Answers to end-of-chapter practice exam questions

The only answers included in this section are for those questions that have only one answer.

As there are a number of ways to answer most of the questions and gain full credit, we have provided appropriate information that could be included within an answer – rather than a single model answer. It would not be necessary to include all the information to gain full credit.

For some answers we have provided additional information to help you to understand how to construct the answer. This is especially true in the mathematics and calculations questions.

It is important to note that for some of the questions you will need to decide how to make the answer specific to the situation or study described in the question or stem material or you might need to choose an appropriate example or add an appropriate reference to gain full credit.

Chapter 1: Memory (Page 25)

1. What is meant by the term ‘encoding’? (2 marks)
   - Taking information into memory.
   - Changing it into a form that can be stored.

2. Charlie and Alfie are brothers. Charlie was talking about a birthday party he had when he was younger.
   Charlie: ‘My favourite party was when I had a clown and he made balloon animals.’
   Alfie: ‘That wasn’t your party that was mine.’
   Mother: ‘Alfie is right, that happened at his party, not yours Charlie.’
   a) Use your knowledge of one factor that affects memory to explain what has happened to Charlie’s memory in the situation above. (2 marks)
      - False memories: remembering something that has never happened.

   b) Identify and briefly outline one other factor that might affect the accuracy of memory. (2 marks)
      - Context: the general setting or environment in which activities happen.
      - Interference: the difficulty in recalling information when other memories get in the way.
3. Testing the duration and capacity of short-term memory often involves using laboratory experiments. Outline one advantage and one disadvantage of using laboratory experiments in memory research. (4 marks)

Advantages:
• Lots of control of EVs means it is easier to establish cause and effect.
• The high levels of control and standardisation mean the experiment can be replicated.
• There is high objectivity because opportunities for bias are reduced in the standardised procedures.

Disadvantages:
• The settings can be artificial, with unrealistic tasks, so there is a lack of ecological validity.
• Participants are aware they are in a study so their behaviour can be affected.

Note
The advantages and disadvantages given here are generic. To fully address the question, indicate how they are relevant to memory experiments.

4. Two students were talking about a psychology test they had to revise for.

Mike: ‘I’ve been trying to revise for the psychology test this week by saying the information over and over again. I still don’t remember it though.’

Caroline: ‘You need to do something with the information, turn it into a story or understand what it really means.’

Describe and evaluate the multi-store model of memory. Refer to the conversation above in your answer. (9 marks)

Knowledge content:
• Theory of memory that suggests information passes through a series of memory stores.
• Sensory store: memory store that holds information received from the senses for a very short period of time. It will quickly fade away unless we pay attention to it.
• Short-term store: memory store that holds approximately seven bits of information for a limited amount of time. It can hold approximately seven items of information. New information pushes old information out.
• Long-term store: memory store that holds a vast amount of information for a very long period of time. Information enters this store through rehearsal. This store has a very large capacity and information can stay there indefinitely.

Evaluation content:
• According to the multi-store model of memory, all information has to be rehearsed to enter the LTS. But our everyday experience of memory suggests that this is not always the case.
• Saying things over and over again does not necessarily make them easier to recall.
• Studies have shown that rehearsal which involves an elaboration of the information (such as turning it into a story) is more effective than simple repetition.

Note
An appropriate reference to the conversation between Mike and Caroline would also be needed to fully answer this question.
5. Describe one study in which the primacy effect and the recency effect in recall have been investigated. Include in your answer the method used, the results obtained and the conclusion drawn. (5 marks)

- **Method:** a laboratory study in which 16 participants were presented with a list of 20 words at the rate of 1 word per second. Once they had heard all 20 words, they were asked to recall as many words from the list as they could remember, in any order. They were given 90 seconds to recall the words. The test was repeated with the same participants 80 times over a few days. A different list of 20 words was used each time.
- **Results:** the words at the end of the list were recalled first (known as the recency effect). Words from the beginning of the list were also recalled quite well (known as the primacy effect), but the words in the middle of the list were not recalled very well at all.
- **Conclusion:** this provides evidence for separate short-term and long-term stores in the multi-store model of memory.

