Please check the examination details below before entering your candidate information

Candidate surname: StemUp Model Solution

Other names:

Centre Number

Candidate Number

Pearson Edexcel International Advanced Level

Tuesday 27 May 2025

Morning (Time: 1 hour 30 minutes)

Paper reference **WPS03/01**

Psychology

International Advanced Level

UNIT 3: Applications of Psychology

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **ALL** questions in Section A, and **ALL** questions from **EITHER** Option 1 criminological psychology **OR** Option 2 health psychology.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The list of formulae and statistical tables are printed at the start of this paper.
- Candidates may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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FORMULAE AND STATISTICAL TABLES

Standard deviation (sample estimate)

$$\sqrt{\left(\frac{\sum(x-\bar{x})^2}{n-1}\right)}$$

Spearman's rank correlation coefficient

$$1-\frac{6\sum d^2}{n\left(n^2-1\right)}$$

Critical values for Spearman's rank

	Level of significance for a one-tailed test				
	0.05	**0.025**	**0.01**	**0.005**	**0.0025**
	Level of significance for a two-tailed test				
N	**0.10**	**0.05**	**0.025**	**0.01**	**0.005**
5	0.900	1.000	1.000	1.000	1.000
6	0.829	0.886	0.943	1.000	1.000
7	0.714	0.786	0.893	0.929	0.964
8	0.643	0.738	0.833	0.881	0.905
9	0.600	0.700	0.783	0.833	0.867
10	0.564	0.648	0.745	0.794	0.830
11	0.536	0.618	0.709	0.755	0.800
12	0.503	0.587	0.678	0.727	0.769
13	0.484	0.560	0.648	0.703	0.747
14	0.464	0.538	0.626	0.679	0.723
15	0.446	0.521	0.604	0.654	0.700
16	0.429	0.503	0.582	0.635	0.679
17	0.414	0.485	0.566	0.615	0.662
18	0.401	0.472	0.550	0.600	0.643
19	0.391	0.460	0.535	0.584	0.628
20	0.380	0.447	0.520	0.570	0.612
21	0.370	0.435	0.508	0.556	0.599
22	0.361	0.425	0.496	0.544	0.586
23	0.353	0.415	0.486	0.532	0.573
24	0.344	0.406	0.476	0.521	0.562
25	0.337	0.398	0.466	0.511	0.551
26	0.331	0.390	0.457	0.501	0.541
27	0.324	0.382	0.448	0.491	0.531
28	0.317	0.375	0.440	0.483	0.522
29	0.312	0.368	0.433	0.475	0.513
30	0.306	0.362	0.425	0.467	0.504

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

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Chi-squared distribution formula

$$X^2 = \sum \frac{(O-E)^2}{E} \qquad df = (r-1)(c-1)$$

Critical values for chi-squared distribution

	Level of significance for a one-tailed test					
	0.10	**0.05**	**0.025**	**0.01**	**0.005**	**0.0005**
	Level of significance for a two-tailed test					
df	**0.20**	**0.10**	**0.05**	**0.025**	**0.01**	**0.001**
1	1.64	2.71	3.84	5.02	6.64	10.83
2	3.22	4.61	5.99	7.38	9.21	13.82
3	4.64	6.25	7.82	9.35	11.35	16.27
4	5.99	7.78	9.49	11.14	13.28	18.47
5	7.29	9.24	11.07	12.83	15.09	20.52
6	8.56	10.65	12.59	14.45	16.81	22.46
7	9.80	12.02	14.07	16.01	18.48	24.32
8	11.03	13.36	15.51	17.54	20.09	26.12
9	12.24	14.68	16.92	19.02	21.67	27.88
10	13.44	15.99	18.31	20.48	23.21	29.59
11	14.63	17.28	19.68	21.92	24.73	31.26
12	15.81	18.55	21.03	23.34	26.22	32.91
13	16.99	19.81	22.36	24.74	27.69	34.53
14	18.15	21.06	23.69	26.12	29.14	36.12
15	19.31	22.31	25.00	27.49	30.58	37.70
16	20.47	23.54	26.30	28.85	32.00	39.25
17	21.62	24.77	27.59	30.19	33.41	40.79
18	22.76	25.99	28.87	31.53	34.81	42.31
19	23.90	27.20	30.14	32.85	36.19	43.82
20	25.04	28.41	31.41	34.17	37.57	45.32
21	26.17	29.62	32.67	35.48	38.93	46.80
22	27.30	30.81	33.92	36.78	40.29	48.27
23	28.43	32.01	35.17	38.08	41.64	49.73
24	29.55	33.20	36.42	39.36	42.98	51.18
25	30.68	34.38	37.65	40.65	44.31	52.62
26	31.80	35.56	38.89	41.92	45.64	54.05
27	32.91	36.74	40.11	43.20	46.96	55.48
28	34.03	37.92	41.34	44.46	48.28	56.89
29	35.14	39.09	42.56	45.72	49.59	58.30
30	36.25	40.26	43.77	46.98	50.89	59.70
40	47.27	51.81	55.76	59.34	63.69	73.40
50	58.16	63.17	67.51	71.42	76.15	86.66
60	68.97	74.40	79.08	83.30	88.38	99.61
70	79.72	85.53	90.53	95.02	100.43	112.32

