Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students’ responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students’ scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students’ reactions to a particular paper. Assumptions about future mark schemes on the basis of one year’s document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from aqa.org.uk
Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student’s answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student’s answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student’s answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner’s mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.
Section A
Approaches in Psychology

0 1 Which of the following statements best describes Wundt’s use of the term introspection?

[1 mark]

Marks for this question: AO1 = 1

1 mark for D

0 2 Discuss Wundt’s role in the emergence of psychology as a science.

[3 marks]

Marks for this question: AO3 = 3

3 marks: Wundt’s role discussed in detail with clarity and coherence, and with appropriate use of terminology.

2 marks: Wundt’s role discussed with some clarity and/or coherence.

1 mark: there is limited understanding of Wundt’s role in the development of psychology.

Candidates may focus on one point in detail or more than one point in less detail.

Possible discussion points:

- first to open a laboratory designated to the scientific study of psychological enquiry under controlled conditions facilitating accurate measurements and replication
- focus was on trying to understand psychological processes of perception etc and structuralism rather than philosophical or biological processes
- he later recognised that higher mental processes were difficult to study using his procedures and this encouraged others to look for more appropriate methods and techniques, paving the way for approaches such as scanning
- introspection still used today in areas such as therapy and studying emotional states demonstrating its value as one way mental processes can be investigated
- issues of determinism and predictability could be presented as a strength or limitation.

Credit other relevant discussion.
Identify two glands that form part of the endocrine system and outline their functions. [4 marks]

Marks for this question: AO1 = 4

For each gland:
2 marks for identification of a gland and a clear outline of its function.

1 mark for identification and/or muddled outline of function.

Possible content:
- thyroid gland: secretes thyroxine/increases metabolic rates and affects growth
- adrenal glands: secretes adrenaline/controls the sympathetic division in the fight or flight response
- pituitary gland: causes other glands to secrete their hormones or directly produces effects (eg, causing the breasts to lactate).

Credit other endocrine glands, eg, ovaries, testes.

Which of the following statements is the best description of an overt observation study? [1 mark]

Marks for this question: AO1 = 1

1 mark for D
Briefly discuss one way in which a covert observation of children might be more beneficial than an overt observation. [3 marks]

Marks for this question: AO3 = 3

3 marks for a clear and coherent discussion of why a covert observation of children might be more beneficial than an overt observation using the detail given below.

2 marks for a discussion of why a covert observation of children might be more beneficial than an overt observation.

1 mark for a muddled or limited discussion, or for an answer with no comparison.

Possible content:
- compared to an overt observation if the researcher is covert then the children are completely unaware that they are being monitored and this increases the likelihood of the behaviour that is produced being spontaneous and natural
- the researcher can also be more certain that covertly collected data are more likely to be valid measurements of behaviour and/or that these behaviours might therefore indicate possible cause and effect relationships.

Credit other valid points including discussion of ethical issues.
Explain why the researcher decided the sign test would be an appropriate statistical test to use on the data from this study.

[4 marks]

Marks for this question: AO2 = 4

<table>
<thead>
<tr>
<th>Level</th>
<th>Marks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3 - 4</td>
<td>There is clear knowledge of why the sign test would be appropriate in this study, with some accurate detail. The answer is generally coherent with effective use of appropriate terminology.</td>
</tr>
<tr>
<td>1</td>
<td>1 - 2</td>
<td>There is limited or partial knowledge of why the sign test would be appropriate with some detail. The answer lacks coherence and use of appropriate terminology.</td>
</tr>
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<td>0</td>
<td></td>
<td>No relevant content.</td>
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</table>

Possible content:
- the researcher is looking for a difference in helping behaviour and doing a sign test is one way in which the analysed data would show such a difference
- the study focused on a single group of children who were tested under both conditions – the sign test can only be used with one group of participants/repeated measures design
- using a sign test will allow the researcher to decide whether differences in helping behaviour are due to chance factors or a ‘real’ effect
- this study produces quantitative/numerical data and the sign test is one way of analysing such data
- there are rules about when a particular test can be used and in this case the design of the study meets the rules for using a sign test

NOTE: reference to level of measurement is not expected, but can be credited, eg: this study produces data in the form of categories/Behavioural categories/frequency counts (nominal level of measurement).
Discuss the contribution of Pavlov's research to our understanding of human behaviour. [8 marks]

