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Centre number

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Candidate number

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Surname

StemUp Model Solution

Forename(s)

Candidate signature

I declare this is my own work.

A-level PSYCHOLOGY

Paper 1 Introductory topics in psychology

Time allowed: 2 hours

Materials

For this paper you may use:

- a calculator.

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions. You must answer the questions in the spaces provided. Do **not** write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

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

For Examiner's Use	
Section	Mark
A	
B	
C	
D	
TOTAL	



J U N 2 2 7 1 8 2 1 0 1

Section A**Social influence**

Answer **all** questions in this section.

0	1
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Which factors affecting minority influence are illustrated by the following examples?

For **each** example, write the correct factor in the space provided.

[3 marks]

Members of a religious group give up their Saturday mornings to distribute leaflets about the importance of worship.

Commitment

An environmental group acknowledges that recycling can be time-consuming while emphasising its importance for the future of the planet.

Flexibility

All of the members of the 'Flat Earth Society' agree that the Earth is flat and not round.

Consistency (synchronic consistency)

0	2
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Name **one** explanation of resistance to social influence.

[1 mark]

Social support (the presence of an ally who also resists).



0 3

A teacher was absent and left work for students to complete during the lesson. Some students in the class did not do the work their teacher had left for them.

Use **one** possible explanation of resistance to social influence to explain why this happened.

[4 marks]

Social support could explain this. Resistance to social influence is more likely when other people are also seen to resist, as they act as disobedient role models.

'Some students' did not do the work, so once one or two students openly ignored the teacher's instructions, the others gained confidence to do the same. The more students who refused, the more the responsibility for disobeying was shared (diffused), so each student may have reasoned they were less likely to be punished individually.

Extra space *This is supported by Milgram's variation where two confederate teachers refused to continue: obedience fell from 65% to 10%.*

Turn over for the next question

Turn over ►



0 4

Describe how situational variables have been found to affect obedience. Discuss what these situational variables tell us about why we obey.

[16 marks]

You may use this space to plan your answer.

Milgram (1963) found that 65% of participants obeyed an experimenter in a grey lab coat and gave the maximum 450V shock. In later variations he altered situational variables to see their effect on obedience.

Proximity: when the teacher and learner were in the same room, obedience fell to 40%, and in the touch proximity condition, where the teacher had to force the learner's hand onto a shock plate, it fell to 30%. When the experimenter left the room and gave orders over the telephone, obedience dropped to 20.5%, and many participants pretended to give shocks.

Location: when the study moved from prestigious Yale University to a run-down office block in Bridgeport, obedience fell to 47.5%.

Uniform: when the experimenter's role was taken by an 'ordinary member of the public' in everyday clothes, obedience fell to 20%. In a field experiment, Bickman (1974) found that people in New York were about twice as likely to obey a confederate dressed as a security guard (92%) than one in ordinary clothes or a milkman's uniform.

These variables help explain why we obey through the agentic state explanation. When the experimenter was close by, participants saw



themselves as an agent carrying out his wishes and so felt less personal responsibility. When he gave orders by phone, his reduced proximity allowed participants to shift back into an autonomous state, taking responsibility for their actions and so disobeying.

Location and uniform can be explained by legitimacy of authority. Uniforms are visible symbols of authority within a social hierarchy, and Yale gave the study a legitimate, prestigious setting, so participants trusted that the authority figure had the right to give orders. In the office block the authority seemed less genuine, so fewer obeyed. Hofling et al. (1966) supports this: 21 out of 22 nurses obeyed an unknown 'doctor' over the phone to give 20mg of an unfamiliar drug, twice the maximum dose. This suggests that the legitimate hospital setting and hierarchy may be more powerful than proximity, since the orders were not even given face to face. However, there are methodological problems. Orne and Holland (1968) argued that participants may have realised the procedure was faked, and Milgram's variations were even more contrived, for example a 'member of the public' giving orders, so this may have increased suspicion and the results may reflect demand characteristics rather than genuine obedience. Mandel (1998) also questioned the ecological validity of Milgram's lab research, arguing that it cannot explain real life atrocities such as the Holocaust, where perpetrators obeyed even when authority was absent. On the other hand, Bickman's study was a field experiment with high ecological validity, so it is stronger evidence that uniform affects obedience in everyday settings. Finally, situational explanations do not explain individual differences: even in the most obedient conditions some participants resisted. Adorno et al. (1950) proposed the authoritarian personality, a dispositional explanation suggesting that people with rigid, conventional attitudes and submissiveness

Turn over ►

to authority, rooted in harsh parenting, are more likely to obey. Elms and Milgram (1966) found that fully obedient participants scored higher on the F-scale, which suggests that why we obey is best explained by an interaction between situational and dispositional factors rather than situational variables alone.

