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

Friday 17 January 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)

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

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

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

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SECTION A

Developmental Psychology

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

1 In developmental psychology you will have learned about Piaget's stages of cognitive development.

(a) Describe the preoperational stage of development.

(2)

The preoperational stage lasts from about 2 to 7 years. Thinking is not yet based on logical reasoning but is dominated by how things look, so the child cannot conserve (eg thinks a taller, thinner glass holds more water). Children are also egocentric: they assume others see things the way they do, so find it hard to take another person's perspective, as in the three mountains task.

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(b) Explain **one** strength and **one** weakness of Piaget's stages of cognitive development.

(4)

Strength

Piaget's stages have real-life application, as they are widely used in education to underpin teaching methods such as discovery learning and readiness for learning. For example, Garner (2008) suggests teachers should give children opportunities to recognise similarities and differences at a physical level to develop conservation skills, so the theory has improved how children are taught.

Weakness

Piaget's stages ignore variation in children's development, so do not account for individual differences, as some children reach stages earlier or later than the ages given. Vygotsky argued cognitive development does not occur in fixed stages but through social interaction, building knowledge by learning from more knowledgeable others, which Piaget underestimated.

(Total for Question 1 = 6 marks)

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2 Sabian is investigating the influence of day care on children's language development. He has arranged to observe two groups of children aged 18 months.

- Group A: Children who attend day care four days per week.
- Group B: Children who do not attend day care.

Sabian also used a semi-structured interview to gather both qualitative and quantitative data. He asked the parents and preschool teachers open questions, such as 'what activities do you do with your child/children to help their language development?'. He also used a ranked scale to indicate the number of language exercises they do with their child/children each day.

(a) Explain **one** reason why qualitative data may be better than quantitative data in Sabian's research.

(2)

Sabian's open questions will give detailed information about the different types of activities the parents and preschool teachers do with the children, such as reading or singing. So he can explore whether it is the type of activity, rather than just the number of language exercises on the ranked scale, that influences the children's language development, improving the validity of his research.

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Sabian also observed each child for a day and recorded the number of different words they could say.

The data gathered by Sabian is shown in **Table 1**.

Group A: Children who attend day care four days per week	The number of different words spoken during the day	Group B: Children who do not attend day care	The number of different words spoken during the day
A	55	F	41
B	70	G	38
C	40	H	50
D	63	I	51
E	50	J	45
Range = 30		**Range = 13**	

Table 1

(b) Explain **one** weakness of Sabian using the range as his measure of dispersion.

(2)

The range ignores all the scores in between and only uses the smallest and largest values, for Group A 40 and 70 different words (70 – 40 = 30). So it can be distorted by one abnormally high or low value, eg child B's 70 words, making Group A look far more spread out than most of the children really are.

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(c) Explain **one** improvement Sabian could make to his investigation.

(2)

Sabian could make sure both the day care centre and the parents use the same standardised language activities with the 18-month-old children. This improves reliability and validity, as he can be more confident that any difference in the number of different words spoken between Group A and Group B is due to day care and not extraneous variables such as the type of activity.

(Total for Question 2 = 6 marks)

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3 Marina carried out a content analysis to see the effects of a new writing programme on the grammatical ability of 10–11-year-old children. She approached her local school and gathered a stratified sample of boys and girls.

(a) Describe how Marina may have gathered her stratified sample.

(2)

Marina would divide the population of 10 to 11-year-old children at her local school into sub-groups (strata), for example boys and girls, or 10-year-olds and 11-year-olds. She would then randomly select children from each stratum in proportion to their numbers in the school, eg if 60% are girls then 60% of her sample are girls, so the sample represents the population for the new writing programme.

(b) Describe **one** ethical issue Marina should have considered when investigating the grammatical ability of the children.

(2)

Marina should protect the children from psychological harm, as they could become distressed or embarrassed about having their grammatical ability judged. She should explain to them that it is the effectiveness of the new writing programme being measured, not their own writing ability, keep their work confidential and gain consent from their parents.

