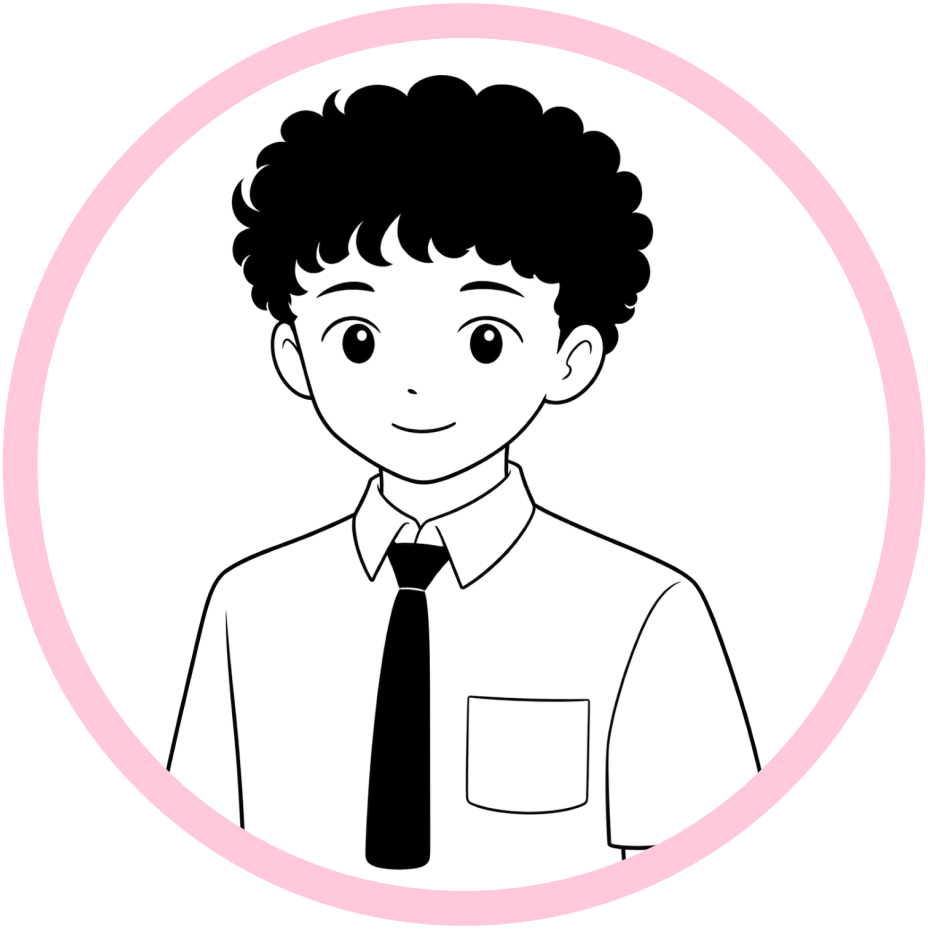
PEARSON EDEXCEL A-LEVEL PSYCHOLOGY · 9PS0

PSYCHOLOGY



EXAM QUESTION PACK

TOPIC 9: PSYCHOLOGICAL SKILLS

SCORE	PERCENTAGE
/528	%

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Q1.

Open plan office study

Researchers wanted to see the impact that removing walls in a workplace office had on human interaction.

The researchers visited a company that had 'spatial boundaries' at work – such as office or cubicle walls – and observed the interaction between employees. At a later date they revisited the same company who had created an open office where the walls were removed, to create an 'unbounded' office space. The researchers again observed the interaction between employees.

The researchers observed the employees using hidden cameras both before and after the office space was changed by the company.

Two types of interaction were measured between employees:

- Face-to-face communication was recorded by tallying each time employees engaged in a conversation.
- Electronic communication was recorded by using the company server and totalling the number of emails or instant messages sent by employees throughout the study.

(Source: adapted from Bernstein and Turban (2018))

(a) The researchers in the open plan office study used a covert, naturalistic, nonparticipant observation when measuring face-to-face communication.

Explain **two** strengths of using this type of observation for the open plan office study in terms of validity.

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(b) The researchers in the open plan office study measured electronic communication (emails or instant messages) using quantitative data.

Explain **one** strength and **one** weakness of using quantitative data in the open plan office study.

(4)

Strength

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Weakness

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(c) Explain **one** weakness of the open plan office study in terms of generalisability.

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The results of the open plan office study are shown in **Table 2**.

	Before the open plan office was introduced	After the open plan office was introduced
Face-to-face communication (average minutes over the course of the study, per employee)	5260	1490
Electronic communication through email (average messages over the course of the study, per employee)	Sent 150 Received 170	Sent 210 Received 250
Electronic communication through instant messenger (activity over the course of the study, per employee)	480 messages	580 messages

Table 2

(d) Explain **one** conclusion you can make regarding the open plan office study using the data in **Table 2**.

(2)

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(Total for question = 12 marks)

Q2.

Evaluate the classic studies by Raine et al. (1997) and Sherif et al. (1954/1961) in terms of their scientific status.

(16)

(Total for question = 16 marks)

Q3.

Prosocial behaviour and culture

Researchers wanted to investigate whether prosocial behaviour was similar cross-culturally and whether this trait increases as people become adults. They recruited 326 children and 120 adults of different gender and age from six countries. The six countries represented a wide range of human variation in terms of culture and geography.

To assess the level of prosocial behaviour participants had to choose between sharing a reward at a cost to them (prosocial) or keep it all at no cost to them (antisocial).

(Source: adapted from House et al. (2012))

The results of the American and Fijian participants are shown in **Figure 1**.