Extra space



[illegible]

Section B**Memory**

Answer **all** questions in this section.

0 5

Briefly outline **one** way in which researchers have investigated the capacity of short-term memory.

[2 marks]

Jacobs (1887) used the digit span technique: participants heard a sequence of digits or letters and had to recall it in order immediately. One item was added each trial until recall failed, giving a mean span of 9.3 digits and 7.3 letters.

0 6

Briefly outline **one** way in which researchers have investigated the duration of short-term memory.

[2 marks]

Peterson and Peterson (1959) showed participants a consonant trigram (e.g. KBF), then made them count backwards in threes for 3 to 18 seconds to prevent rehearsal. Recall fell from about 90% after 3 seconds to about 10% after 18 seconds.



0 7

A student showed participants a film of a car accident. After watching the film, each participant was asked to write down what they had seen. The student was surprised to see that the descriptions of the accident were quite different.

The student's psychology teacher suggested that the participants' recall might be improved by using cognitive interview techniques.

Suggest **two** cognitive interview techniques that could be used to improve participants' recall of the film.

[4 marks]

Report everything: participants should write down every detail of the film, even if it seems trivial or irrelevant, such as the colour of the cars or the weather. Recalling one minor detail may act as a cue that triggers recall of other, more important information.

Change order: participants should recall the accident in a different chronological order, for example starting from the moment of impact and working back to the start of the film. This stops them relying on their schema for a typical car accident and filling gaps with what they expect, so

Extra space *recall is more accurate.*

Turn over for the next question

Turn over ►



0 8

Rory is talking with his grandparent and playing a game on his phone at the same time. The game involves matching blocks of the same colour to complete vertical and horizontal lines. It is only when his grandparent asks him to describe his route to school that Rory puts down his game so he can concentrate fully on his answer.

Discuss the working memory model. Refer to Rory's behaviour in your answer.

[16 marks]

You may use this space to plan your answer.

The working memory model (Baddeley and Hitch, 1974) describes short-term memory as an active processor made up of several components rather than a single unitary store.

The central executive (CE) is a supervisory system that directs attention and allocates the limited processing resources to the slave systems. It has a very limited capacity and does not store information itself.

The phonological loop processes auditory information and is coded acoustically. It has two parts: the phonological store (the 'inner ear'), which holds the words we hear, and the articulatory process (the 'inner voice'), which allows maintenance rehearsal. Its capacity is about two seconds of what we can say.

The visuo-spatial sketchpad (VSS) stores visual and spatial information and has a capacity of about three to four objects. Logie (1995) divided it into the visual cache, which stores visual data such as colour and form, and the inner scribe, which deals with the arrangement of objects in space. The



episodic buffer, added in 2000, is a temporary store with a capacity of about four chunks that integrates information from the other components and links working memory to long-term memory.

Rory's behaviour can be explained by the model. At first he can talk with his grandparent and play the game at the same time because the two tasks use different slave systems: the conversation uses the phonological loop, while matching coloured blocks into vertical and horizontal lines uses the VSS (the visual cache for colour and the inner scribe for position). The CE can divide attention between them because neither system is overloaded. However, describing his route to school requires him to recall and mentally picture a visual and spatial map, which also uses the VSS. Two tasks now compete for the same limited capacity slave system, and the CE has to allocate more resources, so Rory has to put the game down to concentrate fully on his answer.

A strength is support from dual-task studies. Baddeley et al. (1975) found participants struggled to do two visual tasks at once (tracking a light and describing the letter F) but performed well when doing a visual and a verbal task together, which supports separate slave systems with limited capacity, exactly as seen with Rory.

Further support comes from the case of KF (Shallice and Warrington, 1970). After brain damage, KF had poor STM for auditory information but could process visual information normally, suggesting a separate phonological loop and VSS. However, KF also had trouble with some sounds, such as meaningful noises, so the damage may be more complex. Also, case studies of brain damage are unique, so it is hard to generalise from one person.

A limitation is that the central executive is vague and hard to test.

Baddeley admitted it is the least understood component, and Eslinger and

Turn over ►



Damasio (1985) studied EVR, who performed well on reasoning tasks but had poor decision making, suggesting the CE is not a single unitary component. This means the model lacks explanatory power.

Finally, the evidence comes mostly from highly controlled lab studies using artificial tasks such as tracking lights, which lack mundane realism. Even so, the model is more detailed than the multi-store model, since it sees STM as active, and it has practical value, for example in explaining processing deficits seen in dyslexia.

