Mark scheme

| Question	Answer/Indicative content	Marks	Guidance
1	<table><tr><td>Level of response</td><td>Details of required features (RFs) included</td><td>Justification of decisions made</td><td>Reference to own practical work</td></tr><tr><td>**Good** 10-12 marks</td><td>**All 3** required features addressed. Accurate and detailed knowledge and understanding of each feature in context. **Good** evidence of **application** of required features in context.</td><td>**Appropriate justification** of all decisions and *some* is contextualised. Well-developed line of reasoning that is clear and logically structured.</td><td>**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature. E.g. specific mention of aim or procedural features.</td></tr><tr><td>**Reasonable** 7-9 marks</td><td>**All 3** required features addressed. Reasonably accurate and detailed knowledge and understanding of each feature. At least **two** applications of required features in context. If two required features are addressed in detail and justified in context and explicit</td><td>**Some** appropriate **justification** of decision related to all three required features (7 marks if only two required features justified). There was a line of reasoning evident with some structure.</td><td>For top band (good) 10 marks if just one RF linked, 11 marks if two and 12 if all three. If there is no explicit clear link between own practical work and any of the</td></tr></table>	Max 12	Context = mental health, grateful, feelings, etc. **<u>Examiner's Comments</u>** There was a variety of responses to this question, although a significant minority of candidates achieved the marks in the highest band. The best responses were characterised by taking each of the three required features (RF) in turn. Firstly, candidates demonstrated knowledge of the feature itself and an understanding of what was involved in terms of addressing it for the research presented. They would then justify the decision made regarding how to address it before finally drawing on their own experiences of conducting research and explicitly outlining how this informed the planned study presented. All three of the required features (RF) needed to be discussed in context to obtain marks in the highest band. Most candidates achieved marks within the limited band due to a lack of detail in their responses, context or justification. Some candidates wrote more about their own practical activity than they did about the explanation of the study they had planned based on the stem. RF1: Most candidates simply defined a structured interview and their explanation did not go beyond this. Some candidates were able to suggest a question that might be asked. Those who understood the structured interview were able to effectively address how this could be done to gain the highest marks.

links made to own practical work award 8 marks.		3 required features caps the mark at 9 maximum.
Limited 4-6 marks	**Two** of the required features addressed. **Limited application** of required features. **OR** all required features referred to but in a limited way.	**Attempt** to justify decision(s) but weak. Evidence of some structure, but weak.
	If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks.	
Basic 1-3 marks	**One** of the required features addressed. **Weak application** of required features. **OR** more than one of the required features referred to but in a very brief and/or basic way.	**None**, or if present very weak.

RF2: Most candidates were able to suggest a Likert scale but often didn't elaborate on what the scale would be. Some candidates confused a Likert scale with a standard rating scale or a semantic differential scale.

RF3: This was the better answered required feature with most candidates choosing opportunity sampling and suggesting how they could carry out this sampling method.

Exemplar 1
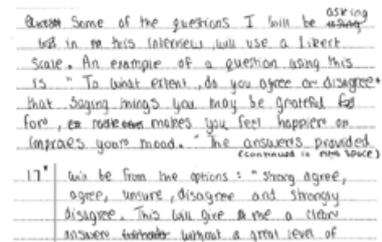
Exemplar 1 shows an extract from a Level 4 candidate answer to RF2 (Likert scale) which is accurate, clear and in context. This candidate has demonstrated knowledge of the options participants are given in a Likert scale question.

Assessment for learning

Candidates often refer to their questionnaire that they have conducted as a form of practical for the self-report method. Candidates should be encouraged to conduct a practical using the interview technique so they are clear on the difference between a structured/semi structured/unstructured interview and are aware of how data is collected.

RF		Details of RF
1	Use of a structured interview.	• **Good** – A clear understanding of a structured interview with a clear and detailed overview of how the interview will be conducted – this could contain some procedural details • **Reasonable** – A clear understanding of a

					structured interview with an overview of how the interview will be conducted • **Limited** – An attempt at defining a structured interview with an indication that there are pre-determined questions with an attempted overview of how the interview will be conducted • **Basic** – An attempt at defining a structured interview - maybe some confusion about understanding of what a structured interview is	
			2	One question that uses a Likert scale.	• **Good** – A clear question with a scale including all options relevant to a Likert scale • **Reasonable** – A clear question with a Likert scale but some options within the scale may be missing • **Limited** – A Likert scale identified and defined • **Basic** – Some confusion regarding different rating scales	
			3	The sampling method you would use to collect participants.	• **Good** – Identified sampling method, possibly defined and clearly explained how this has been carried out in their study. This should include how the sampling method has been enacted/some procedural details • **Reasonable** – Identified sampling method, possibly defined and attempted to explain how this has been carried out in their study • **Limited** – Identified sampling method and defined • **Basic** – Just identified sampling technique or	

				confuses sampling methods		

		Total		**12**	

What you are being **driven** by is the left-hand column of the grid ('details of the required features (RFs)'. That is always your starting point and 'locator' for the appropriate mark band before considering the other two columns ('justification of decisions made' and 'reference to own practical work').

Level of response	Details of required features (RFs) included	Justification of decisions made	Reference to own practical work
Good 12-15 marks	**All 4** required features (RFs) addressed in context Accurate and detailed knowledge and understanding of each feature in context **Good** evidence of **application** of required features in context	**Appropriate justification** of all decisions and *some* is contextualised Well-developed line of reasoning that is clear and logically structured	**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature. e.g. specific mention of aim or procedural features For top band (good) 12 marks if just one RF explicitly linked, 13 marks if two, 14 marks if three and 15 if all four are linked explicitly. If there is no explicit clear link between own practical
Reasonable 8-11 marks	At least **3 required features in context** Reasonably accurate and detailed knowledge and understanding	**Some** appropriate **justification** of decision related to required features (if no justification in context award 8 marks)	

Max = 15

Context = aroma, smell, scent, fragrance, litter, any example of litter (e.g. wrappers, rubbish) cleanliness etc

Annotations

RF (in the left column AND see next page for descriptors of the levels for description of the RF) **L4=Good; L3=Reasonable; L2= Limited; L1= Basic**

Annotate with CONT for context if RF in context. (under RF level annotation on left)

Tick for justification within the response Do not annotate the level, note the level of justification to decide on the mark given within the band

Examiner's Comments

Responses varied a lot to this extended question, with the majority of candidates finding it difficult to gain the higher band marks. The best responses were characterised by taking each of the four required features in turn and writing a separate paragraph relating to each one: first, demonstrating understanding of what was involved and how to address it for the research presented; next by justifying the decisions made regarding how to address it and finally, drawing on the candidates own experiences of conducting research themselves and how they learned from this how to conduct the research presented.
All of this needed to be discussed in context to obtain marks in the highest band. It should also be noted that the candidates own experiences of conducting practical activities (especially the one using the same research method, which here was the

		of each feature	There was a line of reasoning evident with some structure	work and *any* of the 4 required features caps the mark at 11 maximum.
Limited 4-7 marks	At least **two** of the required features addressed in context **Limited application** of required features **OR** three or all four required features referred to but in a limited way	**Attempt** to justify decision(s) but weak Evidence of some structure, but weak	**Maximum 11 marks (reasonable) if *clearly* done as a field experiment.** **Overall Mark Decide on band and final mark** **Look at RF first** **L4 Good** – all 4 good (L4) in context **L3 Reasonable** – min 3 reasonable (L3) in context (could be 1 good and 2 reasonable OR 2 good and 1 reasonable)
	If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks		
Basic 1-3 marks	At least **one** of the required features addressed **Weak application** of required features **OR** more than one of the required features referred to but in a very brief and/or basic way	**None**, or if present very weak	**L2 Limited** – min 2 limited (L2) in context or 3-4 limited (L2) with no context **L1 Basic** – 1 basic (L1) (no context needed). **THEN look at justifications** Make judgement of which mark to give the response within the

laboratory experimental method) should be evident in their response to each required feature in terms of how this has helped inform their decision making for the planning of the current proposed research.

There was also much variation in how candidates demonstrated knowledge and understanding of each of the individual required features (RFs). The best responses were characterised by first defining what the RF was/referred to (e.g. for RF1, defining the sampling method) before going on to describe exactly how the RF would be addressed in the proposed research. Often candidates did not provide enough detail. For example, in relation to RF1 just identifying the method without clearly describing how they would implement this sampling method in this research. For example, many responses did not clarify how they would end up with their final sample e.g. not stating that the first 20 volunteers were used. Some responses confused different sampling techniques, for example naming opportunity sample but then describing self-selected sampling. There were some very clear justifications in context, however, some did not use acceptable strengths of the sampling technique. For example, stating that opportunity sampling method would give a representative sample.