6. Which one of these is a description of the capacity of memory? (1 mark)

- **A** It is how long information can be stored for
- **B** It is how much information can be stored
- **C** It is the way in which information is stored

**B**

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**Chapter 2: Perception (Page 47)**

1. a) What is meant by the term ‘sensation’? (2 marks)

- The information that we receive from the outside world, or from inside our bodies.
- Special sensory organs detect this information.

b) Sadiq suspected that a glass of milk might not be safe to drink. He tested it by using his nose. Which sense is Sadiq most likely to be using? (1 mark)

- **A** Sight
- **B** Smell
- **C** Touch

**B**

c) When Sara drank the coffee that Sadiq had made for her, she suspected that the milk might not be safe to drink. Which sense is Sara most likely to be using? (1 mark)

- **A** Hearing
- **B** Taste
- **C** Touch

**B**

2. a) Describe Gibson’s direct theory of perception. (5 marks)

- Direct perception is the idea that we perceive simply by using the information we receive through our senses. This gives us enough information to make sense of the world and, therefore, we do not need to make inferences or guesses about what we are seeing.
- Key to understanding perception is to remember what it is used for. We do not just receive passive images of the world. We are active in it, and that activity is part of our perception because it changes the visual images we receive.
• We use a variety of information and cues – e.g. from movement, texture, colour and depth.
• We perceive what is around us in terms of ourselves, and what it allows us to do.

b) **Use your knowledge of psychology to evaluate Gibson’s direct theory of perception. (5 marks)**
• Evidence suggests that some perceptual abilities – like perceiving depth – might be innate and therefore due to nature.
• The theory suggests that sensation and perception are the same process and there is evidence to show that this is not the case.
• Our past knowledge and information about the world does affect some of our perception. E.g. we often interpret something depending on what we expect it to be rather than what it actually is.

3. a) **One explanation for visual illusions is ambiguity. Explain what is meant by ‘ambiguity’ in this context. (1 mark)**
• Having more than one possible meaning or interpretation.

b) **Which of the following visual illusions can be explained by ambiguity? (1 mark)**
   - A The Ponzo illusion
   - B The Müller-Lyer illusion
   - C Rubin’s vase
   • C Rubin’s vase

   **Note**
   This is because it can be seen as a vase, or it can be seen as two faces seen from the side.

4. a) **Imagine that you have been asked to conduct a study to investigate how motivation affects perception. Use your knowledge of psychology to describe:**
   • what task you would do to carry out your study
   • what you would measure
   • the results you would expect to find in your study. (5 marks)
   • Possible task: some participants asked not to eat for period of time and some to eat as normal. Given pictures of food to rate in terms of the brightness of colours.
   • Possible measurement: scale from 1–10 with 1 being dull and 10 being very bright.
   • Possible result: participants who did not eat for period of time would rate pictures as being more brightly coloured than those who ate normally.

b) **Identify two ethical issues that you would need to consider in the study you have described in 4 a). (2 marks)**
   • Researchers must treat the participants with respect – (examples of how to do this would be useful, for instance, protection from harm, issue of consent)
   • The data collected should be confidential and anonymised so that people cannot be identified in the research.
   • Deception should be avoided so people should not be misled about the research.
   • Participants have the right to withdraw from the research at any time and can withdraw their data too.
c) Outline how you could deal with the ethical issues that you identified in your answer to 4 b). (2 marks)

For example:

- To treat the participants with respect, the risk of harm from participation in psychology research should be no greater than the risk from everyday life and the psychological and physical health of participants should not be at risk. Therefore, the length of time for which participants do not eat needs to be appropriate and they need to be able to drink water.
- Participants have the right to withdraw from the research at any time and can withdraw their data too. Participants need to be informed of this when they are informed about the study and they should also be reminded during the study. They should not be pressured to continue or experience any negative consequences from withdrawing.