Extra space



[illegible]

24

Section C**Attachment**Answer **all** questions in this section.Only **two** answers for each multiple-choice question are allowed.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD



WRONG METHODS



If you want to change your answer you must cross out your original answer as shown.

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

0 9 Which **two** of the following attachment concepts were **not** introduced by Bowlby?Shade **two** boxes only.**[2 marks]****A** Affectionless psychopathy☐**B** Critical period☐**C** Interactional synchrony☒**D** Internal working model☐**E** Multiple attachment stage☒

1 0Outline **one** example of cultural variation in attachment.**[2 marks]**

Takahashi (1990) used the Strange Situation with 60 Japanese infants: 68% were securely attached, 32% insecure-resistant and none insecure-avoidant, probably because Japanese infants are rarely separated from their mothers, so they were extremely distressed by separation.

1 1

Lenny is being interviewed for a TV dating show. He describes his approach to relationships:

"My friends would say I'm scared of commitment and need to settle down. I suppose they're right, I'm in my late thirties now. I fall in love constantly but my relationships never last more than a few weeks. My mum left when I was very young, I don't know if that has something to do with it..."

Explain how, according to attachment research, Lenny's early experience might have influenced his later relationships.

[4 marks]

According to Bowlby's internal working model, Lenny's early relationship with his primary caregiver acts as a mental template for later relationships. Because his mum left when he was very young, he may have formed an insecure attachment, so his template is of a carer who is unreliable and leaves.

Adults with insecure attachments tend to fear intimacy. This would explain why Lenny is 'scared of commitment' and why his relationships never last more than a few weeks, as he may end them before he can be rejected.

Extra space *Hazan and Shaver's (1987) Love Quiz supports this, as insecurely attached respondents reported more fear of closeness and shorter relationships. Bowlby's maternal deprivation theory also suggests that losing his mum during the critical period may have caused long-term emotional difficulties.*

Turn over ►

1 2

Outline Lorenz's **and** Harlow's animal studies of attachment. Discuss what these studies might tell us about human attachment.

[16 marks]

You may use this space to plan your answer.

Lorenz (1935) randomly divided a clutch of goose eggs. Half hatched with their mother in their natural environment, while half hatched in an incubator and the first moving object they saw was Lorenz. The incubator group followed Lorenz everywhere, while the control group followed their mother, and when the groups were mixed they still did so. This is imprinting, which only happened within a critical period of a few hours after hatching: if the goslings did not imprint within this time, they never did. Lorenz also found sexual imprinting: a peacock raised in a reptile house later directed its courtship towards giant tortoises.

Harlow (1958) reared 16 infant rhesus monkeys in a controlled environment with two wire model 'mothers'. In one condition milk was dispensed by a plain wire mother and in another by a cloth-covered mother. The time spent with each was recorded. The monkeys spent most time cuddling the cloth mother, even when only the wire mother gave milk, and clung to the cloth mother when frightened by a noisy mechanical teddy bear, showing a preference for contact comfort over food. Long-term, the motherless monkeys became socially abnormal: they were more aggressive, less sociable,



bred less often, and as mothers some neglected or even killed their own offspring. These effects could be reversed only if a monkey had a real companion before about 90 days.

Lorenz's concept of a critical period influenced Bowlby's monotropic theory, which proposed that human infants must form an attachment within a critical period of about two and a half years or face long-term consequences, as described in his maternal deprivation hypothesis. This has practical value for social workers in identifying risk factors and ensuring that vulnerable children form early bonds.

However, there are problems generalising from birds to humans. Mammals such as humans show more emotional attachment, and attachment involves two way interaction between infant and caregiver, so Lorenz's findings may have limited relevance to human attachment. Also, human research suggests the critical period is better seen as a sensitive period. Rutter's ERA study found that Romanian orphans adopted after six months often showed disinhibited attachment, but many later recovered, suggesting early deprivation is not always irreversible in humans.

Harlow's study may be more relevant to human experience because rhesus monkeys are mammals and more similar to humans. His findings challenge learning theory, which states that attachment forms because the caregiver is associated with food, and instead suggest contact comfort and responsiveness are more important. This is supported by Schaffer and Emerson's (1964) Glasgow study, which found infants formed their strongest attachments to the most sensitively responsive adult, not necessarily the one who fed them.

Harlow's findings on long-term effects also mirror Bowlby's internal working model: the deprived monkeys became poor parents, just as the internal

Turn over ►



working model predicts that a child who lacks a secure early attachment may later struggle to care for their own children. This has helped psychologists understand the importance of early bonding and has influenced practice in day care and orphanages.