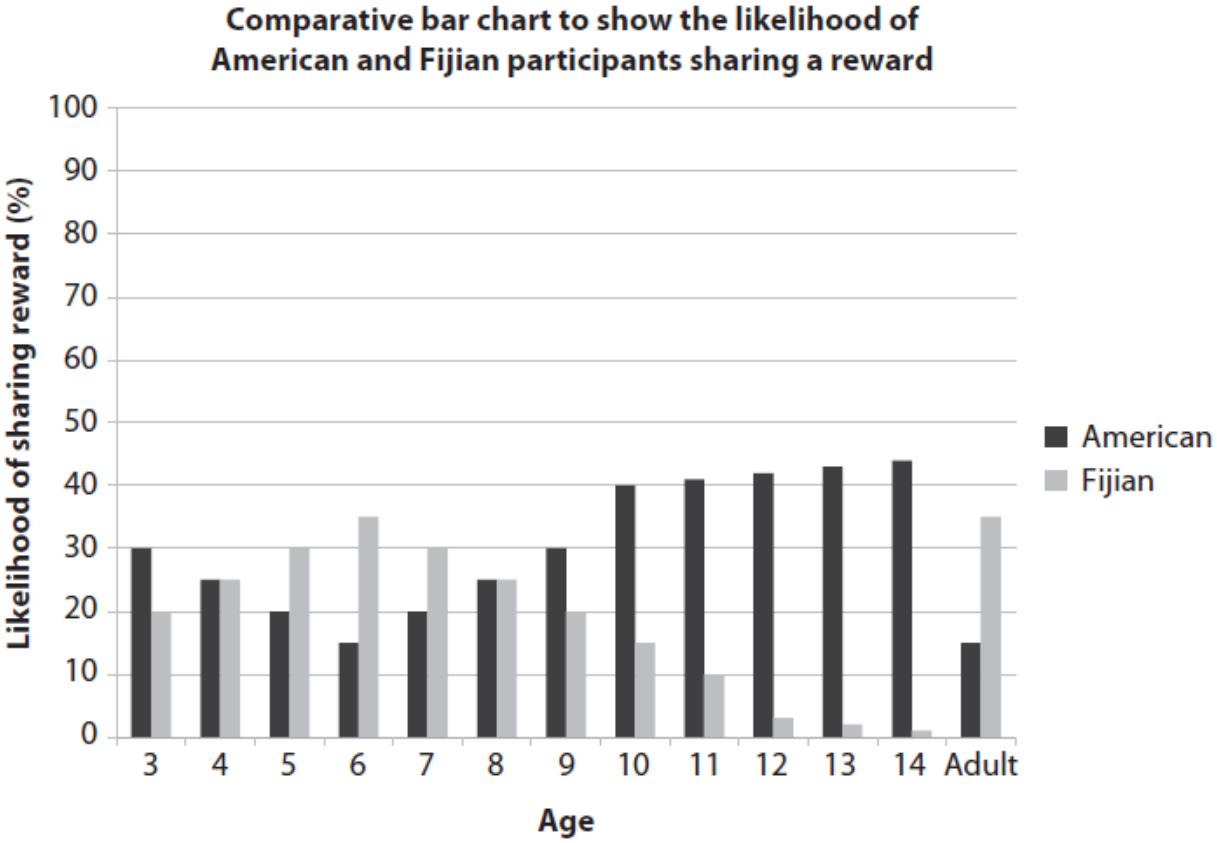


Figure 1

(a) Analyse the data provided in **Figure 1** to explain **two** conclusions that the researchers in the prosocial behaviour and culture study might draw from these results.

(4)

Conclusion 1

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Conclusion 2

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(b) The prosocial behaviour and culture study used a laboratory experiment.

Explain **two** weaknesses of using a laboratory experiment in the prosocial behaviour and culture study.

(4)

Weakness 1

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Weakness 2

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(Total for question = 8 marks)

Q4.

Reconciliation after romantic conflict study

Researchers investigated male and female beliefs regarding how to reconcile after romantic conflict with their partner.

In the first part of their study they asked 20 males and 18 females to write down five acts or behaviours they believe that people of their own sex perform (or may perform) to attempt to reconcile with their partner after they have experienced romantic conflict.

The most common acts or behaviours that participants proposed are shown in **Table 5**.

Act or Behaviour
Communicate
Apologise
Forgive your partner
Spend time together
Give a kiss / hug / affection
Make your partner laugh
Take some space
Ignore partner / avoid partner
Vent to a friend
Cry
Drink alcohol

Table 5

In the second part of their study the researchers asked the participants to rate the perceived effectiveness of the acts or behaviours they had proposed in the first part of the study. They had to rate them from 1 (very ineffective) to 7 (very effective).

The mean ratings for the males and females are shown in **Table 6**.

Act or Behaviour	Males (1–7)	Females (1–7)
Communicate	5.99	6.13
Apologise	5.14	5.98
Forgive your partner	5.63	5.62
Spend time together	5.29	5.72
Give a kiss / hug / affection	5.15	4.99
Make your partner laugh	5.12	4.09
Take some space	4.66	5.02
Ignore partner / avoid partner	1.85	1.73
Vent to a friend	3.17	2.84
Cry	2.32	3.25
Drink alcohol	1.83	1.55

Table 6

(Source: adapted from Wade et al. (2017))

(a) The researchers wanted to see if there was a significant difference in the perceived effectiveness of crying. They conducted a Mann-Whitney U test and found an observed / calculated value of 110 for a 5% level of significance with a two-tailed test.

Explain what this shows in terms of the perceived effectiveness of crying in the reconciliation after romantic conflict study.

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(b) Using research evidence, explain how far social learning theory could account for the findings of the reconciliation after romantic conflict study.

(6)

(Total for question = 8 marks)

Q5.

Assess how far psychology could be considered a reductionist explanation of human behaviour.

(20)

(Total for question = 20 marks)

Q6.

Evaluate the classic studies by Baddeley (1966b) and Watson and Rayner (1920) in terms of reductionism.

(16)

(Total for question = 16 marks)

Q7.

Navigation study

Researchers wanted to investigate whether there were sex differences in navigation strategy and efficiency.

The researchers created a virtual reality (VR) maze and placed five objects in various parts of the maze, such as a chair or a rubber duck. Participants were required to orientate themselves around the maze until they had seen all five objects, as indicated by black dots in **Figure 2**.

Figure 2 shows an aerial view of the maze and **Figure 3** shows the view a participant would have seen.

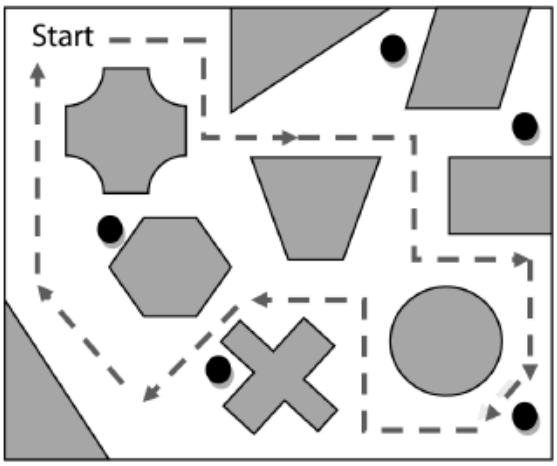


Figure 2

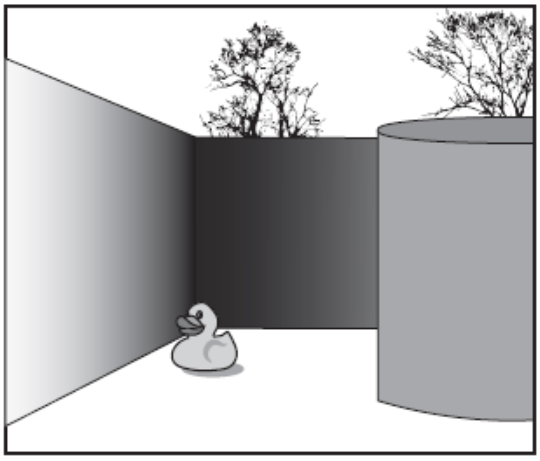


Figure 3

The researchers wanted to assess the strategy used by males and females after they had completed the maze.

(a) The researchers of the navigation study decided to recruit a sample of participants from the local town.

Describe how the researchers could have used a random sampling technique to recruit the participants for the navigation study from the local town.

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(b) Explain **one** weakness of using a random sampling technique for the navigation study.

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Figure 4 shows the strategies used by males and females in the navigation study.

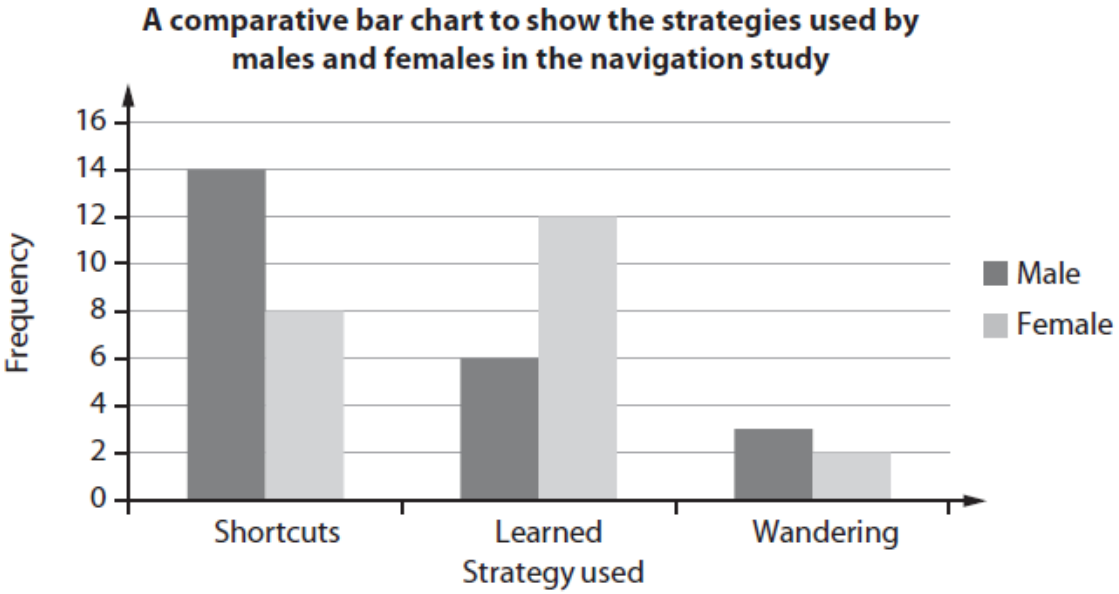


Figure 4

(c) Explain **one** conclusion the researchers of the navigation study could make using the data in **Figure 4**.