**Chapter 3: Development (Page 65)**

1. Briefly describe what the cortex is and identify one role of the cortex. (3 marks)

   - The outer layer of the brain where higher cognitive functions take place. Also known as the cerebral cortex.
   - Is divided into four lobes. Each lobe is associated with different functions:
     - Occipital lobe – processes visual information.
     - Temporal lobe – involved with hearing.
     - Parietal lobe – processes information related to touch on the skin like heat, cold, and pain.
     - Frontal lobe – associated with cognitive activities such as thinking, planning and problem solving.

2. Look at the table below. It shows the scores from an IQ (intelligence) test that was given by a psychologist to pairs of identical twins.

<table>
<thead>
<tr>
<th>Pair</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin one</td>
<td>102</td>
<td>99</td>
<td>122</td>
<td>88</td>
<td>108</td>
<td>76</td>
<td>84</td>
</tr>
<tr>
<td>Twin two</td>
<td>108</td>
<td>93</td>
<td>116</td>
<td>92</td>
<td>106</td>
<td>77</td>
<td>87</td>
</tr>
<tr>
<td>Difference</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

The psychologist wanted to know the average differences in intelligence between the twins.

a) Look at the difference column in the table. Calculate the median difference. (1 mark)

   - 4

**Note**

To find the median you must arrange all the values in order from lowest to highest (i.e. 1, 2, 3, 4, 6, 6, 6). The median is the middle value.

b) Look at the difference column in the table. Calculate the mode score for the differences. (1 mark)

   - 6
c) Look at the table below that shows the median differences between identical and non-identical twins.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Identical twins</td>
<td>4</td>
</tr>
<tr>
<td>Non-identical twins</td>
<td>9</td>
</tr>
</tbody>
</table>

What do these results suggest about the role of nature in IQ (intelligence)? (3 marks)

- The median difference for identical twins is lower than that of non-identical twins.
- Therefore IQ/intelligence levels are more similar for identical twins than they are for non-identical twins.
- Identical twins share exactly the same genes whereas non-identical twins do not. If both identical twins have the same characteristic, it is evidence that the characteristic is due to nature.
- These results suggest that nature is an important factor in IQ (intelligence).

3. What is meant by the term ‘egocentricity’? (2 marks)

- Not being able to see things from another person’s point of view.
- A main feature of Piaget’s pre-operational stage of development.

4. Discuss how the findings of research studies can be used to evaluate Piaget’s theory of cognitive development. (4 marks)

- They have shown that the ages at which Piaget said children could do certain tasks are incorrect.
- They showed that babies develop object permanence before eight months.
- They showed that children lose their egocentric thinking, and can conserve, before the age of seven.
- It has also been suggested that people enter the formal operational stage much later than age 11, and that some people will never reach it.

5. Read the following conversation between two teachers at a school:

Teacher one: ‘I don’t think that learning styles are important and I never find out what my students’ learning styles are.’

Teacher two: ‘I’ve spent hours working out each student’s learning style and trying to teach them in a way that matches how they learn. I don’t understand why this hasn’t improved their exam results.’

Explain Willingham’s criticism of learning styles. Refer to the conversation above in your answer. (4 marks)

- While Willingham agrees that students may have a better visual or auditory memory, he says it does not help in the classroom. This is because teachers usually want students to remember what things mean, not what they sound or look like.
- Willingham believes that students should be taught using the best method for the content being taught.
- If a student has difficulty taking in a particular type of information, they need to be given the opportunity to practise dealing with that type of information.
• He points out that there is no experimental evidence to support the existence of learning styles and that studies show that teaching students in their preferred learning style has no effect on their exam results.