(Total for Question 3 = 4 marks)

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4 Assess Vygotsky's zone of proximal development (ZPD).

(8)

Vygotsky argued that cognitive development is driven by social interaction. Children are born with elementary mental functions, such as attention and memory, which are innate and are developed into higher mental functions through interaction with others. The zone of proximal development (ZPD) is the difference between what a learner can do on their own and what they can do with the help of a more knowledgeable other (MKO), such as a parent, teacher or more able peer. As the child learns through interaction with the MKO, tasks they once needed help with become things they can do alone, so the ZPD is constantly changing.

Learning within the ZPD is supported by scaffolding (Wood, Bruner and Ross, 1976), structured help from a teacher who gradually reduces their role as the learner becomes more competent, so the support is withdrawn as the child takes over the task.

There is evidence that an MKO promotes cognitive development. Shaffer (1996) found that a young girl improved her ability to solve a puzzle when her father demonstrated some basic problem-solving strategies, showing that guidance from an adult moved her through her ZPD. Abbas (2017) found that children who received six weeks of teaching using scaffolding techniques had better comprehension skills than children who did not, which supports the idea and gives the ZPD a useful practical application in classrooms, such as peer tutoring.

However, Vygotsky claims the help of an MKO is necessary for progress, whereas Piaget argued that learning occurs within a child's stage of development through their own active discovery, without needing others. The ZPD is also vague, as it is hard to measure exactly where a child's ZPD lies. Lui and Matthews (2005) suggest learners with learning difficulties may not gain the same meaning from group interactions as those without, so social interaction does not develop

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everyone's innate abilities equally.

Overall, the ZPD is a strong explanation of how children learn with support, backed by research and widely applied in education, but it underplays individual differences and the child's own maturation, so it is best combined with Piaget's ideas about stages.

(Total for Question 4 = 8 marks)

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5 Rafael is a family therapist who specialises in attachment-based therapy. He has been approached by a local day care centre that is concerned about the type of attachment demonstrated by a number of the children.

Rafael proposes to monitor the children and parent interactions for a week, using the strange situation procedure. He will monitor the parent-child interactions. Raphael will then invite all the families to attend parenting skills classes, whatever the attachment type of the child.

Discuss the ethical issues of the research that Rafael is proposing to conduct in relation to the UNCRC (1989).

You **must** make reference to the context in your answer.

(8)

The UNCRC (1989) sets out the rights of children. The best interests of the child must be the main priority in any action affecting them. Article 18 states that parents have the main responsibility for bringing up the child, Article 13 gives every child the freedom to express their thoughts and opinions, and the convention also gives every child the right to protect and preserve their identity and to be protected from harm.

As the children at the day care centre are too young to consent, Rafael must respect Article 18 by gaining fully informed consent from the parents before monitoring the parent-child interactions for a week, explaining that the strange situation procedure will be used and that they can withdraw their child at any time. Without this, the research would breach the parents' rights and responsibilities for their child.

The strange situation procedure deliberately causes mild distress, as the child is left with a stranger and separated from the parent, which may not be in the child's best interests. However, it is being used to identify the children's attachment types so that their attachments can be improved, and the distress is brief, so its use could be justified as being in the children's long-term best interests.

Under Article 13, young children express their views through behaviour such as crying. If any

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child becomes very upset during the strange situation, Rafael should treat this as the child expressing their feelings and stop that episode immediately, returning the parent. Repeating the procedure over a week could also cause more distress than a single observation, so he should keep monitoring to the minimum needed.

Rafael is inviting all families to the parenting skills classes whatever the attachment type of the child. This protects the identity of the children, as no family is singled out as having an insecurely attached child, which could cause stigma or labelling. He must also keep the results confidential, sharing a child's attachment type only with the parents and not with other families or staff who do not need it.