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(d) The researchers of the navigation study also collected the time taken for males and females to complete the maze task.

They summarised their data using categories, which is displayed in **Table 2**.

	Less than 1 minute to complete the maze task	More than 1 minute to complete the maze task
Males	14	9
Females	10	12

Table 2

Using their summarised data, the researchers decided to carry out a chi-squared test to see if there was a difference in the time taken by males and females to complete the maze task.

Complete **Table 3** to calculate the chi-squared test for the navigation study.

You must give all your answers to **two** decimal places.

(4)

		Observed	Expected	O-E	$(O-E)^2$	$(O-E)^2/E$
Males	**Less than 1 minute to complete the maze task**	14	12.27			
	More than 1 minute to complete the maze task	9	10.73			
Females	**Less than 1 minute to complete the maze task**	10	11.73			
	More than 1 minute to complete the maze task	12	10.27			
					Chi-squared =	

Table 3

(e) Explain **two** improvements that the researchers could make to the navigation study.

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(Total for question = 14 marks)

Q8.

Janworth High School wanted their staff and students to exercise more. The head teacher found that students would not listen to staff about the benefits of physical activity, and that staff exercise rates did not go up after watching a video about the rewards of a more active lifestyle.

The head teacher subsequently invited an Olympic athlete to attend the school and give a motivational speech about the benefits of exercise to all the students. The speech was followed by a brief set of smaller group sessions with the athlete. The athlete also led a session with selected staff and students on the school field, where those involved had to work in teams and compete against each other for prizes.

The head teacher did a follow-up survey and found that for most staff and students their levels of exercise increased over the next month.

Evaluate the extent to which human behaviour such as exercise can be explained by social impact theory.

You must make reference to the context in your answer.

(12)

(Total for question = 12 marks)

Q9.

A study looked at how contact between groups affected prejudice. The study used two different cultural groups of 30 people: Group 1 and Group 2.

The findings supported the hypotheses:

- The more previous contact people have had with an 'out group', the more willing they are to have contact with an 'out group'.
- The less they think that there is conflict with that 'out group', the more willing they are to interact with the group.

This suggests that perceived conflict and social contact both affect behaviour related to prejudice. 'Behaviour related to prejudice', which is whether they were prejudiced or not, was called 'behavioural intentions' in the study. The study found that these results were consistent across different status groups and in different cultures.

Results were analysed using a test for correlation.

Table 3 shows the relationship between perceived conflict, social contact and behavioural intentions (prejudice).

Group 1	Perceived conflict	Social contact
Social contact	–0.32	NO DATA
Behavioural intentions	–0.36	0.40
Group 1	**Perceived conflict**	**Social contact**
Social contact	–0.44	NO DATA
Behavioural intentions	–0.43	0.48

Table 3

1 indicates a perfect correlation, 0 indicates no correlation.

(Source from: Adapted from Gaunt, 2011))

(a) Using the critical value table for Spearman's rank, state the best level of probability at which the results would be significant for perceived conflict and social contact for Group 1 and for Group 2.

(2)

Group 1

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Group 2

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(b) Explain how social identity theory supports the findings of this study.

(6)

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(Total for question = 8 marks)

Q10.

A researcher carried out semi-structured interviews with five people to find out, retrospectively, about the issues they faced when using mental health services. They were aged between 8 and 18 years old. The interviews took place in a quiet room in a community-based mental health centre.

(Source from: Adapted from DeRoche and Lahman (2008))

(a) Explain how the information gathered would be different if the researchers had chosen to use an unstructured interview in this study.

(2)

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(b) A follow-on investigation was carried out to assess the issues identified with the mental health service, from the retrospective study.

A longitudinal study approach was used to follow five 8 years old until the age of 18.

Compare the longitudinal approach to the retrospective approach, giving **one** similarity and **one** difference.

(2)

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(c) Explain **two** improvements that could be made to the longitudinal approach and to the retrospective approach.

(4)

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(Total for question = 8 marks)

Q11.

Evaluate the classic studies by Raine et al. (1997) and Watson and Rayner (1920) in terms of the role of nature and nurture.

(Total for question = 16 marks)

Q12.

'Textisms' and literacy study

Researchers wanted to explore the relationship between children's knowledge of text message abbreviations and their standard of literacy.

The researchers gained informed parental consent for 88 British children aged 10–12 years old to be involved in their research study. They asked the participants to compose a series of text messages when provided with a set of scenarios. This gave a measure of the children's knowledge of text message (SMS) abbreviations called 'textisms'. An example of a 'textism' could be the use of contractions such as 'txt', 'plz', 'hmwrk'.

Subsequently the researchers measured the children's vocabulary scores using a standardised tool called The British Picture Vocabulary Scales II (Dunn, Dunn, Whetton & Burley, 1997).

The researchers found that the ratio of 'textisms' used to total words by the children was positively associated with their vocabulary.

(Source: adapted from Plester et al. (2009))

Table 4 shows the vocabulary scores and the ratio of 'textisms' to words used by the children in one class.

Child	Vocabulary score	Ratio of 'textisms' to words used in the scenarios
A	100	0.34
B	87	0.20
C	105	0.45
D	92	0.28
E	98	0.32
F	107	0.49
G	101	0.38
H	96	0.30
I	114	0.51

Table 4

(a) Calculate the standard deviation for the vocabulary score using the data in **Table 4**. Show your working and give your answer to **two** decimal places.

(4)

Standard deviation .....

(b) Explain **one** reason for using the standard deviation rather than the range as a measure of dispersion.

(2)

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(c) Explain **one** improvement that could be made to the 'textisms' and literacy study.

(2)

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(Total for question = 8 marks)

Q13.

Jay and his friends are 17 year-olds and are all learning to drive a car. Some of his friends are studying for their theory test and some are practising for their practical test. Nishka passed both tests on her first attempt whilst Oscar failed his first and second attempts at the theory test.

Jay enjoys watching Formula 1 car racing and his favourite driver won the championship last season. Jay loves Go Karting, and his father encourages and praises him. He recently won a race. Jay took his practical driving test, but he failed his first attempt due to speeding.

Until he can take his test again Jay is being driven to college by Nishka. She keeps forgetting the route to school so has to use a Sat Nav device on her phone to guide them.

Evaluate the extent to which human behaviour, such as the ability to drive, can be explained by biological psychology.

You must make reference to the context in your answer.

(12)

(Total for question = 12 marks)

Q14.

Assess the impact of socially-sensitive research in psychology.

(20)

(Total for question = 20 marks)

Q15.