Marks for this question: AO1 = 4 and AO3 = 4

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<thead>
<tr>
<th>Level</th>
<th>Marks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>7 - 8</td>
<td>Knowledge of the contribution(s) of Pavlov’s research is accurate with some detail. Discussion of the contribution(s) is effective. Minor detail and/or expansion is sometimes lacking. The answer is clear and coherent. Specialist terminology is used effectively. Focus on contribution is explicit.</td>
</tr>
<tr>
<td>3</td>
<td>5 - 6</td>
<td>Knowledge of the contribution(s) of Pavlov’s research is evident but there are occasional inaccuracies/omissions. There is some effective discussion of the contribution(s). The answer is mostly clear and organised. Specialist terminology is mostly used appropriately. Focus on contribution may be implicit.</td>
</tr>
<tr>
<td>2</td>
<td>3 - 4</td>
<td>Limited knowledge of the contribution(s) of Pavlov’s research is present. Focus is mainly on description. Any discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. Focus on contribution may be implicit.</td>
</tr>
<tr>
<td>1</td>
<td>1 - 2</td>
<td>Knowledge of the contribution(s) of Pavlov’s research is very limited. Discussion of the contribution(s) is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used. Focus on contribution may be implicit.</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>No relevant content.</td>
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</tbody>
</table>

Possible contributions:
- Methodology: Pavlov demonstrated the importance of learning by association in his conditioning experiments – salivation in dogs; the experiments showed learning could be investigated experimentally and using non-human participants
- Theory: provided theories of learning and laws of learning – classical conditioning
- Application: provided therapies for the treatment of disorders such as phobias and addictions (aversion therapies and flooding).

Credit other relevant contributions.

Possible discussion:
- scientific methods led to raised status for psychology but also meant that non-observable behaviour could not be studied in this way
- therapeutic techniques in SD and flooding and aversion therapy have been successful in eliminating maladaptive behaviours in real life
- neglect of the whole person – especially in treatment strategies of aversion therapy/SD/flooding
- difficulties involved in extrapolation from animal research to human behaviours
- use of the Little Albert case
- issue of environmental determinism and lack of focus on free will
- comparison with other approaches such as SLT.

Credit other relevant discussion points.
Section B
Psychopathology

Describe one behavioural characteristic that might be seen in a person who has been diagnosed with a phobia of wasps.

Marks for this question: AO1 = 1 and AO2 = 1

2 marks for a clear and coherent description of how one behavioural characteristic would be apparent in a person with a phobia of wasps. Some use of appropriate terminology, eg, panic, avoidance, endurance.

1 mark for a limited or muddled description, or for an answer without application to wasps.

Possible content:
- panic – behaviours such as crying, running, screaming, freezing, fainting, collapsing, vomiting in the presence of a wasp
- avoidance – behaviours such as not going to places where wasps might be encountered, eg, gardens or seaside
- endurance – behaviours such as remaining in the presence of wasp, often frozen still, eg, not leaving a meeting

NOTE: no marks for simply identifying a behavioural characteristic such as panic, avoidance or endurance.

Describe one emotional characteristic that might be seen in a person who has been diagnosed with a phobia of wasps.

Marks for this question: AO1 = 1 and AO2 = 1

2 marks for a clear and coherent description of how one emotional characteristic would be apparent in a person with a phobia of wasps. Some use of appropriate terminology, eg, anxiety or fear.

1 mark for a limited or muddled description, or for an answer without application to wasps.

Possible content:
- anxiety – feelings of worry/distress in the presence of wasps
- fear – feelings of terror/feeling scared, eg, about dying from a wasp’s sting.

NOTE: no marks for simply identifying an emotional characteristic such as fear or anxiety.
Explain how a hierarchy and relaxation might be used in the treatment of someone who has a phobia of wasps. [4 marks]

Marks for this question: AO1 = 2 and AO2 = 2

Hierarchy

1 mark for an explanation of how a hierarchy is created – this is a list designed by the therapist and client into an order of least feared to most feared situations.

1 mark for application of knowledge of a hierarchy to the wasp phobia – the client and therapist will identify fearful situations involving a wasp such as seeing a picture of a wasp or seeing one in a jar and will rank these from lowest to highest.

Relaxation

1 mark for – the client will use relaxation by controlling their breathing/focusing/visualising a peaceful scene/progressive muscle relaxation/using anti-anxiety drugs.

1 mark for application of knowledge of relaxation to the wasp phobia, eg, showing them a picture of a wasp and encouraging the client to use their calming technique(s) to relax and not moving on until they are relaxed.

Credit answers where application is embedded in the description.
Outline the use of one or more drugs in the treatment of obsessive-compulsive disorder (OCD).