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

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Wilcoxon Signed Ranks test process

- Calculate the difference between two scores by taking one from the other
- Rank the differences giving the smallest difference Rank 1

  Note: do not rank any differences of 0 and when adding the number of scores, do not count those with a difference of 0, and ignore the signs when calculating the difference
- Add up the ranks for positive differences
- Add up the ranks for negative differences
- T is the figure that is the smallest when the ranks are totalled (may be positive or negative)
- N is the number of scores left, ignore those with 0 difference

Critical values for the Wilcoxon Signed Ranks test

	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
n	0.1	0.05	0.02
N=5	0	–	–
6	2	0	–
7	3	2	0
8	5	3	1
9	8	5	3
10	11	8	5
11	13	10	7
12	17	13	9

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SECTION A

Developmental Psychology

Answer ALL questions. Write your answers in the spaces provided.

1 Gianna is six months old. Her father likes to play games with her. He shows Gianna her favourite teddy bear. He hides the teddy bear while she is watching but she does not look for it once it is out of sight.

(a) Identify which stage of development Gianna is in, according to Piaget's stages of cognitive development.

(1)

Gianna is in the sensorimotor stage (birth to about 2 years), as she is six months old.

(b) Describe, using your knowledge of Piaget's stages of cognitive development, why Gianna does not look for the teddy bear.

(2)

At six months Gianna has not yet developed object permanence, which Piaget said appears at around eight months. Once the teddy bear is hidden she cannot form a mental representation of it, so to her it no longer exists, which is why she does not search for it.

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(c) Gianna's brother, Micah, is five years old. His teacher showed him two equal glasses of water and asked him if the quantity of the liquid was the same in each glass. Micah said yes. The teacher then poured one of the glasses of water into a taller, thinner glass. The teacher asked Micah for a second time if the quantity of the liquid in each glass was still the same, and he said no.

Describe why Micah might think that one glass has more liquid than the other, when asked for the second time.

(2)

Micah is five, so he is in the pre-operational stage and cannot yet conserve. His thinking is dominated by how things look rather than logic, and he centres on one feature, the height of the liquid. As the taller, thinner glass has a higher water level he thinks it holds more, and he cannot mentally reverse the pouring.

(Total for Question 1 = 5 marks)

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2 Mary Ainsworth developed the Strange Situation procedure to understand the types of attachment in children.

(a) Explain **one** improvement that could be made to the Strange Situation procedure.

(2)

Fathers (and other caregivers) could be included in the eight episodes, as Ainsworth only observed the infant with the mother and a female stranger. This would increase validity, as attachment type would be judged from the child's relationships with all main caregivers, not just the mother.

Attachment types in children have also been studied cross-culturally.

(b) Explain **one** reason why cross-cultural research is used to study attachment types in children.

(2)

Cross-cultural research, such as studies in Germany, Israel and Japan, compares attachment types across cultures with different childrearing practices. This shows whether secure (Type B) attachment is universal and innate, or whether Ainsworth's American findings were ethnocentric and the norms are culturally specific.

(Total for Question 2 = 4 marks)

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3 Bibha and Dalvie carried out an overt observation at their local nursery to investigate which types of play were more successful at encouraging children to play together. They introduced the children to activities such as building with blocks, drawing pictures, playing hide and seek and completing puzzles.

