apply to human behaviour. For example, the behavioural approach was developed as a result of experiments with non-human animals, but such explanations may not be appropriate for complex human behaviours. This matters because environmental reductionism ignores other possible influences on human behaviour, such as cognition or emotional factors.

• A benefit of experimental reductionism is that the research findings may not be applicable to everyday life. For example, Loftus and Palmer’s laboratory experiment provided insight into the accuracy of eyewitness testimony, but these results have not been supported by real-life research.

• An issue with a reductionist approach in general is that it can lead to errors in understanding. For example, lower levels of explanation, such as the biological level, are taken in isolation, and therefore the meaning of the behaviour might be overlooked. This matters because we do not develop an accurate understanding of human behaviour.

• It may be better to consider an interactionist point of view rather than take a reductionist approach because research has shown that the mind can affect our biology. For example, Martin et al. found that depressed patients receiving psychotherapy experienced the same changes in serotonin as those who received drug therapy. This suggests that the different levels of explanation interact.

Idiographic and nomothetic approaches to psychological investigation (pages 48–51)

1.  C

2.  An idiographic approach to psychological investigation focuses on the individual case as a means of understanding behaviour, rather than aiming to formulate general laws of behaviour.

   However, a nomothetic approach to psychological investigation attempts to formulate general laws of behaviour.

   An idiographic approach to psychological investigation uses methods such as case studies, unstructured interviews, and thematic analysis.

   However, a nomothetic approach to psychological investigation uses statistical (quantitative) techniques, such as experiments.

3.  a.

   The idiographic approach to psychological investigation focuses on the individual case as a means of understanding behaviour.

   It collects data that is qualitative, which is non-numerical data, and allows for an in-depth insight into human behaviour.

   This means that we can avoid losing some of what Sebastian calls the ‘richness and complexity’ of social life.

b.  (Specimen answer is supplied in the exam workbook.)

4.  a. Reliability refers to the consistency of a measurement. Validity refers to whether the effect is a genuine one.

   b. One way in which the reliability of a personality test could be assessed is the test–retest method. This involves giving the participants the same test on two occasions to see if the same results are obtained.
One way in which the validity of a personality test could be assessed is to compare scores on an existing test with scores on the one in which you are interested. If the test has concurrent validity, there will be a positive correlation between scores on the existing test and the one in which you are interested.

5. **Possible AO1 content:**
   - The idiographic approach to psychological investigation focuses on the individual case as a means of understanding behaviour, rather than aiming to formulate general laws of behaviour.
   - It prefers to use methods that give qualitative data, such as case studies, unstructured interviews, and thematic analysis.
   - An example of the idiographic approach in psychology is Freud’s case study of Little Hans, which consisted of over 150 pages of quotations and descriptions of events in Little Hans’ life, as well as Freud’s own interpretations of the events.
   - The nomothetic approach focuses on the formation of general laws of behaviour, and involves the study of a large number of people.
   - It prefers to use methods that give quantitative data, such as experiments.
   - An example of the nomothetic approach in psychology is the behavioural approach, which produces general laws of behaviour, through classical and operant conditioning, to explain learning in humans.

**Possible AO3 content:**
   - One strength of the idiographic approach is that it focuses on the individual. For example, Allport argued that a drastic reorientation was needed as it is only by fully understanding an individual that we can predict how an individual might act in a given situation.
   - However, one limitation of the idiographic approach is that it is not scientific. For example, it has been claimed that the approach is not sufficiently evidence-based. Because of this, critics argue that its findings are essentially meaningless and tell us little, if anything, about how people behave.
   - A further limitation of the idiographic approach is that its methods are relatively time consuming. For example, collecting large amounts of data from one person takes far more time than collecting large amounts of data from a group of people. This means that the idiographic approach is less efficient when it comes to data collection.
   - The nomothetic approach may be better than the idiographic approach because it is able to produce general predictions about behaviour. For example, it allows us to produce drugs to help treat mental disorders. It would be far too time consuming to produce personal therapies for each individual.
   - An issue with both the idiographic and nomothetic approaches is that the distinction between them may be false. For example, Holt claims that there is no such thing as a unique individual and what idiographic approaches actually do is generate general principles. Millon and Davis argue that researchers should start with the nomothetic approach and then focus on an idiographic understanding.

**Ethical implications of research studies and theory (pages 52–54)**

1. D

2. a.
   - Socially sensitive research is any research that might have direct social consequences for participants in the research or the group that they represent.
   - This research may be considered socially sensitive because the F-scale measures the different components that make up the authoritarian personality.
   - For example, the volunteer would be told that he has an authoritarian personality, and he may be uncomfortable with discovering this.
b. One way in which ethical issues can be dealt with is by giving a sensitive briefing/debriefing to the participants. This could involve giving participants information about the validity of the questionnaire and any other information that ensures they are not harmed by their experiences in the study.

c. 
- One socially sensitive research study is Zucker et al.’s research into social explanations for gender identity disorder (GID).
- This investigated boys who were concerned about their gender identity and their mothers. They found that, of the boys who were eventually diagnosed with GID, 64 per cent were also diagnosed with separation anxiety disorder, compared to 38 per cent of the boys whose symptoms were subclinical.
- It is socially sensitive because it suggests that the mother’s behaviour during attachment formation might be a factor in the development of GID, which has social consequences for the mother of these boys.

3.
- Findings obtained at one time might not hold true at another time with different researchers or different participants. Therefore, research must be replicated before a finding can be accepted as well established.
- A Type 1 error is when a researcher rejects a null hypothesis that is true. A Type 2 error is when a researcher accepts a null hypothesis that is false.
- The first research team believed the second research team should have used a one-tailed test instead of a two-tailed test. If they had done this, they would have been able to reject the null hypothesis, and would have avoided making a Type 2 error.

4.
- **Possible AO1 content:**
  - Socially sensitive research is any research that might have direct social consequences for participants in the research, or the group that they represent.
  - According to Sieber and Stanley, there are four key aspects of the research process. These are all likely to have ethical issues with social consequences. For example, a research question that asks ‘Is homosexuality inherited?’ may be damaging to members of that group.
  - The ethical implications of research into gender development are important to be aware of. For example, research on gender identity disorder has potential social consequences for people represented by the research. For example, if a biological cause is identified, then it might help society to be more accepting, but it may also cause harm to individuals if it is assumed that transsexualism is inevitable.

- **Possible AO3 content:**
  - One issue with socially sensitive research is the wider impact of the research itself. For example, there is the potential for an indirect impact on the participants’ families or co-workers. This means that it isn’t enough to simply safeguard the interests of the individual in research.
  - Another issue with socially sensitive research is that it may disadvantage marginalised groups in society. For example, many groups, such as those with gender identity disorder, are often excluded from, or misrepresented in, psychological research. This matters because it means that these groups may then miss out on any potential benefits the research brings.
  - One issue with the current ethical guidelines is that researchers may inflict harm on a group of people. For example, they do not ask researchers to consider how their research might be used by others, or how they could form, or shape, public policy.
  - One solution to the issue of conducting socially sensitive research is to avoid it. For example, researchers could avoid researching sensitive areas such as gender, homosexuality, race, or addiction. However, Sieber and Stanley argue that this is an avoidance of responsibility by psychologists, who have a duty to conduct socially sensitive research.
  - Another solution to the issue of conducting socially sensitive research is for researchers to engage in policy matters. For example, in order to reduce the likelihood of misuse of data, psychologists should take a proactive role in taking responsibility for what happens with their findings.