There was great variation in the response to RF2. Better responses gave a clear outline of how the dependent variable of 'amount of litter' would be operationalised. Such as 'counting the pieces of litter left in the room on a tally chart' or 'weighing the amount of litter left in the room in grams'. Sometimes the operationalisation of dependent variable lacked when and where the collection of data would occur or where the litter came from which sometimes limited the response to the 'reasonable' rather than 'good' band for this RF. Common

					band based on the justifications **L4 Good** – at least 2 reasonable (L3) AND at least 2 of the justifications are in context (does not have to be the reasonable ones) **L3 Reasonable** – at least 2 limited (L2) AND at least 1 of the justifications is in context (8 marks if none contextualised OR meets the minimum justification requirement). **L2 Limited** – at least 1 limited (L1) (none have to be in context) OR If one required feature addressed in detail (good) and justified in context and explicit links made to own practical work award 4 marks **L1 Basic** – no justification or basic justification		justifications for this RF included making comparisons, use of bar charts and doing statistical analysis. Some responses gave weaknesses of their dependent variable which did not gain marks. Some justifications were contextualised but this was inconsistent in the responses. Candidates used a wide variety of ethical considerations in their response to RF3. Popular responses including debriefing which told the aim of the study and revealed any deceptions used as to the nature of the study, confidentiality and allowing the participants to withdraw their data. Giving informed consent was another successful response. Clear justifications contextualised the response and often referred to respect for participants or the necessity to follow the BPS guidelines. Weaker responses to this RF did not address the assessment request to address one ethical issue and often attempted to address many ethical issues. This led to less detail being given to each ethical issue raised in the response as well as difficulty in justifying any one ethical issue in detail. Some responses were in context, but this was less consistent compared to RF1 and RF2. The ethical consideration of confidentiality sometimes stated exactly how the researcher would keep the data from the participant confidential, such as using numbers in place of participants' names. However, many responses that had confidentiality as the ethical issue, often just stated they would keep it anonymous with no further explanation as to how they would do this. Some of the justifications were very brief, sometimes just stating it made the study 'more ethical'. There was a wide variety of suggestions given in responses to RF4. The best responses often detailed control of situational variables with a recognition that keeping the lemon smell/no smell in the rooms consistent for each

RF		Details of RF
1	Sampling technique	• Good – Identified the sampling method and clearly explained where and how this has been carried out in their study. Details of how the sampling method is enacted/procedural details e.g. how the P is contacted, is approached or gets in touch with experimenter or becomes part of the sampling pool (e.g using everyone in that location). ` • Reasonable – Identified the sampling method, possibly defined AND reasonable attempt to explain how this has been carried out in their study. • Limited – Sampling method identified and defined OR unclear attempt to explain how this has been carried out in their study. • Basic – Just identifying the sampling technique or confuses sampling methods.
2	Operationalising DV	• Good – Clear details on how dependent variable will be operationalised. Outline how data is quantified and how/when the litter is counted (e.g. how weight is measured or unit of measure, comparison of amount before/after, number of pieces in the bin, tally of number of pieces of litter).

participant was important. Popular ideas including opening windows and not allowing participants to wear any form of perfume during the study. Other ideas that often achieved well standardised the environment by having the layout of the rooms, location of the bins and time spent in rooms standardised among participants. There were also some good responses about participant variables with a recognition that anyone who had problems with smell or was allergic to lemons should be excluded from the study. Weaker responses often just identified the extraneous variable to be controlled or gave a very brief outline of how to control. Some responses were contextualised while others were not. Justifications were often linked to increased validity and/or reliability and some were able to give a clear explanation of why the control would lead to this improvement in the study. Better responses had specific evaluation points included. Weaker candidates justified by suggesting this would improve validity and/or reliability with no further elaboration. Links to own practical work were usually explicit with the responses outlining what they did in their study. Some candidates linked their own practical work to the choice of the RF while others just simply described what they did in their study. Many were able to further justify their choice of RF through their choices made in their own practical work.

Exemplar 2

					- Reasonable – Reasonable details on how dependent variable will be operationalised that does lead to quantitative data e.g. count the number of pieces of litter/number of wrappers. May include a muddled/vague indication of where and how this has been carried out in their study. - Limited – Way DV is operationalised is quantitative and addressed in a limited/unclear way. E.g. does not indicate which litter is being counted, more than one measure indicated; Could indicate where the litter has come from and 'amount of litter left in the room'. - Basic – Vague indication of how DV would be measured (e.g. amount of litter left in the room).		

Exemplar 2 is an example of a candidate who has addressed RF2 reasonably and in context and provided some reasonable justification but in context and makes explicit reference to their practical work. This candidate achieved a mark in the reasonable band overall as the RFs were one good in context, two reasonable in context and one basic in context. The justifications for their response were mixed with some good and some reasonable and mainly in context.

			3	One ethical consideration addressed	Integrity (deception) Respect (privacy/confidentiality/consent/right to withdraw), Responsibility (debrief/no psychological or physical harm unlikely to be creditworthy unless clear how their study could be psychologically or physically harmful), Competence (refers to the competence of the researcher e.g. get an expert in to check for sensory impairments) - Good – Identifying the ethical consideration, explaining the ethical consideration and clarity on how it can be addressed. - Reasonable – Identifying the ethical consideration	

and reasonable explanation of how it can be addressed. Briefly addressed but lacks clarity.

- Limited - Limited explanation with some understanding of the ethical consideration (e.g. outline of how to address ethical consideration possibly without identifying).

- Basic – Just identifies the ethical consideration.

If candidate clearly does more than one consideration, credit the first one. Allow ethical considerations which are clearly connected to each other/influence each other. There may be a mislabelling of the ethical principle. Therefore, if the RF meets the requirements of the description, it can be put at this level.

This RF needs to focus on the way the ethical consideration is addressed. Any information given on the reason is justification.

4	Control of one Extraneous variable	- Good – Clear and somewhat detailed of how EV can be controlled. - Reasonable – Reasonable outline of how EV can be controlled. - Limited – Limited/brief outline of how EV can be controlled is unclear. - Basic – Identifies how EV can be controlled or is muddled.

			If more than one extraneous variable, credit the first one.			

		Total		15	

| 3 | | Depends on candidates own practical activity Answers could include but are not limited to: sample size, method used, design used, data collected, reliability, usefulness of data collected 4 marks for an identification with a developed explanation (in context) that is applied meaningfully to the details/findings of the practical activity. 3 marks for an identification with a basic/generic explanation of the evaluation point in context. 2 marks for an identification with a basic/generic explanation of the evaluation point. Or 2 marks for identification of the evaluation point in context. 1 mark for identifying an appropriate evaluation point. | Max 4 | -Context here = the theme of the candidates own chosen practical activity If candidates write a generic evaluation point which could be included in a discussion session of a practical report (but this is not their own practical report) cap at 2 marks. If candidates elaborate on their evaluation with a relevant counterargument about the same issue this can be accepted as part of a developed explanation. **Examiner's Comments** There was a mixed response to this question. Many candidates discussed a finding/conclusion rather than an evaluation issue. The candidates who were able to access full marks were able to identify and elaborate on an evaluation point from their own practical activity and explain why it was a strength or weakness. |

		Total		4	

4		Level of response	Details of required features (RFs) included	Justification of decisions made	Reference to own practical work		Max 12	-Context = music, prosocial, love, kindness, helpful etc **Examiner's Comments** This question gained a variety of responses, although very few candidates achieved the highest band marks. The best responses were characterised by taking each of the three required features (RF) in turn. Firstly, demonstrating knowledge of the feature itself and an understanding of what was involved in terms of addressing it for the research presented. Candidates would then justify the decision made regarding how to address it before finally drawing on their own experiences of conducting research
		Good 10-12 marks	-**All 3** required features addressed -Accurate and detailed knowledge and understanding of each feature in context	-**Appropriate justification** of all decisions and *some* is contextualised -Well developed line of reasoning that is clear and	-Explicit reference to own practical work and clear links between own work and the planned research for each			

	-Good evidence of **application** of required features in context	logically structured	required feature. e.g. specific mention of aim or procedural features	
Reasonable 7-9 marks	**-All 3** required features addressed -Reasonably accurate and detailed knowledge and understanding of each feature -At least **two** applications of required features in context	**-Some** appropriate **justification** of decision related to all three required features (7 marks if only two required features justified) -There was a line of reasoning evident with some structure	-For top band (good) 10 marks if just one RF linked, 11 marks if two and 12 if all three -If there is no explicit clear link between own practical work and *any* of the 3 required features caps the mark at 9 maximum.	
	If two required features are addressed in detail and justified in context and explicit links made to own practical work award 8 marks			
Limited 4-6 marks	**-Two** of the required features addressed **-Limited application** of required features	**-Attempt** to justify decision(s) but weak -Evidence of some structure, but weak		
	OR all required features referred to but in a limited way			
	If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks			
Basic 1-3 marks	**-One** of the required features addressed **-Weak**	**-None**, or if present very weak		

and explicitly outlining how this informed the planned study presented. All three of the required features (RF) needed to be discussed in context to obtain marks in the highest band.