On the other hand, parents of securely attached children may feel the classes are unnecessary or that they are being judged, while parents of insecurely attached children may need more targeted help than a general class provides. Rafael should therefore offer individual feedback privately as well.

Overall, Rafael's research can meet the UNCRC (1989) if he gains parental consent, stops the procedure when a child is distressed and protects identity, as the aim of improving attachment is in the children's best interests.

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(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 option 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 option with a cross ☒.

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

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

6 Describe how pre-trial publicity may influence jury decision-making.

Pre-trial publicity, such as media reports about the defendant or the crime before the trial, can be a source of juror bias. Jurors make sense of this information using their own schemas, so if the publicity creates a negative schema of the defendant they are more likely to find them guilty, regardless of the evidence presented in court.

(Total for Question 6 = 2 marks)

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7 Becky is a forensic psychologist who is interested in the relationship between Cognitive Behavioural Therapy (CBT) and levels of aggression. She approached her local prison and recorded the number of Cognitive Behavioural Therapy (CBT) sessions the offenders attended over a six-month period. Becky also asked the offenders about the number of aggressive incidents they had been involved in over the same six-month period.

(a) Complete **Table 2** and calculate Spearman's rank correlation coefficient.

You **must** give your answer to **two** decimal places.

The formulae and statistical tables can be found at the front of the paper.

(4)

Number of Cognitive Behavioural Therapy (CBT) sessions attended over a six-month period	Rank 1	Number of aggressive incidents over the same six-month period	Rank 2	d	d^2
18	9	9	1	8	64
7	1	20	9	8	64
16	8	13	3	5	25
15	7	12	2	5	25
10	3	15	5	2	4
9	2	18	8	6	36
14	6	17	7	1	1
11	4	16	6	2	4
13	5	14	4	1	1
				Total:	224

Table 2

Space for calculations

$\Sigma d^2 = 224$ $\quad 6\Sigma d^2 = 6 \times 224 = 1344$

$n(n^2 - 1) = 9 \times (81 - 1) = 720$ $\quad 1344 \div 720 = 1.8667$

$rs = 1 - 1.8667 = -0.8667 \Rightarrow -0.87$ (2 d.p.)

Spearman's rank correlation coefficient ..... −0.87 .....

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(b) Justify why Becky used a Spearman's rank correlation coefficient on her data.

(2)

Becky's hypothesis predicts a correlation between two co-variables, the number of CBT sessions attended and the number of aggressive incidents, not a difference between conditions. The data are at least ordinal, as the numbers of sessions and incidents can be ranked, so Spearman's rank is the appropriate test.

(c) Explain **one** improvement Becky could make to her investigation.

(2)

Becky could use prison records or officers' observations of the number of aggressive incidents rather than asking the offenders to self-report them. This would improve the validity of her data, as offenders may have underestimated their aggressive incidents to look better, eg to help their chances of parole.

(Total for Question 7 = 8 marks)

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8 Arnold works at the local bank. A man approached the desk, pointed a gun at Arnold and demanded that he handed over a large sum of money. Arnold pressed the alarm and the man ran out of the bank without injuring Arnold.

The police were called and they asked Arnold to give a statement of the events, including a description of the man.

Explain **two** ways that weapon focus could make Arnold's eye witness testimony unreliable.

1 *Arnold would have felt very high anxiety when the man pointed the gun at him, so his body would have produced high levels of cortisol and arousal. High cortisol is linked to memory impairment, so his description of the man to the police may be less accurate.*

2 *Arnold's attention would have been focused on the gun because it was a perceived threat to his life. This means he paid less attention to the man's face and features, so peripheral details in his description of the offender may be missing or inaccurate (Loftus et al., 1987).*

(Total for Question 8 = 4 marks)

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9 Kajri was walking through the park when she witnessed a person attack a young man. The attacker ran out from behind a tree, pushed him to the ground and stole his phone. Kajri called the police, who arrested a suspect.

Kajri went to the police station to give details about what she saw. The police needed to decide whether to use a standard interview or a cognitive interview.