(a) Describe how Bibha and Dalvie could have carried out their overt observation at the local nursery.

(2)

Bibha and Dalvie would sit in the nursery room where the children could see them and knew they were being watched, and set out the four activities. Using a tally chart, they would record each time children played together in each activity, eg building with blocks, over the same set time period.

The data gathered by Bibha and Dalvie in the observation is shown in **Table 1**.

	Types of play activity			
	Building with blocks	**Drawing a picture**	**Playing hide and seek**	**Completing a puzzle**
Total number of children who played together in each activity	**8**	**5**	**10**	**6**

Table 1

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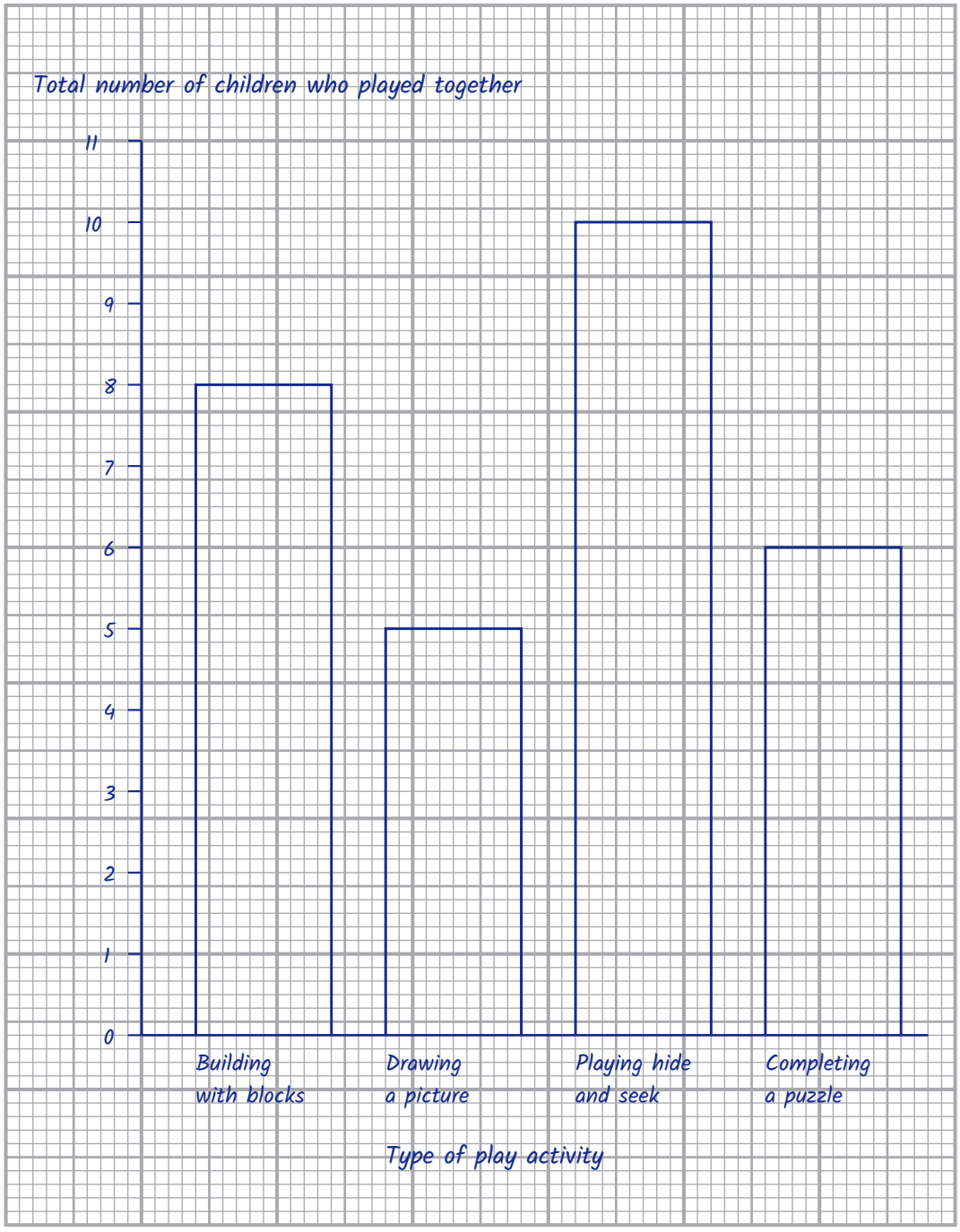
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(b) Draw a bar chart to illustrate the data given in **Table 1**.