Note

An appropriate reference to the conversation between the two teachers would also be needed to fully answer this question.

6. Explain the difference between a fixed mindset and a growth mindset. (2 marks)

• Fixed mindset: Students believe that their intelligence is unchanging. They believe it is genetic and there is nothing they can do to change it.
• Growth mindset: Students believe that their intelligence comes from hard work. They believe that it can be increased by putting time and effort into learning.

7. Discuss the role of praise in learning. (3 marks)

• Dweck believes that the type of praise or positive feedback a student receives from their teacher affects their mindset.
• Person praise: the student is praised for their intelligence.
• Process praise: the student is praised for their effort and the processes they use in completing a task.
• Students who receive person praise believe their successes and failures are something beyond their control.
• Students who receive process praise believe their successes and failures are due to the amount of effort they put in.

Chapter 4: Research methods (Page 101)

1. A teacher wanted to know whether her students were more likely to remember information if they were asked to recall it in the same place that they had first learnt it, compared to a different place. She decided to conduct an experiment.

Each student in her class was a participant in her study. Each participant was shown a list of 20 words in their normal classroom. The class was then divided into two equal groups. One half stayed in the classroom while the other half was taken outside to the playground. Each participant was then given 2 minutes to write down as many of the words on the list that they could remember.

a) Write a suitable null hypothesis for this experiment. (2 marks)

• There is no difference in the number of words recalled when people learn and recall in the same place or learn and recall in different places.

b) What was the independent variable in this experiment? (1 mark)

• Staying in the classroom (same place) or moving to the playground (different place) to recall the list.

c) What is meant by ‘extraneous variables’? Identify one extraneous variable in the experiment above. (3 marks)

• A variable that is not the IV but might affect the DV if it is not controlled.
For example:
• Noise levels in both places.
• Distractions in both places.
• Memory ability of participants in each group.

d) Identify the experimental design that was used in this study. **(1 mark)**
• Independent groups.

e) Give one strength of the experimental design used in this study. **(2 marks)**
• There are no order effects because people only take part in one condition.
• Often, the same material can be used for the task in both conditions.
• Participants cannot work out the aim of the study because they only take part in one condition.

f) Outline how the teacher could have allocated the participants to each condition of the experiment. **(2 marks)**

For example:
• Put ten pieces of paper with ‘A’ on them and ten with ‘B’ into a bag. Each student takes a piece of paper from the bag and those with ‘A’ stay in the classroom and those with ‘B’ move to the playground.
• Put the name of each student on a piece of paper. Fold the 20 pieces of paper in half and put into a bag. The first 10 names drawn out of the bag will stay in the classroom and the remaining 10 will move to the playground.

2. Look at this table below. It shows the number of words that were recalled by each participant in each condition for the experiment described in question 1.

<table>
<thead>
<tr>
<th>Number of words recalled by each participant</th>
<th>Condition 1: classroom</th>
<th>Condition 2: playground</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td><strong>8</strong></td>
<td><strong>11.8</strong></td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>11.8</strong></td>
<td><strong>8.8</strong></td>
</tr>
</tbody>
</table>

a) Calculate the range for condition 2. Show your workings. **(2 marks)**

• \(14 - 3 = 11\)

**Note**

*Range = numerical difference between the highest and lowest value in a set of scores.*
b) Using the table above, explain what the teacher might conclude from this experiment. (3 marks)

- The teacher might conclude that people are more likely to recall information if they are asked to recall it in the same place that they have learnt it.
- The teacher might conclude that people are less likely to recall information if they are asked to recall it in a different place to where they have learnt it.
- This is because the difference in the mean number of words recalled for staying in the classroom (11.8) is higher than that for moving to the playground (8.8) to recall.

c) Draw a bar chart to represent the mean for each condition. Your answer should include the following:
- an appropriate scale
- an appropriate label on each axis
- a suitable title (4 marks)

3. For the experiment described in question 1, the teacher wanted to make sure that each of the students was given the same instructions. Write a short paragraph that the teacher could have read out to the students at the beginning of the experiment. Include reference to the task. (3 marks)

For example:

- ‘Thank you for agreeing to take part in this experiment. You will each be shown a list of 20 words to try and remember. You will have 1 minute to look at them. Then half of you will stay in the classroom while the other half will be taken outside to the playground. You will then be given 2 minutes to write down as many of the words on the list as you can remember. Please do not talk to anyone else. Does anyone have any questions?’