Explain **one** strength of the police using the cognitive interview technique with Kajri.

In a cognitive interview Kajri would recall the attack in a different narrative order, which stops her reconstructing the events using schemas, which can lead to distortion. Geiselman et al. (1985) found the cognitive interview produced more correct information than a standard interview, so starting at the end, when the phone was stolen, should make her testimony more accurate.

(Total for Question 9 = 2 marks)

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10 In criminological psychology you will have studied factors influencing jury decision-making.

Evaluate research into jury decision-making, including Penrod and Cutler (1989), in terms of reliability and validity.

(8)

Jury decision-making is usually researched using mock juries, where participants watch or read a simulated trial and give a verdict, often with fewer jurors than a real trial. This allows extraneous variables to be controlled so the effect of one factor can be isolated. Penrod and Cutler (1989) investigated the effect of factors such as witness confidence and expert testimony on juror decision-making. In a laboratory experiment, 538 participants, including students and eligible and experienced jurors, watched a videotaped mock trial of a robbery and then completed a questionnaire measuring the dependent variables, such as the verdict. They found that witness confidence had little effect on verdicts, but expert testimony made jurors more sensitive to factors affecting eyewitness accuracy.

Mock trials are reliable because the procedure, such as the same video and questionnaire, is standardised and controlled, so it can be replicated to test consistency. Penrod and Cutler's sample was large and the conditions were spread evenly across many small groups of 2 to 8 participants, so the procedure was effectively repeated many times, which increases reliability and generalisability.

However, the validity of mock jury research is questionable. Penrod and Cutler lacked ecological validity, as participants watched a video of a mock robbery trial, which does not represent a real trial lasting days or weeks. Participants knew their verdict had no real consequences for a defendant, so they may not have taken the decision as seriously. Reduced jury numbers may also mean there are not enough jurors to discuss the case in detail, so it may not be a valid measure of how decisions are made in a real criminal trial. Similarly, Dixon et al. (2002) used

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an audio recording of a police interview to study accent bias, which is far from a real courtroom.

On the other hand, using real juries is impossible for ethical and legal reasons, as jury deliberations are secret, so mock juries are the only way to establish cause and effect. Including experienced jurors, as Penrod and Cutler did, also increases population validity.

Overall, research into jury decision-making such as Penrod and Cutler (1989) is highly reliable because it is controlled and replicable, but its validity is limited by artificial tasks, so findings should be applied to real trials with caution.

(Total for Question 10 = 8 marks)

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11 Assess how far social learning from the media can account for criminal and anti-social behaviour.

(8)

Social learning theory (Bandura) suggests criminal and antisocial behaviour is learned by observing and imitating role models, including those in the media. Criminal characters are often shown as strong and powerful, so viewers are likely to see them as role models. Attention is more likely to be paid to criminal behaviour in the media when it is paired with enticements such as music or fast action. The behaviour is retained, and if the observer has the ability, it is reproduced. Motivation comes from vicarious reinforcement, when a character's antisocial acts are rewarded with wealth, power or status. Identification is more likely when the role model is the same gender as the observer.

Bandura et al. (1961) found that children who watched an adult model act aggressively towards a Bobo doll imitated the aggression, and boys were more likely to imitate the male model, supporting the role of identification. Williams (1986) found that levels of aggression in children doubled in a Canadian town after television was introduced, where acts were often rewarded, suggesting media can account for antisocial behaviour. Anderson and Dill (2000) also found that playing violent video games was linked to increased aggressive thoughts and behaviour.

However, Bandura only used young children and aggression towards a doll is not criminal behaviour, so this may not explain the criminal behaviour of adolescents and adults. Charlton et al. (2000) found no increase in antisocial behaviour among children on St Helena after television was introduced, contradicting Williams. Much media research is also correlational, so aggressive people may simply choose violent media rather than the media causing aggression.