(3)

Title

A bar chart to show the total number of children who played together in each type of play activity



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(c) Describe **one** weakness of Bibha and Dalvie using an overt observation to investigate which types of play encouraged playing together.

(2)

As the children knew Bibha and Dalvie were watching them, their play may have been affected by researcher effects. The children may have joined the activities they thought the observers wanted them to play together in, so the tally of children playing together would not show their natural play, making the findings less valid.

(Total for Question 3 = 7 marks)

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4 Evaluate Erikson's stages of psychosocial development.

(8)

Erikson proposed eight predetermined psychosocial stages covering the whole lifespan, from infancy to old age. Each stage has an approximate age range in which a psychosocial crisis between two conflicting states must be resolved, for example trust vs mistrust in roughly the first 18 months, autonomy vs shame and doubt in early childhood, identity vs role confusion in adolescence, generativity vs stagnation in middle adulthood (stage 7) and ego integrity vs despair in late adulthood (stage 8). Successfully resolving each crisis builds a characteristic strength, or virtue, such as hope or fidelity, which is then used to resolve later crises, while an unresolved crisis can cause difficulties at later stages. Development is shaped by social relationships and culture rather than only biological drives.

A strength is that the theory covers the whole lifespan from birth to death. Freud's psychosexual stages end at adolescence, whereas Erikson's later stages account for the personal growth and change people experience after the age of 40, such as caring for the next generation, so the theory gives a more realistic and valid account of how personality develops. It also stresses social influences, which makes it useful, for example in helping teachers and parents support teenagers through identity vs role confusion.

However, the theory is largely descriptive. It describes what crisis occurs at each stage but does not explain a universal mechanism by which a crisis is resolved, or exactly what experiences are needed for a successful outcome. Its concepts, such as ego integrity, are also hard to operationalise and test scientifically, so the stages are difficult to falsify.

In addition, McCrae and Costa (1997) found a common personality structure (the five factors) across many cultures, suggesting that personality traits are stable rather than

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discrete and do not develop through fixed stages. The fixed age ranges may also be culturally biased, as Erikson's ideas were based on Western societies where, for example, the timing of identity formation may differ from other cultures.

In conclusion, Erikson's theory is valuable because it describes development across the whole lifespan and highlights social influences, but because it is descriptive, hard to test and challenged by evidence of stable personality traits, it is best seen as a useful framework rather than a fully supported explanation.

(Total for Question 4 = 8 marks)

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5 In developmental psychology, you will have learned about one of the following contemporary studies in detail:

- Ashdown and Bernard (2012)
- Ding et al. (2014)

Assess whether your contemporary study has furthered our understanding of developmental psychology.

(8)

Chosen Study: *Ashdown and Bernard (2012)*

Ashdown and Bernard (2012) aimed to test whether the You Can Do It! (YCDI) Early Childhood social and emotional learning curriculum improved the social-emotional development, wellbeing and academic achievement of young children. The sample was 99 children (45 females and 54 males) in preparatory and grade 1 classes, and four teachers, at a Catholic school in Melbourne, Australia. The children were of low socioeconomic status and about two-thirds had English as a second language. Some classes received the YCDI programme, which taught confidence, persistence, organisation, getting along and resilience, while others did not. Teachers were trained in YCDI and completed two questionnaires about each child before and after the programme. The YCDI children showed greater gains in social-emotional competence and wellbeing and fewer problem behaviours.

The study has furthered our understanding because it showed that social and emotional competences, such as relationship skills, can be taught to young children, which shows their importance for children's welfare and development. As the children were of low socioeconomic status, a group found in many cultures, the findings suggest programmes like YCDI could help children manage their emotions in many educational settings, so the study has practical applications.