Even so, humans are more cognitively complex than monkeys, and human attachment is shaped by culture and language, so we should be cautious about extrapolating. Finally, Harlow's research caused severe and lasting harm to the monkeys, which some argue cannot be justified, especially as the findings may only partly apply to human attachment.

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Turn over ►



Section D

Psychopathology

Answer **all** questions in this section.

1	3
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Describe the statistical infrequency **and** failure to function adequately definitions of abnormality.

[6 marks]

Statistical infrequency defines abnormality as behaviour or characteristics that are rare and statistically uncommon in the population. Most human traits, such as IQ, fall on a normal distribution curve, with most people near the mean. Anyone at the extreme ends, usually more than two standard deviations from the mean, is considered abnormal. For example, an IQ below 70 is shown by only about 2% of people and is used to diagnose intellectual disability disorder.

Failure to function adequately defines abnormality as being unable to cope with the demands of everyday living, such as holding down a job, maintaining relationships or keeping up basic personal hygiene. Rosenhan and Seligman (1989) proposed signs that someone is not coping, including irrationality, unpredictability, maladaptiveness, personal suffering and observer discomfort, where their behaviour makes others uncomfortable.

The person may also fail to follow interpersonal rules, such as maintaining personal space or eye contact. A person is defined as abnormal when their behaviour causes distress to themselves or others.



1 4Outline **one** limitation of systematic desensitisation as a treatment for phobias.**[3 marks]**

SD may be ineffective for social phobias, which are more generalised and 'free-floating' than specific phobias, as there is no single obvious feared object or situation. This makes it hard to construct a clear anxiety hierarchy, so the gradual exposure and counterconditioning may not work. SD is also time-consuming, as clients must first learn relaxation techniques, so it is less effective for these clients than for specific phobias.

1 5

A biological psychologist wanted to see if there was a positive correlation between heart rate (measured in beats per minute) and levels of a stress hormone (measured in micrograms) in people with obsessive-compulsive disorder (OCD). She wrote a directional hypothesis and collected data from 20 people with OCD.

The psychologist chose to use the Pearson's r test to analyse the data because she was testing for a correlation.

Explain **one other** reason why the psychologist used a Pearson's r test in this study.

[2 marks]

Heart rate (beats per minute) and stress hormone levels (micrograms) are interval/ratio data, measured on a fixed scale with equal, objective units. This is parametric data, so the more powerful parametric Pearson's r test was appropriate rather than Spearman's ρ .

Turn over for the next question

Turn over ►



Only **one** answer for each multiple-choice question is allowed.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD



WRONG METHODS



If you want to change your answer you must cross out your original answer as shown.



If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.



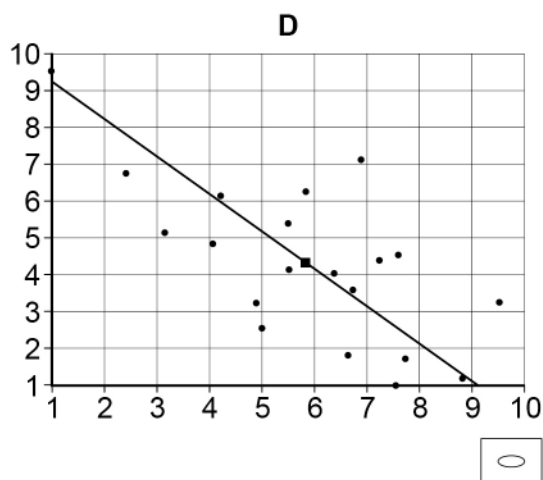
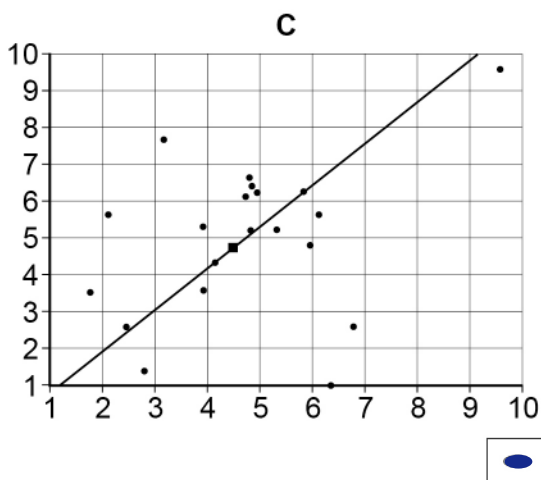
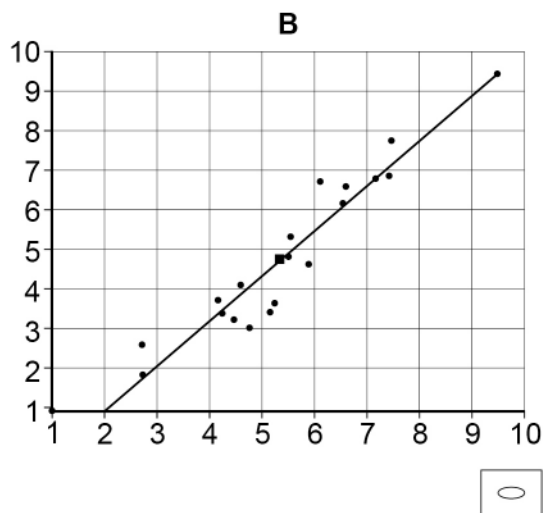
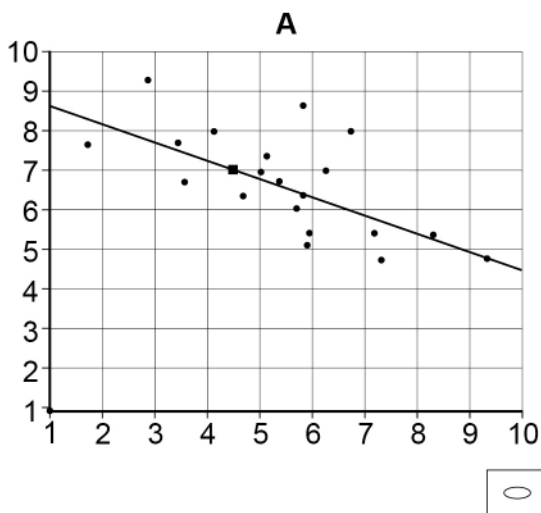
1 6