Social learning also ignores biological explanations. Criminal and antisocial behaviour may be better accounted for by antisocial personality disorder, brain differences or genes, and millions of

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people watch violent media without ever committing crime, suggesting individual differences matter.

In conclusion, social learning from the media can account for some antisocial behaviour, especially imitation in children, but it is only a partial explanation of serious crime, which is better explained by combining biological and social factors.

(Total for Question 11 = 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

12 Describe how the pre-frontal cortex may be associated with stress.

The pre-frontal cortex controls our responses to stress by regulating thoughts, emotions and actions, for example by calming the amygdala. Stress, through high levels of cortisol and noradrenaline, reduces the pre-frontal cortex's function, which disrupts executive functioning such as planning, decision-making and impulse control.

(Total for Question 12 = 2 marks)

13 Becky is a clinical psychologist who is interested in the relationship between Cognitive Behavioural Therapy (CBT) and levels of anxiety. She approached her local clinic and recorded the number of Cognitive Behavioural Therapy (CBT) sessions the patients attended over a six-month period. Becky also asked the patients the number of anxious episodes they had experienced over the same six-month period.

(a) Complete **Table 3** and calculate Spearman's rank correlation coefficient.

You **must** give your answer to **two** decimal places.

The formulae and statistical tables can be found at the front of the paper.

(4)

Number of Cognitive Behavioural Therapy (CBT) sessions over a six-month period	Rank 1	Number of anxious episodes over the same six-month period	Rank 2	d	d^2
18	9	9	1	8	64
7	1	20	9	8	64
16	8	13	3	5	25
15	7	12	2	5	25
10	3	15	5	2	4
9	2	18	8	6	36
14	6	17	7	1	1
11	4	16	6	2	4
13	5	14	4	1	1
				Total:	224

Table 3

Space for calculations

$\Sigma d^2 = 224$ $\quad 6\Sigma d^2 = 6 \times 224 = 1344$

$n(n^2 - 1) = 9 \times (81 - 1) = 720$ $\quad 1344 \div 720 = 1.8667$

$rs = 1 - 1.8667 = -0.8667 \Rightarrow -0.87$ (2 d.p.)

Spearman's rank correlation coefficient ...−0.87...

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(b) Justify why Becky used a Spearman's rank correlation coefficient on her data.

(2)

Becky's hypothesis predicts a correlation between two co-variables, the number of CBT sessions and the number of anxious episodes, not a difference between conditions. The data are at least ordinal, as the numbers of sessions and anxious episodes can be ranked, so Spearman's rank is the appropriate test.

(c) Explain **one** improvement Becky could make to her investigation.

(2)

Becky could ask patients to keep a daily diary, or use a physiological measure such as heart rate, rather than asking them to recall their anxious episodes over six months. This would improve validity, as patients may have underestimated or forgotten episodes, or reported fewer to look better to their therapist.

(Total for Question 13 = 8 marks)

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14 Arnold works at the local bank. A man approached the desk, pointed a gun at Arnold and demanded that he handed over a large sum of money. Arnold pressed the alarm and the man ran out of the bank without injuring Arnold.

Following the incident, Arnold was very upset and experienced high levels of stress.

Explain **two** ways that appraisal-focusing may be an effective coping strategy for Arnold's stress.

1 *Arnold could reappraise the robbery by acknowledging that this kind of armed robbery is very unlikely to happen to him again. This changes his negative appraisal of the event to a more positive one, so his emotional response and his levels of cortisol should fall.*

2 *Arnold appraised the gun as a threat to his life, but he could instead focus on the fact that he pressed the alarm and was not injured. Seeing that he coped well changes the event to a positive appraisal, so it is effective in reducing his stress and helping him return to work.*

(Total for Question 14 = 4 marks)

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15 Kajri was walking through the park when she witnessed a person attack a young man. The attacker ran out from behind a tree, pushed him to the ground and stole his phone. Kajri called the police, who arrested a suspect.

Kajri has high levels of stress and no longer walks through the park because she has panic attacks. Her friends have offered to help her with her panic attacks because she is thinking of moving away.