However, the findings come from one school in Australia, a Western culture, with a small sample, so they may not generalise to other schools or to non-Western cultures where

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social skills are valued differently. This limits how far the study furthers our understanding of development more widely.

Also, the teachers who rated the children knew them well and knew which children had taken part in the programme, so their questionnaire responses may have been biased by expectations. This means we may not have a full understanding of the true effects of the programme on development, and the follow-up period was short, so long-term effects are unknown.

Overall, Ashdown and Bernard (2012) has furthered our understanding by showing that social-emotional skills can be improved in young children, but the narrow sample and possible teacher bias mean its contribution is limited until it is replicated in other cultures with blind, objective measures.

(Total for Question 5 = 8 marks)

TOTAL FOR SECTION A = 32 MARKS

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SECTION B

Answer ALL questions from EITHER OPTION 1: CRIMINOLOGICAL PSYCHOLOGY OR OPTION 2: HEALTH PSYCHOLOGY.

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

If you answer questions in Option 1, put a cross in the box ☒ .

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

6 Hannah spends several hours a day watching videos on a social media platform. She watches videos where people challenge each other to behave in criminal and anti-social ways. The videos do not show the people being punished for their behaviours. Hannah has recently been caught stealing from a shop and using offensive language towards the other customers.

Describe how social learning from the media may account for Hannah's criminal and anti-social behaviour.

Hannah has observed models in the videos behaving criminally, and she sees no negative consequences or punishment for them, so she experiences vicarious reinforcement. She may identify with these people, retain their behaviour and has reproduced it by stealing from the shop and using offensive language.

(Total for Question 6 = 2 marks)

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7 Levi is a psychologist at a prison and wants to investigate whether Cognitive Behavioural Therapy (CBT) would be an effective treatment for offenders convicted of crimes such as assault. He arranged for the offenders to attend a six-week Cognitive Behavioural Therapy (CBT) programme.

He asked the offenders to complete a self-report questionnaire at the beginning of the therapy to rate their levels of aggression. Levi also asked them to complete the same self-report questionnaire at the end of the six-week period so that he could measure the effectiveness of the programme.

(a) Explain **one** positive effect and **one** negative effect of Levi using a Cognitive Behavioural Therapy (CBT) programme to treat the offenders.

(4)

Positive effect

CBT would help the offenders to identify and re-evaluate the distorted thoughts that led them to commit assault. By understanding what triggers their anger and challenging these thoughts, they can change their behaviour so the aggression is less likely to happen again, which reduces their self-reported aggression.

Negative effect

The offenders may lack commitment as attending the programme may be seen as part of their prison sentence. They may not engage in tasks such as keeping a reflective diary of their thoughts when angry, or attend only to look good for parole, which would reduce the effectiveness of the six-week programme.

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(b) Describe **two** reasons why Levi may have chosen to gather primary data rather than secondary data for his investigation.

(4)

1 *Primary data allows Levi to ask questions that relate specifically to the effectiveness of his CBT programme on aggression in offenders convicted of assault. Secondary data might focus on other types of crime or on the procedures of CBT rather than on aggression in assault offenders.*

2 *If Levi used secondary data, the rating scales used to measure aggression may vary across studies, so the results may not be comparable. Primary data means he uses one questionnaire before and after the six-week programme, so he can directly compare scores to measure its effectiveness.*

(Total for Question 7 = 8 marks)

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8 Atisha carried out an investigation into whether personality traits were linked with different criminal acts and anti-social behaviour.

Atisha conducted a meta-analysis of 200 articles about criminals, found in a well-established database. She found that there were two key personality traits mentioned in the articles, psychopathic traits, and low self-control. She calculated the mean number of criminal acts committed by the two different personality traits.

The results of the investigation are shown in **Table 2**.

	Mean number of acts committed by criminals with psychopathic traits	**Mean number of acts committed by criminals with low self-control**
Violent crime	25.5	14.2
Anti-social behaviour	12.8	21.7
Substance abuse	16.1	23.4

Table 2

(a) Atisha concluded that criminals who are judged to have low self-control are more likely to engage in substance abuse than violent crime.

Justify Atisha's conclusion with reference to the data in **Table 2**.