Note

Standardised instructions: these are clear instructions about exactly what the participant will have to do in the experiment.

4. a) For the experiment described in question 1, identify and briefly explain one ethical issue that the teacher should have considered. (2 marks)
• Researchers must treat the participants with respect – (examples of how to do this would be useful e.g. protection from harm, issue of consent)
• The data collected should be confidential and anonymised so that people cannot be identified in the research.
• Deception should be avoided so people should not be misled about the research.
• Participants have the right to withdraw from the research at any time and can withdraw their data too.

b) Describe how the teacher could have dealt with the ethical issue you have outlined in your answer to 4 a). (2 marks)

For example:
• Participants should give informed consent. It does not say how old the students were, but if they were under 16, they should be asked to give their own consent and the teacher may get consent from their parents or guardians. However, because a teacher at school can be considered to be someone acting in the place of a parent, she is also able to give consent for her students.
• Participants have the right to withdraw from the research at any time and can withdraw their data too. Participants need to be informed of this when they are informed about the study and they should also be reminded during the study. They should not be pressured to continue, or experience any negative consequences from withdrawing.

5. A psychologist wanted to know whether young boys or young girls were more likely to share their toys. He decided to carry out observations of children at a local nursery. He also interviewed four members of staff. While he was there, he put a sign up in the reception asking for parents who were willing to be interviewed.

a) Explain one strength and one weakness of using interviews in this situation. (4 marks)

Strengths:
• In general, interviews produce large amounts of data.
• They also provide information about people’s thoughts and feelings that cannot be found by just watching behaviour.
• The data from structured interviews can be collated and analysed easily.
• The data from unstructured interviews are detailed and have ecological validity.

Weaknesses:
• The researcher cannot be sure the interviewee is telling the truth, so the data may not be accurate.
• Structured interviews lack detail and may be frustrating for the interviewer, who wants to ask another question, or for the interviewee, who cannot explain the answer they have given.
• Data from unstructured interviews may be difficult to collate and analyse.

Note
The strengths and weaknesses given here are generic – to fully answer the question, they need to be applied to the described situation.

b) Identify which sampling method the psychologist used to obtain the parents he interviewed. (1 mark)
• Opportunity sampling.
c) Give one evaluation of the sampling method used to obtain the parents in this study. (2 marks)
- Quick and easy.
- Not likely to be representative.
- May have researcher bias.

**Note**

These evaluative points would need some elaboration to receive the full 2 marks.

6. a) In observation studies, what is meant by a ‘behaviour category’? (2 marks)
- The separate actions that are recorded as examples of the target behaviour.

b) Outline one reason why it would be useful to have more than one observer in the study described in question 5. (2 marks)
- When an observation study has been conducted, the record of the behaviours that have been watched has to be an accurate record. The researcher needs to be sure that every time a behaviour that fits the behavioural categories occurs it is recorded.
- This can be a major problem because in many observation studies the actual behaviour will have passed, so it cannot be seen again.

**Note**

The reasons given here are generic – to fully answer the question, they need to be applied to the described study.

7. Outline the difference between primary and secondary data. (2 marks)
- Primary data: data that has been collected firsthand from the source (participants) by the researcher.
- Secondary data: data that is already published and simply used by the researcher.