The majority of candidates achieved marks within the limited band due to responses lacking detail, context or justification. Some candidates wrote more about their own practical activity than they did about the explanation of the study that was being conducted based on the stem. Candidates need to perform well on the explanation and justification of the required features before marks are given for their reference to their experience of their own practical activity.

RF1: Some candidates confused the use of an experimental design with the experimental method. Those who understood the experimental design and were able to effectively address how this could be done in addition to the allocation of participants to conditions gained the highest marks.

RF2: Most candidates were able to operationalise the dependent variable and suggest how this would gain quantitative data. Candidates generally gave a rating scale to assess helpfulness or a task with detail on how they would measure helpfulness.

RF3: This was the least well answered feature with many candidates simply stating an ethical consideration. Some candidates took their response further by defining the consideration however it was rare for candidates to give a detailed explanation on how this consideration could be addressed.

Exemplar 1

				application of required features		
				OR more than one of the required features referred to but in a very brief and/or basic way		

RF		Details of RF
1	Experimental Design	- Good: Design is identified and conditions labelled with how the participants would be assigned to each condition. If RMD which condition it is first/is it counter-balanced. - Reasonable: Design identified and conditions labelled and brief or somewhat muddled outline of how the participants would be assigned to each condition or demonstrates some understanding of the design. - Limited: Design identified and conditions labelled. - Basic: Design identified or described or confuses experimental designs (e.g., identified RMD and outlines IMD).
2	Operationalising DV (quantitative data)	- Good: if a rating scale is suggested - clear numerical scale with ends of rating scale labelled.

The experimental design is the way in which the
participants are used within the experiment. I would
use repeated measures design, which is where ppts are
used in both the condition that does listen to the classical
music and then is assessed on how helpful and also the
condition where they listen to no music and are assessed
on how helpful. I would use repeated measures design as it

This exemplar demonstrates a reasonable in context response to RF1 (experimental design). For this candidate to gain a good in context response they need to explain which condition is completed first for a repeated measures design. The candidate would then go on to justify the use of using this experimental design by giving a strength in context. Before finally using knowledge of their own practical activity to inform their response.

5					Semantic differential scales can be creditworthy and are considered reasonable (good if the numerical scale is given or an explanation of how the data will be made ordinal). - Reasonable: rating scale given but lacks clarity (e.g., Ends of rating scale not labelled). Indicates a number of questions will be asked but does not explain how the final score for each participant will be calculated. - Limited: the way the DV is operationalised could be considered to be quantitative but not explicit. - Basic: vague indication of how DV would be measured e.g., Likert scale		
			3	One Ethical consideration	- Good: ethical consideration identified and clear details of how this will be addressed. - Reasonable: briefly addressed or lacks clarity. - Limited: identification of one ethical consideration with some understanding of the consideration. - Basic: identification of one ethical consideration		
			Total			**12**	
5						Max 3	-Context here = the theme of the candidates own chosen practical activity

			Answer here relates to one of candidates' own practical activities Possible answers may include: detailed answers given, explains the reason 'why' Clear outline of strength in context - 3 Clear outline of strength but not in context - 2 / **OR** attempted out-line of strength in context - 2 Brief and/or weak attempt to out ine strength (whether in context or not) - 1 The candidate has not provided any creditworthy information - 0		**Examiner's Comments** Many candidates gained 2 marks on this question with some achieving full marks. For those who lost marks it was the lack of detail or context about their own practical which penalised them.

			Total	**3**	

6			**Level of Response** **Good** 10–12 marks **Details of required features(RFs included)** • **All 3** required features addressed • Accurate and detailed knowledge and understanding of each feature in context • **Good** evidence of **application** of required features in context **Justification of decisions made** • **Appropriate justification** of all decisions and *some* is contextualized • Well developed line of reasoning that is clear and logically structured **Reference to own practical work** **Explicit** reference to own practical work and clear links between own work and the planned research for each required feature e.g. specific mention of aim or procedural features For top level, 10 marks if one RF linked, 11 marks if two and 12 marks if all three	Max12	Context = mental illness, psychiatric, attitudes etc **Examiner's Comments** This question gained a variety of responses, although very few candidates achieved the highest band marks. The best responses were characterised by taking each of the three required features in turn. Firstly, demonstrating knowledge of the feature itself and an understanding of what was involved in terms of addressing it for the research presented. Candidates would then justify the decision made regarding how to address it before finally drawing on their own experiences of conducting research and explicitly outlining how this informed the planned study presented. All three of the required features (RF) needed to be discussed in context to obtain marks in the highest band. See next page for further details. RF1: Many candidates confused the purpose of a semi-structured interview being about gathering both quantitative and qualitative data. Understanding of a semi-structured interview was quite poor. Those who understood that a semi-structured interview consisted of some pre-planned questions in addition to having the ability to ask spontaneous questions in response to a participants' response gained the

If there is no explicit link between own practical work and any of the three required features – max 9 marks

**Level of Response
Reasonable**
7–9 marks
Details of required features(RFs included)

- **All 3** required features addressed
- Reasonably accurate and detailed knowledge and understanding of each feature
- At least two applications of required features in context

It **two** required features are addressed in detail and justified in context and explicit links made to own practical work – award 8 marks
Justification of decisions made

- **Some** appropriate justification of decisions related to all three required features
- Bottom of the band if only two required features justified
- There was some line of reasoning evident with some structure

Level of Response Limited
4–6 marks
Details of required features (RFs) included

- **Two** of the required features addressed
- Limited application of required features
- OR all **three** required features referred to but in a limited way

If **one** required feature is addressed in detail and justified in context and explicit links made to own practical work – award 4 marks
Justification of decisions made

highest marks.

RF2: Many candidates also confused a Likert scale with other types of rating scales therefore not addressing this feature of the question. Some candidates did have correct knowledge of a Likert scale but sometimes their response was limited due to not giving an appropriate scale that could be used. Those that provided a clear contextualised example of a Likert scale with an appropriate scale gained the highest marks.

RF3: Most candidates addressed this feature well. Many gave a closed question with fixed choice responses to address this feature. Candidates who displayed less understanding were likely to not give fixed choice responses therefore making it unclear how the data gathered would be quantitative.

Exemplar 1

Exemplar 1 shows RF1 being addressed. Correct knowledge and understanding of the feature in context. Candidates should then justify the RF before explicitly linking it to their own practical work.

<table>
<tr><td colspan="4">

Attempt to justify decision(s) but weak
Evidence of some structure, but weak

Level of Response
Basic
1–3 marks
Details of required features (RFs) included

One of the required features addressed
Weak application of required features

OR more than one of the required features referred to but in a very brief and/or basic way
Justification of decisions made

None, or if present very weak

</td><td></td><td></td></tr>
</table>

| | | | **Total** | **12** | |

			Level of response **Good** 12 – 15 marks **Details of required features (RFs) included** -**All 4** required features are good in context -Accurate and detailed knowledge and understanding of each feature in context -**Good** evidence of **application** of required features in context **Justification of decisions made** -**Appropriate justification** of all decisions with at least one that is good and *some* is contextualised -Well developed line of reasoning that is	**15**	**Examiner's Comments** Responses varied a lot to this extended question, with many candidates finding it difficult to achieve the higher band marks. The most successful responses were characterised by taking each of the four required features in turn, writing a separate paragraph relating to each one. Firstly, demonstrating understanding of what was involved and how to address it for the research presented. Next by justifying the decisions made regarding how to address it. Finally, drawing on the candidate's own experiences of conducting research themselves and how they learned from this to conduct the research presented. All of this needed to be discussed in context to obtain marks in the highest band. It should also be noted that the
7					

clear and logically structured

Reference to own practical work

-**Explicit** reference to own practical work and clear links between own work and the planned research, e.g., specific mention of question/scales used or extraneous variables controlled. e.g., specific mention of aim or procedural features

-For top band (good) 12 marks if just one RF explicitly linked, 13 marks if two, 14 marks if three and 15 if all four are linked explicitly.
-If there is no explicit clear link between own practical work and *any* of the 4 required features caps the mark at 11 maximum.

Additional Guidance
RF 3- Needs to lead to data being quantitative to be addressed and measures friendliness (or something similar e.g., warmth). Context needs to be linked to the DV.

Mislabeling 1–10 scale as likert scale will move the response down one level (e.g., fits the good level but has mislabeled 1–10 as likert so achieves reasonable)

Overall, Mark
12–15 marks – 4 RFs in context and they must all be good

8–11 marks – 3 RFs in context and these three must be at least reasonable

4–7 marks – 2 RFs in context and these two must be at least limited
OR 3–4 RFs which are at least limited (whether in context or not)
OR 1 RF addressed in detail, justified in context and explicit links made to own practical work award 4 marks.