(2)

Criminals with low self-control had a mean of 23.4 acts of substance abuse compared with 14.2 violent crimes, which is 9.2 more. This shows that this personality trait is linked to the type of criminal behaviour, as low self-control is associated more with substance abuse than violence.

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(b) Explain **one** way that Atisha could improve her investigation in terms of reliability.

(2)

Atisha could ask another researcher to analyse the 200 articles independently using the same coding categories for personality traits and crimes. If they agree on the links found, there is inter-rater reliability, reducing researcher bias and making the findings more objective and consistent.

(c) Atisha arranged to do a follow-up study at her local prison. She used a semi-structured interview to explore why the prisoners may have been involved in certain types of criminal behaviour.

Describe **one** ethical guideline that could be considered when using semi-structured interviews.

(2)

Right to withdraw: the prisoners should be told, in line with BPS guidelines, that they can stop the interview at any point and withdraw their data. This is because the follow-up questions may be personal and distressing, and prisoners may feel pressure to continue.

(Total for Question 8 = 6 marks)

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9 Evaluate the effect of weapons focus on the reliability of eye-witness testimony.

(8)

Weapons focus is when a witness's attention is drawn to a weapon, such as a gun or knife, during a crime, so they pay less attention to other important details such as the perpetrator's face or clothing. Because attention is narrowed, these details are not encoded properly into memory, making them more likely to be forgotten or recalled inaccurately. The weapon also creates high levels of stress and arousal above the optimum level for memory function. The type of weapon may affect how much attention it draws, as unusual or threatening objects capture more attention.

Loftus et al. (1987) supports weapons focus. Participants saw a man in a restaurant holding either a gun or a cheque. Eye movements showed more fixations on the gun, and in the weapon condition only 11% of participants correctly identified the man in a line-up, fewer than in the cheque condition. This suggests that a weapon makes eye-witness testimony unreliable. However, this was a laboratory study using slides, so participants knew the situation was not real, which reduces ecological validity.

In contrast, Yuille and Cutshall (1986) studied witnesses to a real-life shooting in Canada and found their recall was highly accurate and changed little over five months, despite a weapon being present. This suggests weapons focus may not negatively affect memory in real crimes, although the sample was only 13 witnesses of one event, so it is hard to generalise.

Carlson et al. (2016) found that the unusualness and threat of the weapon matter: only weapons creating a life-threatening situation reduced recall, so the effect depends on the situation. Weapons focus can also be reduced by the cognitive interview, for example by

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asking witnesses to recall events in a different order, such as starting at the end, to trigger memories, which can make their testimony more reliable.

In conclusion, laboratory evidence shows weapons focus can reduce the reliability of eye-witness testimony, but real-life evidence suggests the effect is smaller, and it depends on the threat posed by the weapon, so testimony about peripheral details should be treated with caution rather than dismissed.

(Total for Question 9 = 8 marks)

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10 Assess whether using a psychological (case) formulation can help us understand the offending behaviour of an individual.

(8)

A psychological (case) formulation is a process used with an individual offender to give a psychological understanding of their current difficulties, which then leads to a treatment plan to address them. It was designed mainly for offenders diagnosed with a personality disorder who are judged to be high risk. A multi-disciplinary team, such as forensic psychologists, medical staff and probation officers, gathers information from interviews, records and assessments. It considers the offender's history, such as childhood experiences and past behaviour patterns, as well as current problems and triggers, to explain why the person offended and what keeps the behaviour going, and the formulation is reviewed as new information appears.

A strength is that the formulation focuses on the individual and targets their personal difficulties, so it helps us understand that person's particular offending behaviour rather than applying a general explanation. For example, Wolpe and Turkat (1985) used patterns in a person's past behaviour to identify current environmental triggers, which helped explain the behaviour so that a successful treatment programme could be developed. This shows a formulation can lead to practical, tailored interventions.

Combining information from several professionals also gives a fuller picture of the offender, as it draws on psychological, medical and social factors, so the explanation is more holistic.

However, as its main use was with offenders who have personality disorders, it may not help us understand the offending behaviour of all individuals. It also depends on the skill of the team: if staff are not sufficiently trained, or rely on the offender's own self-report which may be dishonest, the formulation may be inaccurate and not show what has really

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driven the offending. It is also time-consuming and costly, and because each one is unique it is hard to test its validity scientifically.