Chapter 5: Social influence (Page 121)

1. Explain how group size may affect conformity. (2 marks)
- We are more likely to adopt the behaviour of others when we are in a group with three or more other members who are behaving in a similar way.
- We are likely to feel increased pressure to fit in when more people are behaving in the same way than when we are in a smaller group.

2. Describe and evaluate Asch’s research into conformity. (9 marks)

Knowledge content:
- A laboratory experiment. Groups of 7 to 9 people shown sets of 4 lines: a standard line and 3 other comparison lines. They were asked to state out loud which comparison line was the same length as the standard line. The correct answer was always clear. There was only one real participant in each group. He was told the aim of the study was to investigate visual judgement. Unknown to him, the other members of the group were confederates working for the experimenter who had been instructed to give the same
incorrect response for 12 out of the 18 sets of lines. Each real participant was always one of the last to answer so heard the majority of responses before he gave his own judgement. This was to put him under pressure to conform to the incorrect majority. Asch recorded whether participants gave the correct answer or conformed by giving the same incorrect judgement as the group.

- Participants conformed to give the incorrect answer of the group 36.8 per cent of the time. 76 per cent of participants conformed to the incorrect majority at least once. 24 per cent of the participants resisted the pressure to conform and gave the correct judgement in every trial.
- The results showed that people conform to fit in with a group, even when they know they are giving an incorrect judgement.

Evaluation content:
- Carried out in a laboratory, which is not a natural situation for participants. This may have caused them to behave in an unnatural way.
- Matching line lengths is a fairly trivial task without personal significance to most people. In everyday life conformity behaviour is likely to be about decisions that are more important to us. This means that the results may not predict how people respond in real-life conformity situations.
- Carried out using American participants. America and the UK are examples of individualistic cultures that place great emphasis on individual needs. Cross-cultural research has found higher levels of conformity in collectivistic cultures like China. This means Asch’s findings cannot be generalised to all countries.

3. A teacher conducted an experiment into obedience at her school. She told 10 students to each take a note to the school reception. She also asked a student from her class to tell 10 different students to each carry out the same task. She found the following results:

<table>
<thead>
<tr>
<th>Number of students who obeyed</th>
<th>Teacher giving the instruction</th>
<th>Student giving the instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

a) Express the number of students obeying when the teacher asked as a percentage. (1 mark)
- 100%

Note

\[
\text{Number of students who obey} \times \frac{100}{\text{Total number of students given instruction}} = 10 \times \frac{100}{10}
\]

b) Express the number of students obeying when the student asked as a fraction. (1 mark)
- \(\frac{2}{10}\) or \(\frac{1}{5}\)

Note

\[
\text{Number of students obeying the student/ number of students asked by student}
\]
c) Express the results to parts a) and b) above as a ratio. (1 mark)

- 10:2 or 5:1

**Note**

Number of students obeying the teacher: number of students obeying the student

d) What social factor of obedience was the teacher testing? (1 mark)

- Authority: when a person is perceived to have the right to give orders.

4. Evaluate Milgram’s agency theory of obedience. (4 marks)

- Evidence to support this theory comes from the behaviour of soldiers who have followed orders to commit atrocities, e.g. Nazi guards in Second World War concentration camps and Milgram’s obedience study in which 65 per cent of his participants were prepared to give what they believed to be a potentially fatal electric shock to another person when an authority figure told them to.

- We do not all blindly follow orders, which suggests that some people are less likely to enter the agentic state than others.

- Milgram’s theory focuses on social factors that affect obedience, but other psychologists have suggested that dispositional factors such as personality are more important in determining how obedient people are.

5. A psychologist wanted to see how different factors might affect the level of help that a person received at a local football stadium. She used a confederate who was instructed to fall over in front of people. Half the time the confederate was wearing the home team’s shirt and the other half he was wearing the away team’s shirt. She got the confederate to fall over in crowded areas as well as in front of people on their own.