1–3 marks – at least 1 RF referred to (whether in context or not)

Maximum 11 marks (reasonable) if *clearly* done as a field experiment.

candidates own experiences of conducting practical activities (especially the one using the same research method, which here was the laboratory experimental method) should be evident in their response to each required feature in terms of how this has helped inform their decision making for the planning of the current proposed research.

There was also much variation in how candidates demonstrated knowledge and understanding of each of the individual required features (RFs). The most successful responses were characterised by first defining what the RF was / referred to (e.g. for RF1, defining the sampling method) before going on to describe exactly how the RF would be addressed in the proposed research. Often candidates did not provide enough detail. For example, in relation to RF1 just identifying the method without clearly describing how they would implement this sampling method in this research (for example, many candidates did not clarify how they would end up with their final sample, e.g. not stating that the first 20 volunteers were used.)

RF2 was generally identified and defined by providing an outline of the two conditions and whether the participants would do one or two conditions. However, many responses did not explain how the participants would be assigned to the conditions or which condition would be first for repeated measures design. Reponses that used matched pairs design often scored lower for this RF.

Most candidates were able to identify and describe an appropriate way to operationalise the variable 'extraversion' for RF3. Many did clearly explain how this would be done with the most popular choice being a 1–10 scale. A significant number of candidates clearly labelled the rating scale they had given. There were a significant number of

Level of response
Reasonable

8–11 marks

Details of required features (RFs) included
-At least **3 required features are reasonable in context**

-Reasonably accurate and detailed knowledge and understanding of each feature

Justification of decisions made
-**Some** appropriate **justification of decision** with at least one that is reasonable of related to required features (if no justification in context award 8 marks)

-There was a line of reasoning evident with some structure

Level of response
Limited

4–7 marks
Details of required features (RFs) included
-At least **two** of the required features are limited in context

-**Limited application** of required features

OR three or all four required features referred to but in a limited way (in context or not)

If 1 RF addressed in detail and justified in context with explicit links made to own practical work award 4 marks

Justification of decisions made
-**Attempt** to justify decision(s) with at least one that is limited but weak

-Evidence of some structure, but weak

Level of response
Basic

1–3 marks

candidates who did confuse the terms likert scale and semantic differential scale where they would identify one type of scale and then outline a different scale. The most common of these was identifying a likert scale and outlining a 1–10 scale. In addition, some candidates confused the independent and dependent variable and outlined the length of the handshake as the dependent variable which was not creditworthy.

RF4 was also well answered with a wide range of controls with detailed justification of how they would limit the impact of extraneous variables, e.g. standardising the hand shaker's appearance/behaviour. Less successful responses often did not explain how they would enact the control and just identified what should be controlled and why.

Most candidates did make explicit reference to their own practical projects throughout their response. A significant number of responses did not have context when justifying the decisions to use a particular sample, design etc. Also, many candidates wrote extensively about their own research but often did not link this to their decisions to use or not use that particular strategy in their planning of this piece of research. Some candidates wrote out a full description of the activities they had done in class first, then addressed the RF without linking the two together.

Exemplar 2

Exemplar 2 addressed RF2 reasonably and in context and

| | | | **Details of required features (RFs) included**
-At least **one** of the required features addressed

-**Weak application** of required features

OR more than one of the required features referred to but in a very brief and/or basic way

Justification of decisions made - **None**, or if present very weak

RF
1 Sampling technique

Details of RF

• Good – Identified the sampling method and clearly explained how this has been carried out in their study. Details of how is the sampling method is enacted/procedural details.
• Reasonable – Identified the sampling method, possibly defined and attempted to explain how this has been carried out in their study,
• Limited – sampling method identified and defined,
• Basic – Just identifying the sampling technique or confuses sampling methods

RF
2 Experimental design

Details of RF

• Good – Design identified and conditions labelled with how the participants would be assigned to each condition. If RMD which condition is first/is it counter-balanced.
• Reasonable – Design identified and conditions labelled and brief or somewhat muddled outline of how the participants would be assigned to each condition. | | provided some reasonable justification but not in context and makes explicit reference to the candidate's practical work. This candidate achieved a mark in the reasonable band overall as one of the RFs was not in context and the justification for each RF throughout their response was mixed with one limited, two reasonable and one good and sometimes not in context. |

- Limited – Design identified and conditions labelled.
- Basic – Design identified or described or confuses experimental designs (e.g., identifies RMD and outlines IMD).

RF
Operationalising DV

Details of RF

- Good – if a rating scale is suggested - clear numerical scale with ends of rating scale labelled. Semantic differential scales can be creditworthy and are considered reasonable (good if the numerical scale is given or an explanation of how the data will be made ordinal).
- Reasonable – rating scale given but lacks clarity (e.g., Ends of rating scale not labelled). Indicates a number of questions will be asked but does not explain how the final score for each participant will be calculated.
- Limited – way DV is operationalised could be considered to be quantitative but not explicit.
- Basic – vague indication of how DV would be measured e.g., Likert scale.

RF
4 Control of one Extraneous variable

Details of RF

- Good – Clear and somewhat detailed of how EV can be controlled,
- Reasonable – outline of how EV can be controlled,
- Limited explanation of the EV is unclear,
- Basic – identifies how EV can be controlled or is muddled.

			Total	**15**	
8	a		Clear focus on technique, i.e. identification of sampling technique, description of how this technique is used to select the participants, contextualised. Description of the features of the sample is not creditworthy on its own. **3 mark answer:** Clear outline in context **2 mark answer:** Clear outline but not in context OR Attempted outline in context **1 mark answer:** Brief and / or weak attempted outline (whether in context or not) **0 marks:** No creditworthy response	3	-Context = theme for candidates own selected practical activity OR specific location / target population of participants.
	b		Identification and elaboration of strength plus context Clear focus on technique not on features of sample **3 mark answer:** Clear outline of strength in context **2 mark answer:** Clear outline of strength but not in context OR Attempted outline of strength in context **1 mark answer:** Brief and / or weak attempt to outline strength (whether in context or not) **0 marks:** No creditworthy response	3	-Context = theme for candidates own selected practical activity or specific location / target population of participants.
			Total	**6**	
9			**Level of response** **Details of required features (RFs) included** **Good**	Max = 15	-Context = happy, happiness, comedy, emotion etc

12–15 marks
-**All 4** required features (RFs) addressed in context

-Accurate and detailed knowledge and understanding of each feature in context

-**Good** evidence of **application** of required features in context

Reasonable
8–11 marks
-At least **3 required features in context**

-Reasonably accurate and detailed knowledge and understanding of each feature

Limited
4–7 marks
-At least **two** of the required features addressed in context

-**Limited application** of required features
OR three or all four required features referred to but in a limited way

If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks.

Basic
1–3 marks
-At least **one** of the required features addressed
-**Weak application** of required features
OR more than one of the required features referred to but in a very brief and / or basic way

Justification of decisions made

Good
12–15 marks
-**Appropriate justification** of all decisions and *some* is contextualised

-Well developed line of reasoning that is clear and logically structured

Reasonable
8–11 marks

-**Some** appropriate **justification** of decision related to required features (if no justification in context award 8 marks)

-There was a line of reasoning evident with some structure

Limited
4–7 marks
-**Attempt** to justify decision(s) but weak

-Evidence of some structure, but weak

If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks.

Basic
1–3 marks
-**None**, or if present very weak

Reference to own practical work
-**Explicit** reference to own practical work and clear links between own work and the planned research, e.g. specific mention of question / scales used or extraneous variables controlled

-If there is no explicit clear link between own practical work and *any* of the 4 required features caps the mark at 11 maximum.

RF1- Good – two closed questions with response categories. Reasonable – not identifying the RF as a closed question. Limited – one closed question with response categories. Basic – one or two questions that could be answered as closed questions.

RF2 Good – two open questions and identified as open questions. Reasonable – not identifying the open question. Limited – one open question. Basic – unclear open question(s).