Overall, a case formulation can help us understand an individual's offending because it is personalised and links past and present factors, but how useful it is depends on the type of offender and the quality of the professionals and information involved.

(Total for Question 10 = 8 marks)

TOTAL FOR SECTION B OPTION 1 = 32 MARKS

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SECTION B

If you answer the questions in Option 2, put a cross in the box ☒ .

OPTION 2: HEALTH PSYCHOLOGY

11 Hannah watches videos on a social media platform. She shares the videos several times a day with her friends. Hannah gets very upset if they do not acknowledge that they have seen them. She has experienced chest pains when her friends do not react positively or like the videos she has shared. Hannah has recently been diagnosed with high levels of stress.

Describe how cortisol may account for Hannah's high levels of stress.

When Hannah's friends do not react to or like her videos, she perceives this as a stressor, so the HPA axis releases a surge of cortisol. As she shares videos several times a day, she has prolonged cortisol production, which keeps her body aroused and leads to physical symptoms of stress such as chest pains.

(Total for Question 11 = 2 marks)

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12 Levi is a doctor at a health clinic and wants to investigate whether Cognitive Behavioural Therapy (CBT) would be an effective treatment for anxiety disorders such as generalised anxiety disorder. He arranged for his patients to attend a six-week Cognitive Behavioural Therapy (CBT) programme.

He asked his patients to complete a self-report questionnaire at the beginning of the therapy to rate their levels of anxiety. Levi also asked them to complete the same self-report questionnaire at the end of the six-week period so that he could measure the effectiveness of the programme.

(a) Explain **one** positive effect and **one** negative effect of Levi using a Cognitive Behavioural Therapy (CBT) programme to treat anxiety disorders.

(4)

Positive effect

CBT would help the patients to identify and re-evaluate the irrational thoughts they have when they feel anxious. By understanding what triggers their anxiety and challenging these distorted thoughts, they can change them so the anxiety is less likely to recur, reducing their self-reported anxiety scores.

Negative effect

The patients may lack commitment, as CBT can be uncomfortable when they have to face anxious thoughts and re-live difficult experiences. They may not complete tasks such as keeping a reflective diary of their thoughts during anxiety, or may drop out, which reduces the effectiveness of the programme.

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(b) Describe **two** reasons why Levi may have chosen to gather primary data rather than secondary data for his investigation.

(4)

1 *Primary data allows Levi to ask questions that relate specifically to the effectiveness of his CBT programme for anxiety disorders such as generalised anxiety disorder. Secondary data might focus on other mental health disorders or on the procedures of CBT rather than anxiety.*

2 *If Levi used secondary data, the rating scales used to measure anxiety may vary across studies, so the results may not be comparable. Primary data means he uses one questionnaire before and after the six-week programme, so he can directly compare scores to measure its effectiveness.*

(Total for Question 12 = 8 marks)

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13 Atisha carried out an investigation into whether personality traits were linked with stress.

Atisha conducted a meta-analysis of 200 articles about stress in social situations, found in a well-established database. She found that there were two key personality traits mentioned in the articles, high sense of control and introverted personality. She calculated the mean number of episodes of anxiety experienced by the two different personality traits.

The results of the investigation are shown in **Table 3**.

	Mean number of episodes of anxiety in those with high sense of control	**Mean number of episodes of anxiety in those with an introverted personality**
Attending a party	25.5	14.2
Going to work or school	12.8	21.7
Starting conversations	16.1	23.4

Table 3

(a) Atisha concluded that people with an introverted personality are more likely to experience an episode of anxiety when starting conversations than from attending a party.

Justify Atisha's conclusion with reference to the data in **Table 3**.

(2)

People with an introverted personality had a mean of 23.4 episodes of anxiety when starting conversations compared with 14.2 when attending a party, which is 9.2 more. This shows that personality traits affect the anxiety people experience in different social situations.

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(b) Explain **one** way that Atisha could improve her investigation in terms of reliability.

(2)

Atisha could ask another researcher to analyse the 200 articles independently using the same coding categories for personality traits and anxiety. If they agree on the links found, there is inter-rater reliability, reducing researcher bias and making the findings more objective and consistent.