Assess the role of both nature and nurture in psychology.

(20)

(Total for question = 20 marks)

Q16.

Twitter and Facebook study

Twitter and Facebook are popular social media platforms with many regular users. A group of researchers wanted to investigate whether personality was related to those who commonly used Twitter and Facebook.

The researchers recruited 300 participants from England via an advertisement posted on both Twitter and Facebook. There were 93 males and 207 females aged 18 – 63, with a mean age of 27. The participants gave informed consent and were asked a number of questions which were designed to measure three personality characteristics:

- Need for cognition: the tendency for a person to engage in and enjoy thinking. Items measuring the need for cognition included statements such as 'I like to solve complex problems'.
- Sociability: the extent to which someone enjoys the company of others. Items measuring sociability included statements such as 'I like being part of a loud crowd'.
- Neuroticism: the extent to which someone experiences feelings such as anxiety, worry, fear, jealousy, and guilt. Items measuring neuroticism included statements such as 'I have frequent mood swings'.

Statements were scored using ranked scale questions with seven options ranging from 'Strongly Disagree (1)' to 'Strongly Agree (7)'. The responses for need for cognition, sociability, and neuroticism were averaged for each participant to give a score from 1 to 7, where a high score indicated a high need for cognition, high sociability, or high neuroticism.

(Source: adapted from Hughes et al. (2012))

(a) Explain **one** strength and **one** weakness of the sampling technique used for the Twitter and Facebook study.

(4)

Strength

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Weakness

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A summary of the results from the Twitter and Facebook study are shown in **Table 1**.

	Twitter users		Facebook users	
	Mean (1–7)	**Standard deviation**	**Mean (1–7)**	**Standard deviation**
Need for cognition	6.60	0.87	5.00	0.94
Sociability	3.39	0.87	4.99	0.82
Neuroticism	2.69	0.99	4.03	1.12

Table 1

(b) Analyse the data provided in **Table 1** to explain **two** conclusions that the researchers in the Twitter and Facebook study might draw from these results.

(4)

Conclusion 1

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Conclusion 2

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(c) The Twitter and Facebook study used primary data.

Explain **one** strength of using primary data for the Twitter and Facebook study.

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(d) The researchers in the Twitter and Facebook study used the mean score to analyse the data from their ranked scale questions.

Explain **one** weakness of using the mean score to analyse the data in the Twitter and Facebook study.

(2)

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(Total for question = 12 marks)

Q17.

Monkeying around

Researchers wanted to investigate the role of reward in the behaviour of monkeys.

They gave monkeys a task where they had to learn a sequence of three coloured buttons.

The monkeys experienced one of the following conditions:

- Condition 1: For pressing the correct sequence of buttons five times in a row, a food treat was provided
- Condition 2: For pressing the correct sequence of buttons between two and four times in a row (the amount changed each time), a food treat was provided
- Condition 3: A food treat was provided every 60 seconds, provided the correct sequence of buttons was pressed at least once during this time period
- Condition 4: For pressing an incorrect sequence of buttons, a mild electric shock was given.

The number of attempted button presses (in 10 minutes) and the number of correct button sequences (in 10 minutes) were recorded by the researchers.

The mean results of the monkeying around study are shown in **Table 5**.

Condition	Mean number of attempted button presses (in 10 minutes)	Mean number of correct button sequences (in 10 minutes)
Condition 1	30	22
Condition 2	55	40
Condition 3	20	15
Condition 4	4	2

Table 5

(a) Explain **one** ethical consideration that the researchers of the monkeying around study would

have had to consider when conducting their investigation.

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(b) Using research evidence, explain how operant conditioning could support the findings of the monkeying around study.

(6)

(Total for question = 8 marks)

Q18.

Scary and nasty beasts study

With animal phobias being one of the most prevalent mental health disorders researchers wanted to investigate the creatures people found most scary and revolting.

Researchers asked 1,798 participants to complete an online survey about 10 creatures, such as a spider or snail. They were shown each creature in a photograph in a random order. Participants had to rate their fear and disgust for each of the creatures on a scale from 1 (no fear/disgust) to 7 (extreme fear/disgust). A red panda was used as one of the 10 creatures shown to participants, as a control stimulus.

The results of the scary and nasty beasts study are shown in **Table 4**.

Creature	Mean fear (1–7)	Mean disgust (1–7)
Bull	3.84	1.62
Cockroach	3.10	4.16
Pigeon	1.48	2.01
Red panda	1.57	1.17
Snail	1.15	1.69
Snake	4.34	2.83
Spider	4.39	4.47
Tapeworm	3.60	4.83

(Source: adapted from Polák et al. (2019))

Table 4

(a) Explain **one** weakness of the scary and nasty beasts study in terms of validity.

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(b) Using research evidence, explain how far evolution and natural selection could account for the findings of the scary and nasty beasts study.

(6)

(Total for question = 8 marks)

Q19.

Animals are sometimes used to conduct psychological research.

Assess the practical and ethical implications of using animals in psychological research.

(Total for question = 20 marks)

Q20.

Superman vs The Joker

Playing computer video games is a very popular pastime, which has been suggested to have an influence on human behaviour. The characters within the games may encourage people to act in particular ways after engaging with the game for a period of time.

To assess the influence of computer video game characters on behaviour researchers recruited the help of 60 students aged 17 to 37 years old. The participants were divided into two groups where they played a violent computer video game as either Superman (a hero) or The Joker (a villain). Those assigned as Superman (a hero) had to protect another character from threats (prosocial behaviour) whereas those assigned as The Joker (a villain) had to attack another character (antisocial behaviour).

After 15 minutes participants were thanked and they left the laboratory where an apparently lost letter was lying on the floor. Researchers noted the number of participants who posted the letter in a postbox, which was close by, and those who ignored the letter. Those who posted the letter were considered to be acting in a prosocial manner whereas those who ignored the letter did not act prosocially.

(Source: adapted from Happ, 2013))

(a) The results of the Superman vs The Joker study are given below in **Table 2**.

	Superman (hero)	**The Joker (villain)**
Pick up and post letter	14	6
Ignore letter	16	24

Table 2

The researchers carried out a chi-squared (χ^2) test and found an observed value of 4.8 for a 5% level of significance with a one-tailed test.

Explain what this shows in terms of prosocial behaviour for those assigned to play as either Superman (hero) or The Joker (villain).

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(b) Explain how useful social learning theory could be in accounting for the findings of the Superman vs The Joker study.

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(Total for question = 8 marks)

Q1.

Junior to senior Pinocchio study

Approximately 1000 participants were recruited by researchers to visit a Science Centre to investigate lying ability and frequency. The researchers used a cross-sectional design for their study. The participants had their ability and frequency of lying measured and their results were then grouped into age categories.

To measure lying ability the participants had to respond to 15 simple questions with a 'yes' or 'no' response. For example, one question was 'can pigs fly?'. Participants were told to either tell the truth or lie depending on the colour of the yes / no response options. The researchers expected the most able liars to respond the quickest and with fewer errors when lying and the least able liars to either have a delayed response or give a reflex truthful response when told to lie.

To measure lying frequency, the participants were asked how many times they had lied in the past 24 hours to family members, friends and strangers in a face-to-face situation.

The age categories and number of participants used for the study are shown in **Table 1**.

Age (years)	Description	Number of participants
6–8	Early childhood	102
9–12	Mid childhood	295
13–17	Adolescence	101
18–29	Young adulthood	83
30–44	Mid adulthood	216
45–59	Older adulthood	134
60–77	Seniors	61

Table 1

(Source: adapted from Debey et al. (2015))

(a) Explain **one** strength and **one** weakness of using a cross-sectional design for the junior to senior Pinocchio study.