Identify one dispositional factor and one social factor that may have affected bystander intervention in this study. Use your knowledge of psychology to explain how each factor might affect bystander behaviour. (6 marks)

Dispositional factors:

- Similarity to victim: when there are similarities between a bystander and the person in need, bystanders are more likely to offer assistance.

- Expertise: bystanders are more likely to help others if they believe they have the skills required to help someone in a specific situation.

Social factors:

- Presence of others: we are more likely to help others when we are alone than when other people are present.

- The cost of helping: we weigh up the cost and rewards of helping a person in need. If the costs outweigh the rewards, we are less likely to help others.

**Note**

The factors given here are generic. To fully answer the question, they need to be made specific to the described study.
1. Read the following descriptions of types of non-verbal communication.

<table>
<thead>
<tr>
<th>Description</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirroring another person’s body position</td>
<td>B</td>
</tr>
<tr>
<td>Positioning arms and/or legs so that they are not folded or crossed over the body</td>
<td>A</td>
</tr>
<tr>
<td>Positioning arms and/or legs across the body</td>
<td>C</td>
</tr>
</tbody>
</table>

From the following list of terms, choose the one that matches each description and write either A, B or C in the box next to it. Use each letter only once. **(3 marks)**

- A Open posture
- B Postural echo
- C Closed posture

2. Describe and evaluate the Sapir-Whorf hypothesis that thinking depends on language. **(9 marks)**

Knowledge content:
- The hypothesis states that our thoughts and behaviours are affected and formed by the language we speak. This means that cultures with different languages and vocabulary will also have different ways of thinking and understanding things.
- The hypothesis suggests that the language we speak may lead us to focus on certain ways of seeing and understanding things and that some ways of thinking are easier and more common than others.
- The language we speak may also lead to memory bias, where the ability to recall or retrieve certain information is increased or decreased.
- Sapir and Whorf provided evidence for their ideas by studying indigenous languages. Whorf used the Hopi’s use of different types of words for time and the Eskimo’s large number of words for snow to support his claims.

Evaluation content:
- Some of Sapir and Whorf’s claims have been challenged and some of their methods have been found to be unreliable. For example, Eskimos have about the same number of words for snow as English speakers do and Whorf had never even met anyone from the Hopi tribe.
- Books and instruction manuals can be translated into a completely different language without developing a whole new meaning for the reader.
- People who grow up without a language, or who lose the ability to speak (such as stroke victims), are still able to think.
- However, there is a reasonable amount of evidence supporting the hypothesis.

3. Identify one difference between animal and human communication. **(1 mark)**
- Humans use communication to plan ahead or to discuss future events.

4. The following conversation took place between two work colleagues.

Faye: ‘Have you noticed that our new boss always looks down at the ground when you have a conversation with him?’

Julie: ‘Yes. I think that’s why I find it hard to know if it’s my turn to speak when I am talking to him.’
Explain one function of eye contact. Refer to the conversation in your answer. (3 marks)

- Regulating flow of conversation: we use eye movements to signal turn-taking in a conversation. When someone is about to finish speaking, they give the other person a prolonged look. So when we cannot see someone’s eyes, we are unsure when their turn to speak is finishing and ours is starting.
- Signalling attraction: dilation is when the pupils expand and look larger. When young men were shown two nearly identical pictures of the same girl and asked which picture they found more attractive, the majority of participants chose the picture of the girl whose pupils had been altered to look dilated. The participants’ pupils also dilated when they looked at the altered photo.
- Expressing emotion: research has also found that people prefer those who look at them more frequently. This may be because we interpret a high level of looking as a signal of attraction.

Note

An appropriate reference to the conversation between Faye and Julie would also be needed to fully answer this question.

5. A psychologist conducted a study in which she used computer software to create faces with different combinations of happy and sad eyes and mouths. She asked participants from France and China to rate how happy they thought each face was on a scale from 1–10. A rating of 1 meant very sad and a rating of 10 meant very happy.

a) Identify the dependent variable in this experiment. (1 mark)

- The happiness rating on the scale from 1–10.

b) Write a suitable hypothesis for this experiment. (2 marks)

For example:

- The participants from France will rate the faces with happy mouths and sad eyes as happier with a higher rating score than the participants from China.