Explain **one** strength of Kajri using social support to help her cope with her stress.

Kajri's friends can provide emotional and practical support, such as walking through the park with her, which can moderate the impact of the attack on her stress and wellbeing. Fleming et al. (1982) found that people with strong social support showed fewer psychological and behavioural effects of stress, so it may reduce her panic attacks and help her stay rather than move away.

(Total for Question 15 = 2 marks)

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16 In health psychology you will have studied factors affecting stress.

Evaluate whether the Holmes and Rahe stress scale is a reliable and valid measure of stress.

(8)

Holmes and Rahe (1967) developed the Social Readjustment Rating Scale (SRRS), a questionnaire listing 43 stressful life events, such as death of a spouse and divorce. Each event is rated in life change units (LCUs), eg death of a spouse 100 and marriage 50, according to how much readjustment it needs. Participants tick the events they have experienced in the last 12 months and the LCUs are totalled; a score over 300 was linked to a high chance of stress-related illness. It is a self-report method, so the link with illness is not measured scientifically, and people with different personality types deal with stress in different ways.

The SRRS can be considered reliable because every participant answers the same standardised list of events, written in an accessible format, so it is easy to replicate and different researchers can score it consistently. It also produces quantitative scores that can be compared between people and over time.

It has some validity, as each event has a life change unit that can be scored over a 12-month period, and Rahe et al. (1970) found a positive correlation between LCU scores and illness in US Navy personnel. However, the correlation was weak, about +0.118, and is only a relationship, so other factors may cause illness.

Reliability is limited because it relies on people recalling events over a year, which they may forget or misremember, so the same person might give different answers on another occasion. The LCU ratings are also subjective evaluations, so the scale may be unscientific.

Validity is also limited as the SRRS ignores individual differences in emotional responses to

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stressors: divorce may be a relief to one person but devastating to another, yet both get the same LCUs. It ignores daily hassles, which Kanner et al. (1981) found predicted symptoms better than life events, and some events, such as a holiday, are positive. The original events may also be outdated and culturally specific.

Overall, the SRRS is a fairly reliable, easy to use measure, but its validity is weak because it gives fixed scores and ignores how individuals appraise events, so it is not a fully valid measure of stress.

(Total for Question 16 = 8 marks)

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17 Assess how far Type A personality may be associated with stress.

(8)

Friedman and Rosenman (1974) described Type A personality as competitive, impatient, time conscious, self-critical and hostile, taking part in goal-directed behaviour. They become impatient if they think time is being wasted, and their need to be the best makes them try to achieve more in both work and leisure, so they experience higher levels of stress. This prolonged stress means Type A people are more likely to suffer from stress-related illnesses such as coronary heart disease (CHD). Type B personalities are relaxed, patient and less competitive.

Friedman and Rosenman's Western Collaborative Group Study followed over 3,000 healthy men in California for eight and a half years and found that Type A men were about twice as likely to develop CHD as Type B men, even when smoking and other lifestyle factors were considered. Miličić et al. (2016) found that, compared with healthy controls, more of those who had suffered an acute myocardial infarction were classified as Type A, supporting the link.

However, this is a correlation, so it may be due to other factors such as a genetic predisposition to heart disease rather than stress. Ragland and Brand (1988) followed up the same men and found Type A men were no more likely to die from CHD than Type B men, which challenges the link. Later research suggests that only the hostility component of Type A, rather than the whole personality type, is linked to heart disease.

Type A personality may also not be the source of the stress itself. Type A people are often found in high pressure, stressful jobs, as traits such as being highly motivated and goal-directed are desired by employers, so it may be the situation, not the personality, that causes the stress. The original sample was also only American men, so it may not generalise to women or other cultures.

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In conclusion, Type A personality is associated with stress to some extent, but the link is weaker than first claimed and is likely to depend on hostility and the stressful situations Type A people choose.

(Total for Question 17 = 8 marks)

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

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