(4)

Strength

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Weakness

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Table 2 shows the average lying ability of the participants in each of the age categories.

Age (years)	Description	Error rate (%)	Response times (seconds)
6–8	Early childhood	20.20	3.83
9–12	Mid childhood	16.86	3.46
13–17	Adolescence	14.59	3.30
18–29	Young adulthood	8.55	3.25
30–44	Mid adulthood	9.03	3.50
45–59	Older adulthood	10.40	3.60
60–77	Seniors	12.65	3.60

Table 2

(b) Explain **two** conclusions you can make using the data in **Table 2** regarding the lying ability of the participants in the age categories.

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(c) Explain **one** weakness of the junior to senior Pinocchio study in terms of validity.

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(d) Explain **one** strength of the junior to senior Pinocchio study in terms of reliability.

(2)

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Figure 1 shows the lying frequency of the participants in the junior to senior Pinocchio study.

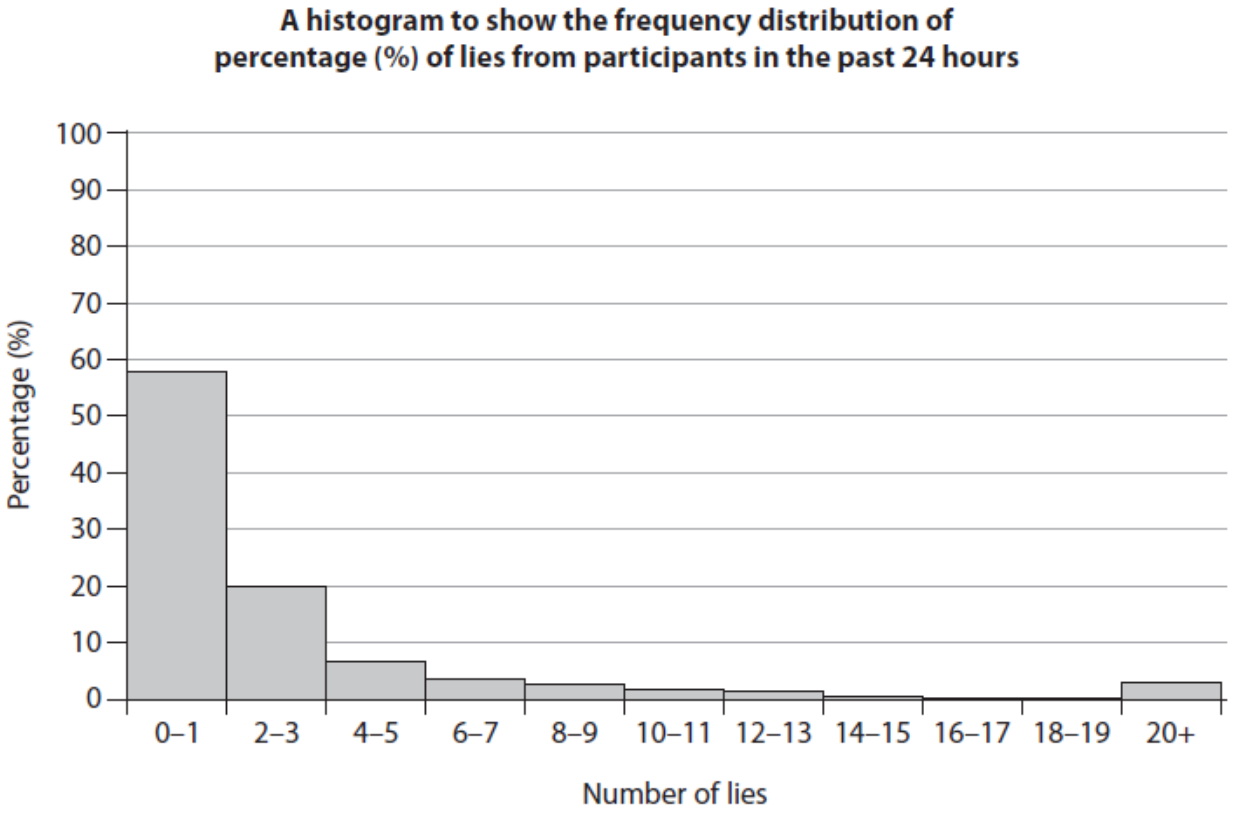


Figure 1

(e) State **one** conclusion that could be made from **Figure 1** with reference to the type of skew shown.

(1)

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The lying frequency for each age category is shown in **Table 3**.

Age (years)	Description	Mean lying frequency (past 24 hours)
6–8	Early childhood	1.75
9–12	Mid childhood	2.5
13–17	Adolescence	3
18–29	Young adulthood	2.5
30–44	Mid adulthood	2
45–59	Older adulthood	1.75
60–77	Seniors	1.5

Table 3

(f) Calculate the overall mean lying frequency for the participants using the data in **Table 3**.

You must give your answer to **one** decimal place.

(1)

Mean .....

(g) The researchers used a volunteer sampling technique to gather the participants for the junior to senior Pinocchio study.

Explain **one** weakness with using a volunteer sampling technique for the junior to senior Pinocchio study.

(2)

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(Total for question = 16 marks)

Q2.

The iPhone Effect

Researchers wanted to investigate whether the presence of mobile phones influences the quality of in-person social interactions. In a field experiment, 100 pairs of participants were observed during the course of a 10-minute conversation.

The researchers recorded whether participants placed a mobile phone on the table or held it in their hand. The researchers measured the level of connectedness and empathetic concern at the end of the conversation for those with a mobile phone present and those where it was absent.

(Source: adapted from Mirsa et al. (1999))

(a) State a two-tailed (non-directional) hypothesis for the iPhone effect study.

(2)

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(b) Explain why the experimental/research design used in the iPhone effect study was appropriate.

(2)

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(c) Explain **one** strength of using a field experiment for this study.

(2)

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(d) To measure connectedness and empathetic concern ranked scale questions were used where 1 indicated not close (connectedness) or no concern (empathetic concern) and 7 indicated very close (connectedness) or high concern (empathetic concern).

Explain **two** weaknesses of using ranked scale questions in the iPhone effect study.

(4)

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(e) The results of the study are given below in **Table 1**.

	Mobile phone present		Mobile phone absent	
	Mean	Standard deviation	Mean	Standard deviation
Empathetic concern	3.54	0.91	5.85	0.66
Connectedness	5.05	0.76	5.36	0.64

Table 1

Analyse the data in **Table 1** to explain **three** conclusions that the researchers might draw from these results.

(6)

Conclusion 1

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Conclusion 2

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Conclusion 3

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(Total for question = 16 marks)

Q3.

'Larks and Owls' Study

Researchers used a questionnaire to find out from 500 students whether they preferred carrying out cognitive activities in the morning or in the evening. The students who preferred mornings were called 'Larks' and those who preferred evenings were called 'Owls'. Students found to have no preference were called 'In Betweens'. The results of the questionnaire found 315 'Owls', 53 'Larks' and 132 'In Betweens'.

The researchers wanted to test whether 'Larks' were better at cognitive activities in the morning and 'Owls' better in the evening, as predicted from the preferences.

Using the 368 students who were 'Larks' or 'Owls', the researchers asked them to perform cognitive activities in controlled conditions. There were two types of cognitive activity: one tested creativity and the other tested analysis skills. Each type of activity had 20 cognitive tasks for the students to complete.

Each student had to complete all 40 cognitive tasks twice on one day, between 9am and 10am in the morning, then again between 3pm and 4pm in the afternoon. The scores indicate the number of tasks in each type of cognitive activity that the students performed correctly.

Table 1 shows the mean number of tasks out of 40 that were correct.