RF3 Good – the questions correctly identified as Likert and semantic differential. One Likert scale statement (with fully labelled scale showing strength of agreement / disagreement)

			and one semantic differential scale question (clearly labelled / how to complete). Reasonable – one of the questions is unclear / labelling is unclear. Limited – Both of the questions are unclear / labelling is unclear. Basic – Rating scales are given (which are neither Likert nor semantic differential). RF4 – Good – the self-report can be reliably administered e.g. 1. whether it is an interview / questionnaire 2. if the participant does the questionnaire at home or in front of the researcher 3. how the participant submits the questionnaire / how the interview is recorded.		
			Total	**15**	
10			**Level of response** **Good** 12-15 marks **Details of required features (RFs) included** -**All 4** required features (RFs) addressed in context -Accurate and detailed knowledge and understanding of each feature in context -**Good** evidence of **application** of required features in context **Justification of decisions made** -**Appropriate justification** of all decisions and *some* is contextualised -Well developed line of reasoning that is clear and logically structured	Max = 15	-Context = structure/ weight, personality etc **Reference to own practical work** -**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature. e.g. specific mention of aim or procedural features -For top band (good) 12 marks if just one RF linked, 13 marks if two, 14 marks if three and 15 if all four are linked -If there is no explicit clear link between own practical work and any of the 4 required features caps the mark at 11 maximum. Link to their own practical work must inform this study. E.g. the candidate should explain why their choice of sample is better than the one used in their practical work (or is at least as good as it). Justification of the RF can be done by referring to their own practical work. RF1- Basic – Just identifying the

					sampling technique, Limited – sampling method identified and defined, Reasonable – Identified the sampling method, possibly defined and attempted to explain how this has been carried out in their study. Good – Identified the sampling method and clearly explained how this has been carried out in their study. RF 2- needs to lead to data to be at least ordinal data to be addressed (e.g. qualitative data would not be appropriate for a correlation). Semantic differential scales can be creditworthy and are considered reasonable (good if the numerical scale is given or an explanation of how the data will be made ordinal) weight is not context for this RF. RF 3-Integrity, Respect, Responsibility, Competence. Also allow social sensitivity. Basic – just identifies the ethical consideration, Limited - Limited explanation of the ethical consideration, Reasonable – identifying the ethical consideration/how it can be addressed, Good – Explaining the ethical consideration and clarity on how it can be addressed. RF 4-Basic – just identifies the extraneous variable, Limited explanation of the extraneous variable, Reasonable – identifying the extraneous variable/how it can be controlled, Good – Explaining the extraneous variable and clarity on how it can be controlled. **Level of response** **Reasonable** 8-11 marks **Details of required features (RFs) included** -At least **3 required features in context**

					-Reasonably accurate and detailed knowledge and understanding of each feature

-Reasonably accurate and detailed knowledge and understanding of each feature

Justification of decisions made

-**Some** appropriate **justification** of decision related to required features (if no justification in context award 8 marks)

-There was a line of reasoning evident with some structure

Level of response

Limited
4-7 marks

Details of required features (RFs) included

-At least **two** of the required features addressed in context

-**Limited application** of required features

OR three or all four required features referred to but in a limited way

Justification of decisions made

-**Attempt** to justify decision(s) but weak

-Evidence of some structure, but weak

If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks

Level of response

Basic
1-3 marks

Details of required features (RFs) included -At least **one** of the required features addressed

-**Weak application** of required features

OR more than one of the required features referred to but in a very brief and/or basic way

Justification of decisions made -**None**, or if present very weak

Examiner's Comments

Responses varied a lot to this extended (yet predictable in its format) question, with many candidates finding it difficult to achieve the higher band marks. The best responses were characterised by taking each of the four required features in turn, writing a separate paragraph relating to each one. Firstly, demonstrating understanding of what was involved and how to address it for the research presented. Next by justifying the decisions made regarding how to address it. Finally, drawing on the candidates own experiences of conducting research themselves and how they learnt from this how to conduct the research presented. All of this needed to be discussed in context to obtain marks in the highest band. It should also be noted that the candidates own experiences of conducting practical activities (especially the one using the same research method, which here was correlation) should be evident in their response to each required feature in terms of how this has helped inform their decision making for the planning of the current proposed research.

There was also much variation in how candidates demonstrated knowledge and understanding of each of the individual required features (RFs). The best responses were characterised by first defining what the RF was / referred to (e.g. for RF1, defining the sampling method) before going on to describe exactly how the RF would be addressed in the

proposed research. Often candidates did not provide enough detail. For example, in relation to RF1 just identifying the method without clearly describing how they would implement this sampling method in this research did not gain the full credit. Most candidates were able to identify and describe appropriate way to operationalise the variable 'extraversion' for RF2. Many did clearly explain how this would be done with the most popular choice being a 1-10 scale. A significant number of candidates clearly labelled the rating scale they had given. Some candidates identified that they would collect nominal data which is not appropriate for a correlation and was not creditworthy for RF2.

RF3 was well explained by many candidates with some identifying 'respect' as the core principle, although many did not put this into the context of extraversion or body type. Some made good reference to upholding the status of Psychology by adhering to the ethical guidelines, which in turn, reflects positively on Psychology' s standing in the wider community. However, many of the candidates did write brief responses that identified the ethical guideline and wrote very brief justifications, such as stating that it would make the study more ethical with no explanation given as to why this would be the case.

RF4 was often well explained and sometimes contextualised by the candidates. Popular controls included gender, age, mental health and the environment that the study took place in. Some of these responses were very well explained and justified. However, many responses lacked context or were very brief and just identified a variable to control rather than explaining how it would be controlled in this research.

Most candidates did make explicit

					reference to their own practical projects throughout their response. Many did get confused however between the correlation and experimental method and sometimes provided justifications that related to comparing conditions which was not creditworthy. **Exemplar 2** Exemplar 2 is an example paragraph from a candidate who has addressed RF2 clearly and provided some reasonable justification but not in context and makes explicit reference to their practical work. This candidate achieved a mark in the reasonable band overall as the justification for each RF throughout their response was reasonable and sometimes not in context.
			Total	**15**	
11			**Explain how you would conduct a study using the laboratory experiment method to investigate the effect of colour on memory for a list of words. Justify your decisions as part of your explanation. You must refer to:** **-the use of independent measures design or repeated measures design** **-how the variables are operationalised** **-at least two control features** **-level of data collected** **Level 4: 12–15 marks** **-Good** knowledge and understanding of experimental method **-Good** application of knowledge and	15	**AO1 (3 marks)** Candidates should demonstrate knowledge and understanding of the following required features of the method that could be used in this study: • the use of independent measures design or repeated measures design • how the variables are operationalised • at least two control features • level of data collected **AO2 (5 marks)**

understanding of experimental method
-**Good** justification of planning choices

All of the required features are addressed and the candidate demonstrates accurate knowledge of each. There is **good** evidence of application in the description of features showing high levels of understanding. There is appropriate justification **of all or most** decisions and some of this is contextualised with reference to the investigation brief. There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. The response **explicitly** draws on the candidates own experience and there are clear links between the planned investigation and the practical activity carried out.

Level 3: 8 – 11 marks
-**Good** knowledge and understanding of experimental method
-**Reasonable** application of knowledge and understanding of experimental method
-**Reasonable** justification of planning choices

Most if not all of the required features are addressed and the candidate demonstrates **reasonably accurate** knowledge of each. There is **some** evidence of application in the description of features showing a level of understanding. There is likely to be some appropriate justification of decisions and, at points, this is contextualised with reference to the investigation brief. There is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. The response draws on the candidates own experience and there are some links between the planned investigation and the practical

- Application of knowledge of the use of independent or repeated measures design
- Application of knowledge of how to operationalize variables
- Application of knowledge of at least two control features
- Application of knowledge of levels of data

AO3 (7 marks)
Broad discussion of decisions concerning the method described to conduct the research.

activity carried out.

Level 2: 4 – 7 marks
-Reasonable knowledge and understanding of experimental method
-Limited application of knowledge and understanding of experimental method
-Limited justification of planning choices

At least some of the required features are addressed and the candidate demonstrates knowledge of these. There is limited evidence of application in the description of features showing basic understanding. There may be an attempt to justify decisions but it is likely to be weak. There is a line of reasoning presented with some structure. The information has some relevance and is presented with limited structure. The information is supported by limited evidence. The response makes reference to the candidates own experience and there are vague links between the planned investigation and the practical activity carried out.

Level 1: 1 – 3 marks
-Reasonable knowledge and understanding of experimental method
-Basic application of knowledge and understanding of experimental method
-Basic justification of planning choices
At least one of the required features is addressed and the candidate demonstrates knowledge here. There may be weak application of the chosen technique(s). There is unlikely to be any justification of decisions, and if so it will be weak. The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. The response may make some reference to the candidates own experience and there are weak or tenuous links between the planned investigation and the practical activity carried out.
0 marks: No creditworthy response.