[4 marks]

Marks for this question: AO1 = 4

<table>
<thead>
<tr>
<th>Level</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3 - 4</td>
<td>There is a clear knowledge of the use of drug(s) in the treatment of OCD with some accurate detail. The answer is generally coherent with effective use of appropriate terminology.</td>
</tr>
<tr>
<td>1</td>
<td>1 - 2</td>
<td>There is limited or partial knowledge of the use of drug(s) in the treatment of OCD with some detail. The answer lacks coherence and use of appropriate terminology.</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>No relevant content.</td>
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</tbody>
</table>

Possible content:
- attempt to increase or decrease levels of neurotransmitters or the activity of neurotransmitters in the brain
- general purpose is to decrease anxiety, lower arousal, lower blood pressure or heart rate
- antidepressants – SSRIs – prevent the reuptake of serotonin and prolong its activity in the synapse in order to reduce anxiety/normalize the ‘worry circuit’
- tricyclics – block the transporter mechanism that re-absorbs both serotonin and noradrenaline, again prolonging their activity
- anti-anxiety drugs – such as benzodiazepines – enhance the activity of GABA and therefore slow down the CNS causing relaxation
- SNRIs – more recent drugs which also increase levels of serotonin and nor-adrenaline and are tolerated by those for whom SSRIs are not effective.

Credit other relevant material.
Discuss one or more cognitive explanation(s) of depression. 

Marks for this question: AO1 = 6 and AO3 = 6

<table>
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<tr>
<th>Level</th>
<th>Marks</th>
<th>Description</th>
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<tbody>
<tr>
<td>4</td>
<td>10 - 12</td>
<td>Knowledge of one or more cognitive explanation of depression is accurate and generally well detailed. Discussion is effective. Minor detail and/or expansion is sometimes lacking. The answer is clear and coherent. Specialist terminology is used effectively.</td>
</tr>
<tr>
<td>3</td>
<td>7 - 9</td>
<td>Knowledge of one or more cognitive explanation of depression is evident but there are occasional inaccuracies/omissions. There is some effective discussion. The answer is mostly clear and organised. Specialist terminology is mostly used appropriately.</td>
</tr>
<tr>
<td>2</td>
<td>4 - 6</td>
<td>Limited knowledge of one or more cognitive explanation of depression is present. Focus is mainly on description. Any discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.</td>
</tr>
<tr>
<td>1</td>
<td>1 - 3</td>
<td>Knowledge of one or more cognitive explanation of depression is very limited. Discussion is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.</td>
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<tr>
<td></td>
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<td>No relevant content.</td>
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</table>

Possible content:
- focus of cognitive explanations is on how mental processes affect behaviour, in particular how generally negative or maladaptive biases in thinking lead to depression
- Beck’s theory – faulty information processing, negative schemas, the negative triad and examples of these
- Ellis’ ABC model: A – the activating event, B – the belief, rational or irrational, C – the consequence: in depression irrational beliefs lead to unhealthy emotions. Examples of these
- mustabatory thinking – the source of irrational beliefs.

Possible discussion:
- lots of evidence to support the idea that faulty thinking is associated with depression: Bates, Grazioli and Terry, Clark and Beck
- the relationship seems to be association rather than causal
- there have been practical applications of this explanation in the development of CBT. Generally considered the most successful therapy for depression
- CBT assigns responsibility for depression to the client and therefore the client has the power to address this with help from therapist
- not all episodes of depression seem to have an activating event
- some people with depression are very angry and Beck’s theory does not explain this type of depression.
- there is evidence that depression can be explained as having a biological component. Psychological therapy is often not possible until clients are stabilised using drug therapy first.

Credit other relevant discussion.
Section C
Research Methods

[1 3] Explain why it was important to match the students on their high level of interest in business studies.

Marks for this question: AO2 = 2

2 marks for a clear explanation of why it was important to match the students for this variable.

1 mark for a limited or muddled explanation, or for an answer without application.

Content:
- level of interest could affect their satisfaction scores so needs to be controlled; matching students' levels of interest in business studies keeps this participant variable constant.

[1 4] Suggest one other variable for which the researcher should have matched the students. Explain how this might have affected the satisfaction scores if it was not controlled.

Marks for this question: AO2 = 2

1 mark for a suggestion of an appropriate variable – interest in using computers (eg, for studying), past experience of using computers (eg, for studying), disability issues, prior knowledge of this business studies topic.

Accept other appropriate suggestions.

1 mark for an explanation of how it might relate to satisfaction scores.
15 Outline one benefit of allocating the students randomly to the different numbers of online hours and classroom hours as seen in Table 1. [2 marks]

Marks for this question: AO2 = 2

2 marks for a clear outline of one benefit of random allocation in this situation.

1 mark for a limited or muddled explanation, or for an answer without application.