	9 am to 10 am		Total	3 pm to 4 pm		Total	Overall total
	Creative	Analysis		Creative	Analysis		
'Larks'	10	15	**25**	6	14	**20**	**45**
'Owls'	8	12	**20**	12	15	**27**	**47**
Totals	**18**	**27**	**45**	**18**	**29**	**47**	**92**

Table 1

(Source: Adapted from Roberts and Kyllonen (1999))

(a) Analyse the data provided in **Table 1** to explain three conclusions that the researchers might draw from these results.

(6)

Conclusion 1

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Conclusion 2

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Conclusion 3

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Table 2 shows the mean number of tasks out of 40 that were correct for 'Larks' and 'Owls' in the morning.

	9 to 10 am		Total
	Creative	Analysis	
'Larks'	10	15	**25**
'Owls'	8	12	**20**
Totals	**18**	**27**	**45**

Table 2

(b) Analyse the data provided in **Table 2** to explain whether the results are likely to show a significant difference.

(2)

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(c) State the null hypothesis for the 'Larks and Owls' study.

(2)

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(d) Explain how to improve the effectiveness of **two** controls used in the 'Larks and Owls' study.

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(Total for question = 16 marks)

Q4.

Applications in psychology include clinical psychology, criminological psychology, child psychology and health psychology.

Assess how psychology could be used as a form of social control, with reference to any **two** of these applications.

(Total for question = 20 marks)

Q5.

Assess the extent to which psychology could be considered a science.

(Total for question = 20 marks)

Q6.

Aaondi is a country that has had the same president for 20 years. The president orders the citizens to grow specific vegetables in their gardens, reduce water consumption and minimise their disposal of non-recyclable waste. The president's orders are clearly displayed on billboards and are reinforced on television and radio every day. Aaondians have to pay a fine every time they do not follow the president's orders.

Evaluate how useful agency theory would be in explaining human behaviour such as that of the citizens of Aaondi. You must make reference to the context in your answer.

(12)

(Total for question = 12 marks)

Q7.

During the college summer holiday, Rhianna went to a large music festival where she saw musicians and bands who played various genres of music. These included rock, dance, hip hop, grime, and pop music genres. Rhianna enjoyed dancing and singing with her three best friends when listening to all of the music genres at the festival. They all joined in when the artists encouraged certain behaviours such as clapping hands or singing lyrics.

When listening to music on her iPhone, Rhianna really enjoys listening to rock and pop music genres but does not really like grime or hip hop.

Evaluate how far social psychology can account for human behaviour, such as that of listening to

music.

You must make reference to the context in your answer.

(Total for question = 12 marks)

Q8.

Assess the cultural and gender issues in psychological research.

(Total for question = 20 marks)

Q9.

Job interview

Researchers wanted to investigate how long it took interviewers to make a decision to hire an employee through a job interview. The researchers wanted to see whether interviewers made an almost instant decision (in under a minute) to hire an employee, as suggested by previous research findings.

They collected data from 160 unstructured job interviews where students were hired for a job at a university careers fair. The researchers asked the interviewers to estimate how long it took them, in minutes, to make their hiring decision.

The estimated time that it took the interviewers to make a hiring decision was split into four categories:

- Under 1 minute
- 1 to 5 minutes
- 5 to 15 minutes
- More than 15 minutes.

The interviewers were fully informed about the aim of the study beforehand and gave their permission for their data to be used in a published research study.

(**Source:** adapted from Frieder et al. (2015))

The results of the job interview study are shown in **Table 3**.

Time taken to reach hiring decision	Percentage (%) of interviewers who reported making their hiring decision in this time period
Under 1 minute	5
1 to 5 minutes	30
5 to 15 minutes	20
More than 15 minutes	45

Table 3

(a) Calculate the ratio of those interviewers who reported making their decision in under 1 minute to those interviewers who reported making their decision in more than 15 minutes.

You must express the ratio to the lowest whole numbers.

(1)

Ratio .....

(b) The researchers also asked the interviewers who made a quick hiring decision to give some information about the factors that helped them make a quick decision.

The common themes given by the interviewers are shown in **Table 4**.

Contributing factor for quick decision in hiring an employee	Number of interviewers who reported this as a factor
Experience of interviewer	𝍸 //
Confidence of interviewer	///
Friendly pre-interview chat	𝍸 𝍸 𝍸
Interview late in the day	𝍸 𝍸

Analyse the data in **Table 4** to explain **one** conclusion that the researchers might draw from these results.

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(c) Explain **two** ways that subjectivity could have influenced the job interview study.

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(d) Explain **one** way the researchers could have made sure the job interview study was reliable.

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(Total for question = 9 marks)

Q10.

Computer video games study

Playing computer video games is a popular leisure activity, and has been claimed to be the fastest growing form of recreation in humans, with annual revenues from video games having surpassed those of Hollywood (Yi, 2004).

Popular computer video games can enable players to connect online via the Internet and allow individuals to purchase in-game rewards with either real or virtual money. The in-game rewards can benefit players by providing resources which give them a better chance to complete objectives within the game successfully.

A group of researchers wanted to see if the number of in-game purchases correlated with the time spent playing the online games against others. The researchers asked 30 participants how much time they spent playing online against others and the number of in-game rewards they purchased for money.

The results of the computer video games study are shown in **Figure 1**.

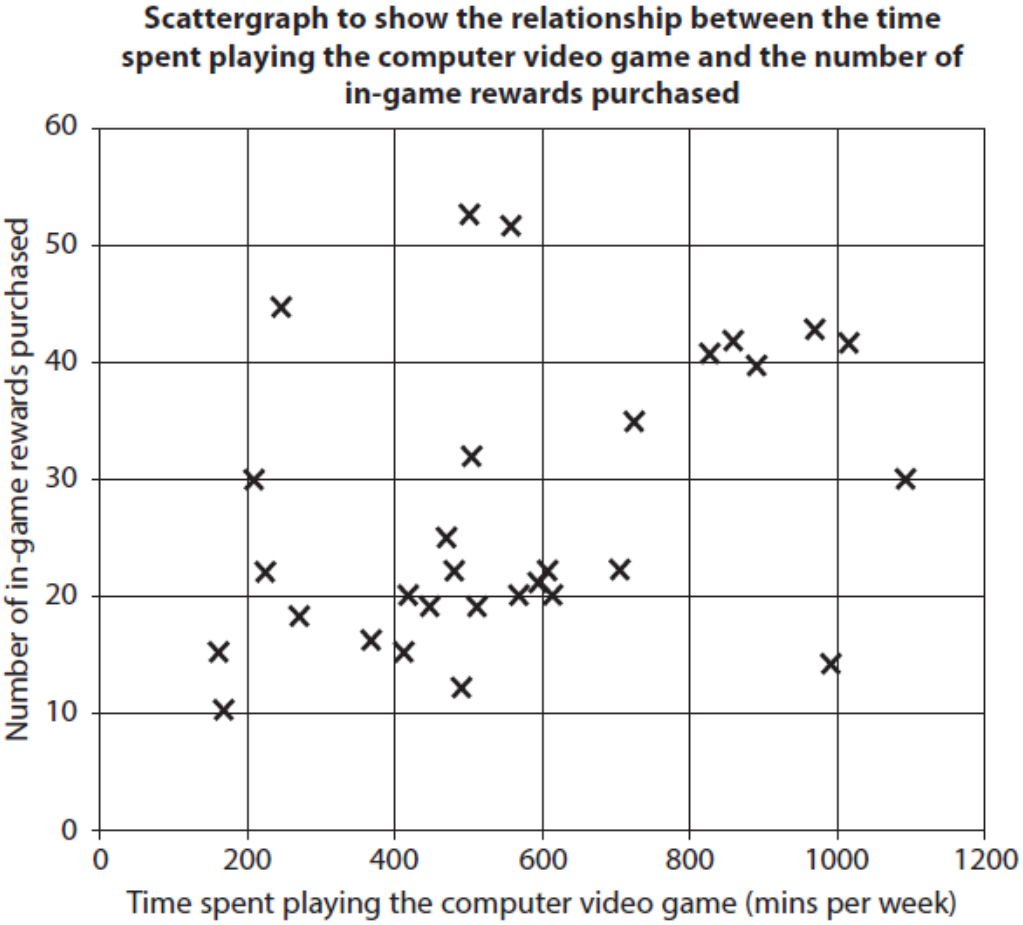


Figure 1

(a) The researchers decided to use a statistical test for their data to determine significance. They calculated an observed / calculated value of 0.411 for a Spearman's rho at the 5% level of significance for a two-tailed (non-directional) test.