			Total	15	

| | | | | | -Context = journey (including modes of transport – e.g. car, bus, plan train etc), and / or any relevant related behaviours from the candidates suggested behavioural categories) |

Level of response

Good
12-15 marks

Details of required features (RFs) included	Justification of decisions made
-**All 4** required features (RFs) addressed -Accurate and detailed knowledge and understanding of *each* feature in context -**Good** evidence of **application** of required features in context	-**Appropriate justification** of all decisions and *some* is contextualized -Well developed line of reasoning that is clear and logically structured

Reasonable
8-11 marks

-**All 4** required features addressed -Reasonably accurate and detailed knowledge and understanding of *each* feature -At least **three** applications of required features in context	-**Some** appropriate **justification** of decision related to all four required features (8 marks if only three required features justified) -There was a line of reasoning evident with some structure

If **three** required features are addressed in detail and justified in context and explicit links made to own practical work award 9 marks

Limited
4-7 marks

-**Two** of the required features addressed in	-**Attempt** to justify decision(s) but weak

RF1
To be regarded as having been 'addressed' there must be some description, and not just naming / stating 'participant', or 'non-participant obs' will be used. If observation technique incorrectly named, then counts as not addressed (e.g. claiming participant obs is used but actually describing non-participant)

RF2
Sufficient here to identify / name the behavioural categories to be used (whether presented as a list or in a table)

RF3
To demonstrate understanding must provide a definition, or must be a clear distinction between event and time sampling (e.g. for event sampling making it clear that each time every behaviour from the behavioural categories occur they are recorded and over what total time period – the entire journey, first half-an-hour etc). For time sampling if just saying for example 'record behaviour every 10 minutes' without explaining for how long (e.g. just at that moment, or for 30 seconds) at that interval = limited response here. If sampling named incorrectly, then counts as not addressed (e.g. claiming event sampling is used but actually describing time sampling)

RF4
It is appreciated there may be some overlap here with what has already been discussed in relation to some of the other RFs already addressed. Typical responses here may include: ref to where the observer(s) will be

12

15

context -**Limited application** of required features	-Evidence of some structure, but weak
OR three or all four required features referred to but in a limited way (in context or not)	

If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks

Basic
1-3 marks

-**One** of the required features addressed -**Weak application** of required features	-**None**, or if present very weak
OR more than one of the required features referred to but in a very brief and / or basic way	

Reference to own practical work

-**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature. e.g. specific mention of aim or procedural features

-For top band (good) 12 marks if just one RF linked, 13 marks if two, 14 marks if three and 15 if all four are linked

-If there is no explicit clear link between own practical work and *any* of the 4 required features caps the mark at 11 maximum.

positioned and what they will be doing whilst observing; use of a tally chart / system; covert or overt recordings; use of video etc

Examiner's Comments

Responses varied a lot to this extended (yet predictable in its format) question, with many candidates finding it difficult to achieve the higher band marks. The best responses were characterised by taking each of the four required features in turn, writing a separate paragraph relating to each one. Firstly, demonstrating understanding of what was involved and how to address it for the research presented. Next by justifying the decisions made regarding how to address it. Finally, drawing upon the candidates own experiences of conducting research themselves and how they learned from this how to conduct the research presented. All of this needed to be discussed in context to obtain marks in the highest band. It should also be noted that the candidates own experiences of conducting practical activities (especially the one using the same research method, which here was observation) should be evident in their response to each required feature in terms of how this has helped inform their decision making for the planning of the current proposed research.

There was also much variation in how candidates demonstrated knowledge and understanding of each of the individual required features (RFs). The best responses were characterised by first defining what the RF was / referred to (eg for RF1, what the difference between a participant and non-participant observation was) before going on to describe exactly how the RF would be addressed in the proposed research. Often candidates here did not provide enough detail (eg in

					relation to RF1 just naming stating that participant observation would be used) without explaining how. Nearly all candidates were able to identify and describe appropriate behavioural categories to use in relation to RF2. RF3 caused the most problems and demonstrated the biggest lack of understanding. Some candidates clearly did not understand the difference between time and event sampling, with some identifying one, then describing another. Even candidates that did know the difference often did not provide enough detail about how the chosen technique to observe behaviour would be used (eg just saying behaviour would be recorded every 5 minutes, but not for how long, or over what total duration). For RF 4, many candidates referred to the use of a coding scheme or basic tally chart of some type, which was fine, provided it was described in sufficient detail.
					In general, it was acknowledged that there was some degree of overlap between the different individual RFs (eg especially in relation to RF4) and that some candidates (especially those including a lot of detail in their responses) may have included details related to one RF in response to another already discussed. This was acceptable and creditworthy, providing each RF had been addressed at the end of the overall response to the question.
			Total	**15**	
13			**Level 4 (12-15 marks)** **-Good** knowledge and understanding of the correlation technique **-Good** application of knowledge and understanding of the correlation technique **-Good** justification of planning choices **All** of the required features are addressed and the candidate demonstrates accurate knowledge of	**Max 15**	-Context = 'sleep' and 'concentration'

each. There is **good** evidence of application in the description of features showing high levels of understanding. There is appropriate justification of **all or most** decisions and some of this is contextualised with reference to the investigation brief. There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. The response **explicitly** draws on the candidates own experience and there are clear links between the planned investigation and the practical activity carried out.

Level 3 (8-11 marks)

-**Good** knowledge and understanding of the correlation technique
-**Reasonable** application of knowledge and understanding of the correlation technique
-**Reasonable** justification of planning choices

Most if not all of the required features are addressed and the candidate demonstrates **reasonably accurate** knowledge of each. **There is some** evidence of application in the description of features showing a level of understanding. There is likely to be some appropriate justification of decisions and, at points, this is contextualised with reference to the investigation brief. There is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. The response draws on the candidates own experience and there are some links between the planned investigation and the practical activity carried out.

Level 2 (4-7 marks)

-**Reasonable** knowledge and understanding of the correlation technique
-**Limited** application of knowledge and understanding of the correlation technique

14			-**Limited** justification of planning choices **At least some** of the required features are addressed and the candidate demonstrates knowledge of these. There is limited evidence of application in the description of features showing basic understanding. There may be an attempt to justify decisions but it is likely to be weak. There is a line of reasoning presented with some structure. The information has some relevance and is presented with limited structure. The information is supported by limited evidence. The response makes reference to the candidates own experience and there are vague links between the planned investigation and the practical activity carried out. **Level 1 (1-3 marks)** -**Reasonable** knowledge and understanding of the correlation technique -**Basic** application of knowledge and understanding of the correlation technique -**Basic** justification of planning choices **At least one** of the required features is addressed and the candidate demonstrates knowledge here. There may be weak application of the chosen technique(s). There is unlikely to be any justification of decisions, and if so it will be weak. The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. The response may make some reference to the candidates own experience and there are weak or tenuous links between the planned investigation and the practical activity carried out.		
			Total	**15**	
14			**Explain how you would carry out an observation to investigate the differences in use of personal space between rural and urban**	15 **3 AO1 1b 5 AO2**	**Level 4: 12–15 marks** **Good** knowledge and understanding of observation and of appropriate sampling techniques.

| | | | **environments. Justify your decisions as part of your explanation.**

• **structured OR unstructured observations**
• **participant OR non-participant observations**
• **time OR event sampling**
• **collection of data.**

AO1 (3 marks)

Required features

• **Either** structured observation **or** unstructured observation
• **Either** participant observation **or** non–participant observation
• **Either** time sampling **or** event sampling
• Understanding of ways of collecting data in observation e.g. use of more than one observer, use of behavioural categories, use of video recordings, location of researcher, etc.

AO2 (5 marks)

Application of the above techniques to the context of the study (observing personal space in rural / urban settings). e.g. using a checklist of behaviours for protecting personal space (structured), watching people while being part of the crowd in the city (participant), a structured observation would allow for reliable comparison between the rural and urban settings, etc.

AO3 (7 marks)

A broad discussion of design decisions e.g. structured observations would be inappropriate for the qualitative nature of the observation, participant observation would be difficult in terms of accurately recording the behaviours because the researcher would be too involved / distracted, non–participant observation would allow for a level of objectivity, | g/h
7 AO3
2b | **Good** application of knowledge and understanding to the design of the investigation.

Good evaluation and justification of design

All of the required features are addressed (ie **either** structured observation **or** unstructured observation, **either** participant observation **or** non–participant observation, **either** time sampling **or** event sampling and collection of data) and the candidate demonstrates accurate knowledge of each. There is good evidence of application in the description of techniques showing high levels of understanding. There is appropriate justification of all or most techniques chosen and some of this is contextualised with reference to the investigation brief. There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. The response explicitly draws on the candidates own experience and there are clear links between the planned investigation and the practical activity carried out.

Level 3: 8 – 11 marks

Good knowledge and understanding of observation and of appropriate sampling techniques.

Reasonable application of knowledge and understanding to the design of the investigation.

Reasonable evaluation and justification of design.

Most of the required features are addressed and the candidate demonstrates reasonably accurate knowledge of each. There is some evidence of application in the description of techniques showing a level of understanding. There is some |

			time sampling would give a more representative sample as it spans a period of time, etc. Other appropriate responses should be credited. There are no additional marks for contextualising the justification of the chosen observational techniques but a good answer should include this at points but not necessarily for all reasoning.		appropriate justification of techniques chosen and, at points, this is contextualised with reference to the investigation brief. There is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. The response draws on the candidates own experience and there are some links between the planned investigation and the practical activity carried out. **Level 2: 4 – 7 marks** **Reasonable** knowledge and understanding of field or laboratory experiments and of an appropriate experimental design. **Limited** application of knowledge and understanding to the design of the investigation. **Limited** evaluation and justification of design Some of the required features are addressed and the candidate demonstrates knowledge of each. There is limited evidence of application in the description of techniques showing basic understanding. There is likely to be an attempt to justify techniques chosen although this may not be contextualised. The information has some relevance and is presented with limited structure. The information is supported by limited evidence. The response makes reference to the candidates own experience and there are vague links between the planned investigation and the practical activity carried out. **Level 1: 1 – 3 marks** **Limited** knowledge and understanding of of field or laboratory experiments and of an appropriate experimental design.