(c) Atisha arranged to do a follow-up study at her local health clinic. She used a semi-structured interview to explore why the patients may have found certain social situations difficult.

Describe **one** ethical guideline that could be considered when using semi-structured interviews.

(2)

Right to withdraw: the patients should be told, in line with BPS guidelines, that they can stop the interview at any point and withdraw their data. This is because the follow-up questions may be personal and distressing about social situations they find difficult.

(Total for Question 13 = 6 marks)

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14 Evaluate the use of serotonin and norepinephrine reuptake inhibitors (SNRIs) as a treatment for anxiety.

(8)

Serotonin and norepinephrine reuptake inhibitors (SNRIs), such as venlafaxine, are drug treatments for anxiety disorders such as generalised anxiety disorder. They block the reuptake of serotonin and norepinephrine into the presynaptic neuron, so more of these neurotransmitters stay in the synapse and continue to stimulate the postsynaptic neuron. Higher levels of serotonin and norepinephrine over time are thought to promote neuroplasticity in the brain. SNRIs can increase anxiety in the short term and take about a week to 10 days to start reducing these feelings, with full effects taking several weeks. They also have side effects such as nausea and sleep disturbance.

A strength is that there is evidence that SNRIs are effective. Silverstone and Ravindran (2001) studied 359 outpatients and found venlafaxine was effective in reducing anxiety and was well tolerated, which supports its use as a treatment. Drugs are also easy to take and need little effort from the patient compared with therapies, so they suit people who are too anxious to engage with psychological treatment.

The idea that SNRIs promote neuroplasticity is also a strength, as the brain circuitry can be modified, so over time the brain may become better at resisting anxiety rather than just masking it.

However, the side effects of SNRIs, such as nausea, sleep problems and the initial increase in anxiety, are unpleasant, so patients may stop taking them before they work, making them less effective in practice. Stopping suddenly can also cause withdrawal symptoms.

Also, SNRIs only treat the symptoms of anxiety and not the cause, such as faulty thinking

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or stressful life events, so anxiety may return when the drugs are stopped. Patients may benefit from combining SNRIs with a psychological therapy such as CBT, which deals with the cause.

In conclusion, SNRIs are an effective, well-tolerated short to medium term treatment for anxiety, but their side effects, delayed action and focus on symptoms mean they work best alongside psychological therapy.

(Total for Question 14 = 8 marks)

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15 Assess brain regions as an explanation for stress.

(8)

Several brain regions are involved in stress. When a stressor is detected, the hypothalamus is activated and triggers the hypothalamic-pituitary-adrenal (HPA) axis; it releases CRH, which causes the pituitary gland to release ACTH, which stimulates the adrenal cortex to release cortisol. The amygdala is a processing centre for emotions and mediates our fear responses to stimuli we see as stressors, signalling the hypothalamus. The prefrontal cortex (PFC) acts as a control centre that regulates our emotional responses to stress, and the hippocampus helps to switch off the stress response, with reduced hippocampal volume being a risk factor for stress.

A strength of this explanation is that it shows how brain regions produce the hormonal response to stress, as activation of the HPA axis leads to cortisol release, which prepares the body for fight or flight. This links biological structures to the physical symptoms of stress, so it has explanatory power.

However, the PFC is itself sensitive to stress exposure, so dysfunctions in its neural pathways may be a result of stress rather than a cause. This means it is hard to establish cause and effect, as much of the evidence is correlational. Similarly, long-term stress makes decision making more difficult, as the amygdala becomes disinhibited when the PFC's control is weakened, showing that the regions interact rather than acting alone.

The vulnerability hypothesis suggests that a smaller hippocampal volume is a genetic risk factor for developing stress-related disorders, which suggests that stress is not explained solely by brain regions but also by genes. The explanation is also reductionist, as it ignores psychological factors such as how a person appraises a stressor, personality and social

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support, which explain why people differ in their stress.

In conclusion, brain regions such as the hypothalamus, amygdala, PFC and hippocampus clearly play a key role in the stress response, but because cause and effect is unclear and genetic and psychological factors are also involved, brain regions are only a partial explanation for stress.

(Total for Question 15 = 8 marks)

TOTAL FOR SECTION B OPTION 2 = 32 MARKS
TOTAL FOR PAPER = 64 MARKS

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