Explain what this shows in terms of in-game purchases for the participants who played computer video games.

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(b) Using research evidence, explain how far biological psychology could account for the findings regarding the purchase of in-game rewards in the computer video games study.

(6)

(Total for question = 8 marks)

Q11.

Instagram study

Researchers investigated whether there was a difference in how an Instagram user perceived their own personality compared to how others would perceive their personality. Four Instagram users (group 1) and 65 observers (group 2), who did not know the Instagram users, were recruited for the study.

Instagram users (group 1) had to complete a self-report personality test that measured a number of personality traits, including extraversion and openness.

- Extraversion (categorised by sociable traits) included statements such as 'I see myself as enthusiastic'.
- Openness (a curiosity for artistic pursuits and appreciation for alternative viewpoints) included statements such as 'I see myself as open to new experiences'.

Each participant rated themselves on a scale from 1 (strongly disagree) to 7 (strongly agree), as shown in **Figure 1**.

Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
1	2	3	4	5	6	7

Figure 1

The observers (group 2) viewed screenshots of the Instagram users' profiles. They were then asked to complete an adapted form of the same personality test to measure their perception of each of the four Instagram users (group 1).

The researchers compared the mean self-report scores of the Instagram users (group 1) to the mean scores as rated by the observers (group 2) on the different personality measures.

The results of the Instagram study are shown in **Table 1**.

Rater	Extraversion (1–7)	Openness (1–7)
Instagram user 1 self-rating	3.00	7.00
Observers' mean rating for Instagram user 1's profile	4.61	5.20
Instagram user 2 self-rating	3.50	6.00
Observers' mean rating for Instagram user 2's profile	5.12	5.91
Instagram user 3 self-rating	5.00	5.50
Observers' mean rating for Instagram user 3's profile	5.14	5.13
Instagram user 4 self-rating	3.50	6.50
Observers' mean rating for Instagram user 4's profile	3.61	5.60

(Source: adapted from Harris and Bardey (2019))

Table 1

(a) Explain **one** conclusion you can make regarding 'extraversion' using the data in **Table 1**.

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(b) Explain **one** conclusion you can make regarding 'openness' using the data in **Table 1**.

(2)

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(c) Explain **one** strength of the researchers collecting quantitative data in the Instagram study.

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(d) The researchers in the Instagram study decided to carry out follow-up unstructured interviews with the observers (group 2).

Explain **two** strengths of using an unstructured interview with the observers (group 2) in the Instagram study.

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(Total for question = 10 marks)

Q12.

Researchers wanted to test the effect of prenatal alcohol exposure on the development of the hippocampus in the brain. They administered repeated 1g/kg doses of pure alcohol (ethanol) in a nutritionally adequate liquid diet to pregnant rats. Control groups were fed the same liquid diet except for the substitution of sucrose (sugar) for pure alcohol (ethanol).

The brains of 60-day-old offspring were investigated and those that were exposed to alcohol were found to have 20% fewer hippocampal cells compared to the control groups. Prenatal exposure to pure alcohol (ethanol) permanently reduced the number of hippocampal neurones without altering physical growth.

(Source: adapted from Barnes and Walker (1981))

(a) Explain **one** practical application of the above study.

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(b) Justify whether the use of animals in this study was appropriate.

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(Total for question = 8 marks)

Q13.

Both Raine et al (1997) and Watson and Rayner (1920) have ethical implications.

> In their study, Watson and Rayner (1920) wrote as part of their findings, 'The child started violently, his breathing was checked and the arms were raised in a characteristic manner. On the second stimulation the same thing occurred, and in addition the lips began to pucker and tremble. On the third stimulation, the child broke into a sudden crying fit.' (Watson and Rayner 1920, p2).
>
> In their study, Raine et al. (1997) wrote, 'The key findings… are that murderers pleading guilty to NGRI (not guilty by reason of insanity) are characterized by (a) reduced glucose metabolism in bilateral prefrontal cortex… and (b) abnormal asymmetries of activity (left hemisphere lower than right)… These data… provide some general support for pre-existing biological theories of violence…' (Raine et al 1997, p502).

Evaluate the ethical issues of these studies in relation to each other, with reference to their aims and methods.

(Total for question = 16 marks)

Q14.

Lu, a mother of three young children, is having trouble controlling her anger. She believes that her children are likely to show aggression themselves if she carries on behaving this way. Lu thinks that her anger might have been caused by her own mother's behaviour. Lu has given up a successful career to be a full-time mother and, although she has the support of the children's father when he is not at work, the everyday decisions are her responsibility.

Lu visits a therapist who plans to help her by getting her to reward herself when she is calm with the children and to stop feeling guilty about her behaviour.

Evaluate the application of social learning theory as proposed by the therapist in helping Lu. You must make reference to the context in your answer.

(Total for question = 12 marks)

Q15.

Psychology is the scientific study of the human mind and behaviour. The findings of psychological research have been used to help solve major problems across the world. However, it has been suggested that the findings of psychological research may have cultural and gender issues.

Evaluate the cultural and gender issues of Sherif et al. (1954/1961) and Rosenhan (1973), with reference to their methods and implications for the real world.

(Total for question = 16 marks)

Q16.

Companies that enable people to meet potential romantic partners are becoming increasingly popular. Some companies include a series of questions during registration that assist them in recommending which people are a potential 'match'.

Mandy decides to use a company to meet a potential romantic partner and is recommended a number of 'matches' who have similar interests. Mandy's mother disagrees with this approach and tells Mandy that romantic relationships are purely biological in basis.

Evaluate how far the biological approach can explain human behaviour such as meeting potential romantic partners. You must make reference to Mandy's situation in your response.

(Total for question = 12 marks)

Q17.

When commuting to college Sam notices that whichever form of public transport he uses strangers rarely communicate with each other. He notices that people tend to sit alone where possible and avoid eye contact with other commuters whilst listening to music or reading a newspaper.

One morning there is an incident on the bus when he is going to college. Following the event, Sam notices everyone is communicating and making eye contact. Later, when Sam discussed this change in behaviour with his friend, she argued that communication is a learned behaviour and that people are not born to communicate.

Evaluate the extent to which human behaviour such as communication can be explained by learning theories.

You must make reference to the context in your answer.

(Total for question = 12 marks)

Q18.

Working memory training

Working memory training is where people repeatedly practise increasingly difficult working memory tasks to attempt to improve their cognitive performance.

Researchers wanted to see how working memory training affected recognition performance of a list of words. They recruited 100 participants who were allocated to either the working memory training group (Condition 1) or the control group (Condition 2).

At the beginning of the study, all participants in Condition 1 and Condition 2 were read 20 target words. The participants then had to try and recognise the 20 target words from a list of 60 words, where 40 were new words. All participants were given two minutes to recognise as many of the target words as they could.

