

Mark schemes

Q1.(a) **[AO1 = 1]****B** The abstract, the discussion and the results sections only.

1

(b) **[AO2 = 1]****A** -0.80

1

(c) **[AO2 = 3]****1 mark** for scattergram/scattergraph.**Plus****2 marks** for a clear and coherent explanation linked to this study.**1 mark** for a limited or muddled explanation.**Possible content:**

- the study is correlational/looking at the relationship between recreational screen time and academic performance
- scattergrams display relationships between co-variables, academic performance and recreational screen time are co-variables.

Credit other relevant material.

3

(d) **[AO2 = 2]****2 marks** for a clear and coherent explanation linked to this study.**1 mark** for a limited or muddled explanation.**Possible content:**

- correlation only shows a relationship between the two co-variables, recreational screen time and academic performance
- researcher's conclusion implies causation, increased recreational screen time impairs academic performance
- third variable could be responsible for the relationship, eg personality type, number of hours spent studying.

Credit other relevant material.

2

Q2.

(a) [AO2 = 2]

2 marks for a clear and coherent reason with some relevant elaboration in the context of this study.

1 mark for a limited/muddled reason.

Possible content:

- it would be difficult to dictate the number of hours the students should sleep
- it may be more ethical to conduct a correlation rather than restrict how many hours each student slept.

Credit other appropriate reasons.

2

(b) [AO2 = 3]

Award 1 mark for each bullet point:

- collect the names of all the 1st year students at the researcher's university
- put all the students' names into a hat/computer random name generator
- select a name in an unbiased manner to include as students in the experiment, repeat this until 18 names have been selected.

3

(c) [AO2 = 4]

Award 2 marks for each bullet point:

- correlational hypothesis (1 mark) as the researcher is investigating the relationship between the number of hours slept and how well rested the students feel (1 mark)
- ordinal data (1 mark) as they are using an arbitrary scale of 1–5 to assess how well rested the students feel/not a universal or standardised measure (subjective) of how well rested the students feel but can be ranked (1 mark).

4

(d) [AO2 = 4]

Award 1 mark for each bullet point:

- the critical value is 0.401 (accept value identified in table)
- the hypothesis is directional/it is a one-tailed test
- there are 18 participants so $N=18$
- the level of significance is 0.05.

4

(e) [AO2 = 2]

Award 1 mark for each bullet point:

- the researcher's hypothesis should not be accepted (as the result is not significant)
- because the calculated value of rho (0.395) is less than the critical value (0.401).

Note: if students have identified the critical value incorrectly as lower than the calculated value in part (d), to gain the first bullet point they should state that the researcher's hypothesis should be accepted (as the calculated value of rho is greater than the critical value identified).

2

(f) [AO2 = 2]

2 marks for a clear and coherent explanation with some relevant elaboration in the context of this study.

1 mark for a limited/muddled explanation.

Possible content:

- the 5% level of significance is the conventional level of probability employed by psychologists/balances the risks of making a Type I and Type II error
- the researcher is investigating the relationship between numbers of hours slept and how well rested participants feel, this is not a sensitive topic nor one which may affect individual's health (as in clinical trials).

2

(g) [AO2 = 2]

2 marks for a clear and coherent explanation with some relevant elaboration in the context of this study.

1 mark for a limited/muddled explanation.

Content:

- when the researcher accepts there is no correlation between the number of hours slept and how well rested they felt (null hypothesis) even though the alternative hypothesis is correct
- when the researcher believes the relationship between the number of hours slept and how well rested they felt is not significant when it is (false negative).

2

[19]

Q3.

[AO3 = 2]

2 marks for a clear and coherent explanation of why such a conclusion would be inappropriate with some elaboration.

1 mark for a muddled/limited explanation.

Possible content:

- there was no manipulation of an IV, therefore cause and effect between therapy and well-being cannot be inferred
- a third, untested variable may be causing the positive relationship between therapy and well-being.

[2]