						Basic application of knowledge and understanding to the design of the investigation. **Basic** evaluation and justification of design At least one of the required observational techniques is addressed and the candidate demonstrates knowledge here. There may be weak application of chosen technique(s). There may be an attempt to justify techniques chosen although it is unlikely to be contextualised. The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. The response may make some reference to the candidates own experience and there are weak or tenuous links between the planned investigation and the practical activity carried out. **0 marks**: No creditworthy response.
		Total			**15**	

Level of response

Good
12-15 marks

Details of required features (RFs) included	Justification of decisions made
-**All 4** required features (RFs) addressed in context -Accurate and detailed knowledge and understanding of each feature in context -**Good** evidence of **application** of	-**Appropriate justification** of all decisions and *some* is contextualized -Well developed line of reasoning that is clear and logically structured

(Row mark: **15**, Total: **15**)

-Context = 'dream(s)', 'dreaming' etc

-For context also accept themes appropriate to what the candidate chooses to focus on as a potential influence on dreaming (e.g. exercising, using social media, if they have had a bad day etc etc)

Examiner's Comments

This question needed candidates to refer to four required features (RFs) as part of explaining how a piece of research could be conducted in the specified area (this is a consistent rubric for the 15 mark, extended

required features in context

Reference to own practical work

-**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature.
e.g. specific mention of aim or procedural features

-For top band (good) 12 marks if just one RF linked, 13 marks if two, 14 marks if three and 15 if all four are linked

Reasonable
8-11 marks

-At least **3 required features in context** -Reasonably accurate and detailed knowledge and understanding of each feature	-**Some** appropriate **justification** of decision related to required features (if no justification in context award 8 marks) -There was a line of reasoning evident with some structure

-If there is no explicit clear link between own practical work and *any* of the 4 required features caps the mark at 11 maximum.

RFs additional guidance …

Limited
4-7 marks

Details of required features (RFs) included	**Justification of decisions made**
-At least **two** of the required features addressed in	-**Attempt** to justify decision(s) but weak

writing question on this paper.)

To achieve high band marks each required feature needed to be addressed (an explanation provided about how it would be used / implemented), justified (a rationale for why it was being used in the prescribed way) and linked to the candidates own practical work in some way. The highest achieving responses addressed each required feature in context, in turn and in a detailed and clear way justifying the decisions made in relation to each required feature in context of the research to be conducted. They then went on to make explicit reference to their own practical work they had conducted to explain how this had informed them of the way to plan the proposed research. 'Explicit reference' requires some details relating to what the research was about (the research question / hypothesis that was investigated).

Candidates could not access the higher marks if they did not address each required feature (or if they did not address it in context) or if they failed to justify their decisions and didn't make explicit reference to their own practical work. Some candidates seemed to find RF2 ('your questionnaire') quite challenging and were often 'lost' amidst the addressing of RF3 ('open and closed questions'), or responses here were even completely absent. The best responses in relation to this RF outlined some general features of the questionnaire to be used, such as the total number of questions to be asked, the style / mixture of the questions, where / how it would be completed (at home or online for instance) and whether it would be completed anonymously.

A really good tip to help structure candidates' responses to this question is to use a separate paragraph for each of the four RFs so

			context -**Limited application** of required features	-Evidence of some structure, but weak	they are clearly distinguishable. It is also important to realise that the main demand of the question is to address each RF. If this is not achieved it becomes difficult (if not impossible) to fulfil the other demands of the question fully (justifying the decisions made in relation to how the RFs have been addressed, and demonstrating how the candidates own practical activities have informed their decisions in how the RFs have been addressed).
			OR three or all four required features referred to but in a limited way		
			If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks		

RF1 (sample / sampling)
should be some details of sample (e.g. size, gender, age etc) and sampling technique and how implemented. If only sample details, **or** sampling referred to = 'limited' response

RF2 (questionnaire)
details such as overall make up the questionnaire, number of questions, any accompanying standardised instructions, whether completed anonymously, any time limit to complete, where completed etc etc

Basic
1-3 marks

-At least **one** of the required features addressed -**Weak application** of required features	-**None**, or if present very weak
OR more than one of the required features referred to but in a very brief and / or basic way	

RF3 (open / closed ques)
There should be an example of at least one open and one *closed question (*which needs to include the fixed response options). If only one type of question addressed (open only, or closed only) = 'limited' response

			RF4 (Likert scale ques) There should be an example of at least one Likert scale question. Do not credit non-Likert scale, standard rating scales - e.g. suggestion of using a 1-10 scale		
			Total	**15**	
16			**Level of response** **Good** 10-12 marks **Details of required features (RFs) included** -**All 3** required features addressed -Accurate and detailed knowledge and understanding of each feature in context -**Good evidence of application** of required features in context **Justification of decisions made** -**Appropriate justification** of all decisions and *some* is contextualized -Well developed line of reasoning that is clear and logically structured **Reference to own practical work** -**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature. e.g. specific mention of aim or procedural features **Level of response** **Reasonable** 7-9 marks **Details of required features (RFs) included** -**All 3** required features addressed -Reasonably accurate and detailed knowledge and understanding of each feature -At least **two** applications of required features in context If two required features are addressed in	**Max 12**	-Context = bar / drink, couples Also accept (appropriate) behavioural categories as context? -For RF1 check there are at least 5 behavioural categories presented (otherwise counts as 'limited response') **Examiner's Comments** This question needed candidates to refer to three required features (RFs) as part of explaining how a piece of research could be conducted in the specified area (this is a consistent rubric for the 12 mark, extended writing question on this paper). To achieve high band marks each required feature needed to be addressed (an explanation provided about how it would be used / implemented), justified (a rationale for why it was being used in the prescribed way) and linked to the candidates own practical work in some way. The highest achieving candidates addressed each required feature in turn in a detailed and clear way and justified the decisions made in relation to each required feature in context of the research to be conducted. They then went on to make explicit reference to their own practical work they had conducted to explain how this had informed them of the way to plan the proposed research. 'Explicit reference' requires some details relating to what the research was about (the research question / hypothesis that was investigated). Candidates were required to address

detail and justified in context and explicit links made to own practical work award 8 marks

Justification of decisions made
-**Some appropriate justification** of decision related to all three required features (7 marks if only two required features justified)

-There was a line of reasoning evident with some structure

If two required features are addressed in detail and justified in context and explicit links made to own practical work award 8 marks

Reference to own practical work
-For top band (good) 10 marks if just one RF linked, 11 marks if two and 12 if all three

-If there is no explicit clear link between own practical work and *any* of the 3 required features caps the mark at 9 maximum.

**Level of response
Limited**
4-6 marks

Details of required features (RFs) included
-**Two** of the required features addressed

-**Limited application** of required features

OR all required features referred to but in a limited way

If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks

Justification of decisions made
-**Attempt** to justify decision(s) but weak

-Evidence of some structure, but weak

If one required feature addressed in detail and justified in context and explicit

each feature or failing to justify their decisions and not making explicit reference to their own practical work. Some candidates only referred to one or two of the required features (not all three), and / or did not justify why the decisions being discussed had been made. More candidates made reference to their own practical activities this year than in previous.

Also some candidates who made no reference at all to any of their own practical work as a way to inform their responses. RF3 ('protection of participants') was not addressed, with many candidates simply referring to ethical issues in general, and sometimes ones that were not really relevant because of the location (a public bar) of this study (e.g. informed consent).

Only the three required features stated in the question needed addressing. It may be worth highlighting this when practicing such questions in class and drawing attention to the need to address the specific required features stipulated.

			links made to own practical work award 4 marks **Level of response** **Basic** 1-3 marks **Details of required features (RFs) included** -**One** of the required features addressed -**Weak application** of required features **OR** more than one of the required features referred to but in a very brief and / or basic way **Justification of decisions made** -**None**, or if present very weak		
			Total	**12**	
17			**You have been asked to carry out a follow-up study to investigate the difference in the language ability of people when they are carrying out a physical task and when they are not.** **Explain how you would carry out an experiment to investigate if there is a difference or not. Justify your decisions as part of your explanation.** **You must refer to:** • **field or laboratory experiments** • **the experimental design you would use** • **at least one control you would use.** **AO1 – 2 marks** <u>Required features which demonstrate knowledge and understanding of scientific processes.</u> • **Either field OR** laboratory experiments. • Experimental design. • At least one control. **AO2 – 6 marks** Responses will achieve AO2 credit through the application of design	12 2 AO1 1b 6 AO2 g/h 4 AO3 2b	**Level 4: 10–12 marks** **Good** knowledge and understanding of field or laboratory experiments and of an appropriate experimental design and control(s). **Good** application of knowledge and understanding to the design of the investigation. **Good** justification of design. All of the required features are addressed and the candidate demonstrates accurate knowledge of each. There is good evidence of application in the description of features showing high levels of understanding. There is appropriate justification of all or most decisions and some of this is contextualised with reference to the investigation brief. There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. The response explicitly draws on the candidates own experience and there are clear links between the planned investigation and the practical activity carried out.

decisions in the context of this investigation.