The calculated value of r for the Pearson's test was **+0.42**.

Which **one** of the following scattergrams **best** represents a correlation coefficient of +0.42?

Shade **one** box only.

[1 mark]



The researcher used the following table of critical values.

Table 1 Critical values of r for Pearson's test

Level of significance for a one-tailed test	0.05	0.025
Level of significance for a two-tailed test	0.10	0.05
$df = 17$	.389	.456
18	.378	.444
19	.369	.433
20	.360	.423

Calculated value of r must be equal to or more than the critical value for significance to be shown
Degrees of freedom (df) = $N - 2$

1 7

Is the psychologist's calculated value significant? With reference to **Table 1**, explain your answer.

[4 marks]

Yes, the result is significant at the 0.05 level.

The psychologist wrote a directional hypothesis, so a one-tailed test is used.

$N = 20$, so $df = N - 2 = 20 - 2 = 18$.

For $df = 18$ at the 0.05 level (one-tailed), the critical value is 0.378. The calculated value of $r = +0.42$ is more than 0.378, so the result is significant and the null hypothesis can be rejected (it would not be significant at the 0.025 level, where the critical value is 0.444).

Extra space

Turn over ►



1 8

Discuss the genetic explanation for obsessive-compulsive disorder (OCD).

[8 marks]

The genetic explanation suggests that OCD is inherited: individuals inherit a genetic vulnerability or predisposition that is passed on across generations.

Lewis (1936) found that 37% of patients with OCD had parents with OCD and 21% had siblings with it. OCD is thought to be polygenic, as many candidate genes are involved; Taylor (2013) identified up to 230 genes.

Examples include COMT, which regulates dopamine, and SERT, which affects serotonin transport. OCD also shows aetiological heterogeneity: different combinations of genes may cause OCD in different people and may account for different types of OCD, such as hoarding.

A strength is research support from twin studies. Nestadt et al. (2010) reviewed twin studies and found that 68% of MZ twins shared OCD compared with 32% of DZ twins. As MZ twins share 100% of their genes, the higher concordance suggests a genetic influence.

However, concordance in MZ twins is not 100%, so environmental factors must also play a role. Twin and family studies also confound genes and environment, as relatives share an environment and may acquire OCD behaviours through social learning. Cromer et al. (2007) found that over half of OCD patients had experienced a traumatic event, which suggests OCD is not entirely genetic and cannot explain cases with no family history.

Finally, the explanation is biologically reductionist and determinist, ignoring cognitive factors. A diathesis-stress approach may be better, suggesting that a genetic vulnerability only leads to OCD when triggered by environmental stress. On the other hand, understanding genetic risk has practical value, as it may lead to gene therapy in the future.



END OF QUESTIONS

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ANSWER IN THE SPACES PROVIDED**



Question number	Additional page, if required. Write the question numbers in the left-hand margin.
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2 8



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