During the next three weeks:

- Condition 1 (working memory training group) completed a session of working memory training for 90 minutes, once a week.
- Condition 2 (control group) did no working memory training.

After the three-week period, the participants then performed another memory recognition task. As before, they had to learn a list of 20 words from a list of 60 words, where 40 were new words.

(Source: adapted from Matzen et al. (2016))

(a) State a fully operationalised directional (one-tailed) experimental hypothesis for the working memory training study.

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(b) The number of words correctly recognised (out of 20) by participants was recorded as a measure of memory performance by the researchers.

State which level of measurement the number of words correctly recognised (out of 20) for each participant would be in the working memory training study.

(1)

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(c) The working memory training study used a laboratory experiment to assess the memory of the participants.

Explain **two** strengths of using a laboratory experiment for the working memory training study.

(4)

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(d) The mean results of the working memory training study are shown in **Table 1**.

Group	Performance on memory recognition task (out of 20) at the beginning of the study	Performance on memory recognition task (out of 20) at the end of the study
Condition 1 (working memory training group)	13.3	10.7
Condition 2 (control group)	11.9	12.1

Table 1

Explain **two** conclusions that could be made using the data in **Table 1**.

(4)

Conclusion 1

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Conclusion 2

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The results of the working memory training group at the end of the study are shown in Table 2.

Number of words recognised correctly (out of 20) at the end of the study	Frequency
0 – 5 words	10
6 – 10 words	40
11 – 15 words	30
16 – 20 words	20

Table 2

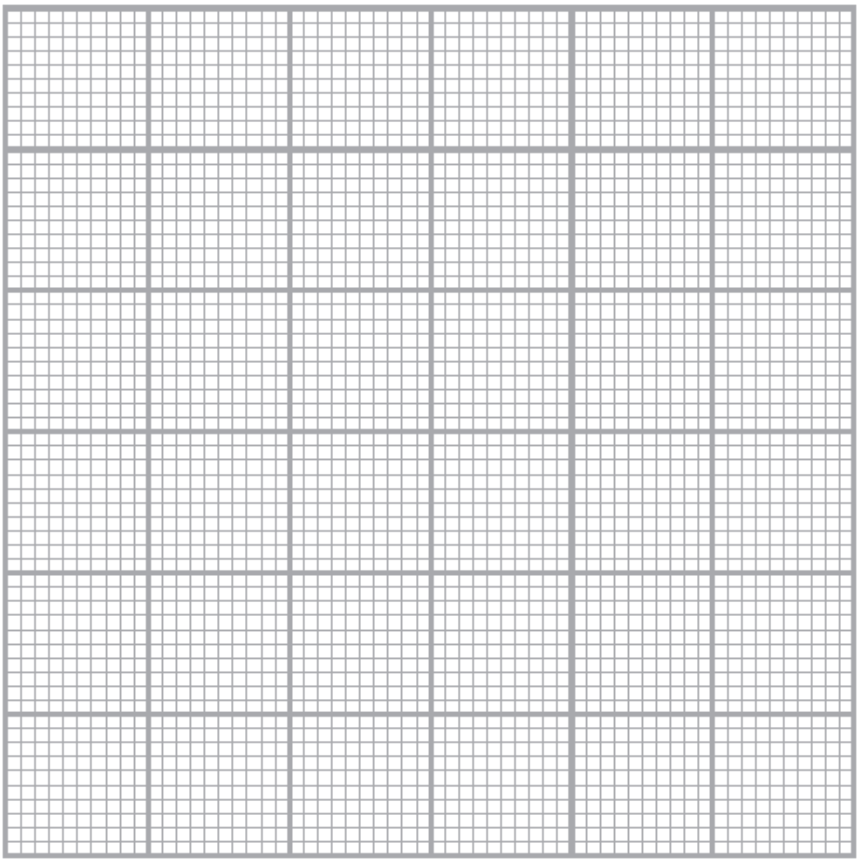
(e) (i) Draw a histogram to display the data in **Table 2**.

(3)

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(ii) Interpret the histogram you have drawn for (e)(i).

(1)

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(Total for question = 15 marks)

Q19.

'Instigators' and an unethical act

A study examined the psychology of 'instigators'. 'Instigators' are people who surround an unethical act and influence the wrongdoer without directly committing the act themselves.

Student confederates were recruited to instruct participants to commit an unethical act. The unethical act was to vandalise a book in the university library by writing the word 'pickle' in pen on a specified page.

There were three conditions in the study:

- two student confederates instructed an unknown student to carry out the unethical act
- one student confederate instructed a close student friend to carry out the unethical act
- one student confederate instructed an unknown student to carry out the unethical act.

(Source: adapted from Bohns et al. (2013))

(a) Explain **one** ethical issue that could be violated in the 'instigators' and an unethical act study.

(2)

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The findings of the study are shown in **Table 2** below.

	Two student confederates instructed an unknown student to carry out the unethical act	One student confederate instructed a close student friend to carry out the unethical act	One student confederate instructed an unknown student to carry out the unethical act
% of student participants that vandalised the university library book	87	80	62

Table 2

(b) Explain how far social impact theory can support the findings of the 'instigators' and an unethical act study.

(6)

(Total for question = 8 marks)

Q20.

Lecture notes and learning

Researchers wanted to see whether providing learning aids during a lecture would help students. Students attended an audio lecture on how car brakes function. Before the lecture, students were given either a skeletal outline (with headings and subheadings) or no learning aid at all (they were given notepaper). After the lecture, students were given a short-answer test that assessed their understanding of how car brakes function.

(Source: adapted from Bui et al. (2015))

(a) Identify the experimental/research design used in the lecture notes and learning study.

(1)

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(b) Explain how **one** participant variable could affect the findings of the lecture notes and learning study.

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(c) Explain **one** way the researchers in the lecture notes and learning study could make the study as generalisable as possible to the target population of students.

(3)

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The researchers in the lecture notes and learning study decided to carry out a Mann-Whitney U test on the data.

(d) Complete **Table 1** and calculate Mann-Whitney U for the data in **Table 1**.

(4)

Experimental Group		Control Group	
Score on test with skeletal outline	Rank	Score on test with notepaper	Rank
85	16.5	67	10.5
46	5	45	3
55	7	33	1
89	19	79	14.5
55	7	45	3
90	18	71	12
78	13	45	3
55	7	67	10.5
92	20	65	9
85	16.5	79	14.5
Total		**Total**	

Table 1

U_a .....

U_b .....

U .....

(e) The researchers of the lecture notes and learning study need to decide whether to accept or reject their null hypothesis. They have been warned not to make a Type I error when doing this.

Explain to the researchers what a Type I error would be in the lecture notes and learning study.

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(f) The researchers in the lecture notes and learning study are interested in publishing their work in the British Journal of Educational Psychology.

The British Journal of Educational Psychology publishes psychological research that makes a significant contribution to the understanding and practice of education.

Author Guidelines for the British Journal of Educational Psychology:

- We publish psychological research that makes a significant contribution to the understanding and practice of education.
- We aim to publish research which has a broad international appeal to researchers and practitioners in education.
- We welcome experimental studies, observations of classroom behaviours, interviews, and surveys.
- Important criteria in the selection process are quality of argument and educational significance.
- We tend to publish more quantitative than qualitative studies.

(Source: statement adapted from the Author Guidelines for the *British Journal of Educational Psychology*, published by the British Psychological Society (2015))

Explain what the peer review process would involve for the researchers in the lecture notes and learning study, including a consideration of the likelihood of their findings being published.

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(Total for question = 16 marks)