Relevant points:
• removal of researcher bias in determining which participant has the most to least number of online hours
• increased validity as the researcher will not be biased in how students are allocated
• removal of participant bias as each participant has the same chance of having a particular number of online hours as any other participant.

16 The sample used in this pilot study was an opportunity sample. Briefly explain how using a stratified sample when the final study is conducted might be an improvement to the design. [3 marks]

Marks for this question: AO3 = 3

3 marks for a clear and coherent explanation of how stratified sampling would improve the design.

2 marks for some explanation of how stratified sampling would improve the design.

1 mark for a muddled/limited explanation.

Content:
• stratified sampling ensures each identified sub group of the whole target population of possible participants is represented in the sample so generalisation of the results to the target population is more valid than if the participants were just available at the time of asking
• stratified sampling is an improvement because people who are identified by opportunity are likely to be present at same time, doing similar things, possibly of similar personality types etc which may limit representativeness of sample.

Accept other appropriate explanation points.
The researcher designed a questionnaire to collect data from the students about how satisfied they felt when they had completed the course.

Give an example of an appropriate question that the researcher might use to collect qualitative data on the questionnaire.

Marks for this question: AO2 = 1

1 mark for a question which would generate qualitative data: what did you like/dislike about the online/classroom lessons?

Accept any appropriate question or item that generates qualitative data.

Briefly explain one problem the researcher might have in analysing the qualitative data collected from the questionnaires.

Marks for this question: AO2 = 2

2 marks for a clear and coherent explanation of a possible problem.

1 mark for a muddled/limited explanation.

Possible problems:
- analysis of qualitative data relies on interpretation by the researcher which could be inaccurate/biased/subjective
- qualitative data may not be easy to categorise/collate into a sensible number of answer types
- the researcher could be left with lots of individual responses that cannot be summarised.

Do not accept answers which simply identify a problem with no further appropriate elaboration eg 'hard to analyse', 'time consuming'.

Outline one ethical issue that should have been taken into account when carrying out the questionnaire.

Marks for this question: AO2 = 1

1 mark for an outline of an appropriate ethical issue that would be relevant when using a questionnaire: issues such as anonymity, protection from harm, treating with respect, parental consent.

Possible issues:
- the students should be treated with respect by explaining that their answers will be kept confidential
- the students must be assured that they can withdraw their answers if they want to
- the students must be told exactly what the researcher was trying to find out about the relationship between satisfaction and the way information was delivered.

Answer must be an outline and not just a name or term.
Using the data in Table 2 and the graph paper provided below, draw an appropriate scattergram. Fully label your display.

[4 marks]

Marks for this question: AO2 = 4

Award 1 mark for each of the following points.

Content:
- appropriate title, including reference to (negative) relationship and the two variables
- axis 1 – number of online hours and suitable scale 0-10
- axis 2 – satisfaction score and suitable scale 0-20
- accurate plotting of 11 points on scattergram.

No penalty for drawing a line of best fit.

If display is not a scattergram award max 1 mark if title is appropriate.

(A scattergram to show the negative)
Relationship between student satisfaction scores and the number of online teaching hours

![Scattergram](image-url)
What conclusion might the researcher draw, based on the results of the study? [2 marks]

Marks for this question: AO2 = 2

1 mark for saying there is a negative relationship/correlation (between the number of online hours and satisfaction scores).

1 mark for further detail eg the more hours they have online the less they are satisfied with the course (or vice versa), however this does not indicate a cause and effect relationship.

Accept other valid conclusions.
2 2 The researcher looked at the mode and median satisfaction scores of the students. Calculate these two descriptive statistics.

[2 marks]

Marks for this question: AO2 = 2

1 mark for the mode = 19
1 mark for the median = 12

2 3 Explain why the median would be more suitable than the mode to represent the average score for satisfaction for the students.

[2 marks]

Marks for this question: AO2 = 2

2 marks for a clear and coherent explanation.

1 mark for a muddled or limited explanation.

• The median is more representative than the mode because the mode is at the top end of the set of scores, whereas more of the scores are numerically closer to the median.

Accept other explanations, for example, in terms suitability in relation to ordinal data vs nominal data.

2 4 Look at the following sets of descriptive statistics from a different study. Which of the sets (A or B or C) would indicate a negative skew in the distribution of the data?

[1 mark]

Marks for this question: AO1 = 1

1 mark for B
<table>
<thead>
<tr>
<th>Assessment Objective Grid</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td><strong>Approaches in Psychology</strong></td>
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<td><strong>Research Methods</strong></td>
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| **Paper Total** | **26** | **27** | **19** | **72** |