- applying the chosen experimental method to the investigation, e.g. the environment will be controlled by ensuring there are no other distractions apart from the task itself
- applying the chosen experimental design to the investigation, e.g. half of the participants will be tested without the task first while the other half will be tested whilst doing the task first
- identifying an appropriate extraneous variable, e.g. the time given to complete the language test could affect the results.
- outlining how a chosen extraneous variable would be controlled, e.g. all participants will be asked if their first language was English.

AO3 – 4 marks

Broad discussion of design decisions

Candidates will demonstrate an ability to develop design and procedures through the justification of these decisions – this is likely to be one mark for each decision which is adequately justified but a well-developed justification may earn all four marks e.g. giving the various advantages of an independent groups design.

There are no additional marks for contextualising the justification of the chosen experiment and design but a good answer should include this at points.

Other appropriate responses should be credited.

Level 3: 7–9 marks

Good knowledge and understanding of field or laboratory experiments and of an appropriate experimental design and control(s).

Reasonable application of knowledge and understanding to the design of the investigation.

Reasonable justification of design.

Most if not all of the required features are addressed and the candidate demonstrates reasonably accurate knowledge of each. There is some evidence of application in the description of features showing a level of understanding. There is likely to be some appropriate justification of decisions and, at points, this is contextualised with reference to the investigation brief. There is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. The response draws on the candidates own experience and there are some links between the planned investigation and the practical activity carried out.

Level 2: 4–6 marks

Reasonable knowledge and understanding of field or laboratory experiments and of an appropriate experimental design and control(s).

Limited application of knowledge and understanding to the design of the investigation.

Limited justification of design.

At least some of the required features are addressed and the candidate demonstrates knowledge of these. There is limited evidence of application in the description of techniques showing basic understanding. There may be an

					attempt to justify decisions but it is likely to be weak. The information has some relevance and is presented with limited structure. The information is supported by limited evidence. The response makes reference to the candidates own experience and there are vague links between the planned investigation and the practical activity carried out. **Level 1: 1–3 marks** **Reasonable** knowledge and understanding of field or laboratory experiments and of an appropriate experimental design and control(s). **Basic** application of knowledge and understanding to the design of the investigation. **Basic** justification of design. At least one of the required features is addressed and the candidate demonstrates knowledge here. There may be weak application of chosen technique(s). There is unlikely to be any justification of decisions and, if so, it will be weak. The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. The response may make some reference to the candidates own experience and there are weak or tenuous links between the planned investigation and the practical activity carried out. **0 marks**: No creditworthy response.
		Total	**12**	
18		**Level of response** **Good** 10-12 marks **Details of required features (RFs) included** -**All 3** required features addressed -Accurate and detailed knowledge and	Max 12	Context = reference to TV and snacks -**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature. e.g. specific mention of aim or procedural features

understanding of each feature in context

-**Good** evidence of **application** of required features in context

Justification of decisions made
-**Appropriate justification** of *all* decisions and *some* is contextualized

-Well developed line of reasoning that is clear and logically structured

Level of response
Reasonable
7-9 marks

Details of required features (RFs) included
-**All 3** required features addressed

-Reasonably accurate and detailed knowledge and understanding of *each* feature

-At least **two** applications of required features in context

Justification of decisions made
-**Some** appropriate **justification** of decision related to all three required features (7 marks if only two required features justified)

-There was a line of reasoning evident with some structure

If two required features are addressed in detail and justified in context and explicit links made to own practical work award 8 marks

Level of response
Limited
4-6 marks

Details of required features (RFs) included
-**Two** of the required features addressed

-**Limited application** of required features

-For top band (good) 10 marks if just one RF linked, 11 marks if two and 12 if all three

-If there is no explicit clear link between own practical work and *any* of the 3 required features caps the mark at 9 maximum.

RF1 – sampling technique must be described, not just named (otherwise counts as 'basic')

RF2 – must be clear how both variables will be measured for use in a correlation analysis (production of quantitative data)

Examiner's Comments

There was a mixture of different quality of responses to this question, although many candidates did find it difficult to achieve the higher band marks. The best responses were characterised by taking each of the three required features in turn. Firstly, demonstrating understanding of what was involved and how to address it for the research presented. Next by justifying the decisions made regarding how to address it. Finally, drawing upon the candidates own experiences of conducting research themselves and how they learned from this how to conduct the research presented. All of this needed to be discussed in context to obtain marks in the highest band. It is particularly worthy of pointing out the how it should be made clear how the candidates own experiences of conducting research involving the same required features using the same research technique (correlation) should be evident in the response here as an acknowledgement of how/why the suggestions are being made for the research proposed have been derived from the candidates own experiences of conducting practical

			OR all required features referred to but in a limited way **Justification of decisions made** -**Attempt** to justify decision(s) but weak -Evidence of some structure, but weak If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks **Level of response** **Basic** 1-3 marks **Details of required features (RFs) included** -**One** of the required features addressed -**Weak application** of required features **OR** more than one of the required features referred to but in a very brief and/or basic way **Justification of decisions made** -**None**, or if present very weak		activities. Many candidates also demonstrated a lack of understanding of what was involved in correlation research, often describing the measurement of the variables as if for an experiment instead, and sometimes explicitly referring the IVs and DVs.
			Total	**12**	
19			**Level of response** **Good (**10–12 marks) 	**Details of required features (RFs) included**	**Justification of decisions made**
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- **All 3** required features addressed - Accurate and detailed knowledge and understanding of each feature in context - **Good** evidence of **application** of	- **Appropriate justification** of all decisions and some is contextualized - Well developed line of reasoning that is clear and logically structured		**Max 12**	**Examiner's Comments** This question needed candidates to refer to three required features (RFs) as part of explaining how a piece of research could be conducted in the specified area. It is worthwhile noting that this rubric will be consistent on all other subsequent papers and use the comments that follow to guide preparation to answer this question in future. To achieve high band marks each required feature needed to be addressed (an explanation provided about how it would be used / implemented), justified (a rationale for why it was being used in the prescribed way) and linked to the candidates own practical work in some way. Strong responses addressed each required feature in turn in a detailed and clear way and justified the decisions made in

| | | | required features in context | | | relation to each required feature in context of the research to be conducted. The candidates then went on to make explicit reference to their own practical work they had conducted to explain how this had informed them of the way to plan the proposed research. 'Explicit reference' requires some details relating to what the research was about (the research question / hypothesis that was investigated). |

Reference to own practical work

-**Explicit** reference to own practical work and clear links between own work and the planned research for each required feature.

e.g. specific mention of aim or procedural features

10 marks if just one RF linked, 11 marks if two and 12 if all three

Level of response
Reasonable (7–9 marks)

Details of required features (RFs) included	Justification of decisions made
-**All 3** required features addressed -Reasonably accurate and detailed knowledge and understanding of each feature -At least **two** applications of required features in context	-**Some** appropriate **justification** of decisions related to all three required features (7 marks if only two required features justified) -There was a line of reasoning evident with some structure

If two required features are addressed in detail and justified in context and explicit links made to own practical work award 8 marks

Reference to own practical work

-No explicit link between own practical work and required features

Level of response
Limited (4–6 marks)

To access the highest marks candidates needed to address each required feature and justify their decisions, and make explicit reference to their own practical work. Some candidates only referred to one or two of the required features (not all three), and / or failed to justify why the decisions being discussed had been made. There were also some candidates who made no reference at all to any of their own practical work as a way to inform their responses.

Only the three required features stated in the question needed addressing. Other aspects related to how the research could / would be conducted (such as details of the sample and sampling technique) were not required and were not creditworthy (although candidates were not penalised for including such details but may have lost time for reference to required features that were needed). It was evident that some candidates adopted the more traditional 'who, what, where, when and how' approach in responding to this question which would have led them to include details that were not required. It may be worth highlighting this when practicing such questions in class and drawing attention to the need to address the specific required features stipulated.

Details of required features (RFs) included	Justification of decisions made		
-**Two** of the required features addressed -**Limited application** of required features **OR** all required features referred to but in a limited way	-**Attempt** to justify decision(s) but weak -Evidence of some structure, but weak		
If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks **Level of response** **Basic (**1–3 marks)			
Details of required features (RFs) included	Justification of decisions made		
-**One** of the required features addressed -**Weak application** of required features **OR** more than one of the required features referred to but in a very brief and / or basic way	-**None**, or if present very weak		
Total	**12**		