The results for the experiment described above are shown in the table below.

<table>
<thead>
<tr>
<th>Culture of participants</th>
<th>Median rating for happiness for a face with sad eyes and a happy mouth</th>
<th>Median rating for happiness for a face with happy eyes and a sad mouth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>3.5</td>
<td>9</td>
</tr>
<tr>
<td>French</td>
<td>8.5</td>
<td>4</td>
</tr>
</tbody>
</table>

c) What conclusions can the psychologist draw from the results shown in this table? Explain your answer. (4 marks)

- The psychologist can conclude that the mouth is more important to the French when making their judgement about how to interpret a facial expression. This is because the happy eyes faces were given a higher rating for happiness by the French participants.
- The psychologist can also conclude that the eyes are more important to the Chinese when making their judgement about how to interpret a facial expression. This is because the happy mouth faces were given a higher rating for happiness by the Chinese participants.
Chapter 7: The brain and neuropsychology (Page 167)

1. Read the following statements and decide whether they are true or false.
   a) Functions of the cerebellum include coordination of motor movement, dexterity, and balance. (1 mark)
      • True
   b) Neurons are special cells which exchange chemicals to generate small electrical impulses. (1 mark)
      • True
   c) A synapse is a series of connections between neurons which act in sequence to make a familiar ‘route’ from one area of the brain to another. (1 mark)
      • False

2. Describe and evaluate Hebb’s theory of learning and neuronal growth. (6 marks)
   • If a neuron repeatedly or persistently excites another neuron, neuronal growth takes place, so the synaptic knob becomes larger.
   • This means that when certain neurons act together frequently, they become established as a connection and form neural pathways.
   • Hebb called these combinations of neurons ‘cell assemblies’, and suggested that each cell assembly formed a single processing unit. Hebb argued that whenever we learn to do or remember certain things, we are developing stronger cell assemblies, and the more we use them, the better we learn and hold on to the information in that neural pathway.
   • There has not been a great deal of research on the theory due to the difficulty of carrying out the investigations.
   • Modern neuropsychology supports Hebb’s ideas.

3. Scientists used an fMRI scan to examine the motor cortex of 20 participants. Half of the participants regularly played video games for more than 3 hours a day and the other half rarely played any video games. The scientists measured the area of the motor cortex devoted to the use of the arms and hands.

   a) Identify the independent variable in this experiment. (1 mark)
      • Playing video games for more than 3 hours a day or rarely playing any video games.

   b) The results for the experiment described above are shown in the table below.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Percentage of the motor cortex devoted to the use of the arms and hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular gamers</td>
<td>32.5%</td>
</tr>
<tr>
<td>Non-gamers</td>
<td>26.8%</td>
</tr>
</tbody>
</table>

   How much larger is the area of the motor cortex devoted to the use of arms and hands in the regular gamers compared to the non-gamers? Show your workings. (2 marks)
   • $32.5 - 26.8 = 5.7$

4. a) Other than an fMRI scan, identify one other scanning technique used to identify brain functioning. (1 mark)
   • CT scan
   • PET scan
b) Describe the scanning technique you have identified in 4 a). (3 marks)

• CT scan: Computerised Tomography, which scans the brain by building up a 3D image from a series of X-ray ‘slices’.

• Some types of tissue are denser than others, and this shows up in the X-rays. Bone is the densest, but nerve cell bodies (grey matter) are less dense than myelinated nerve fibres (white matter), so they look different too. Tumours and blood clots also show up with this method, so it is useful for medical purposes.

• PET scan: Positron Emission Tomography, which locates blood flow in the brain by detecting radioactive tracers.

• Active brain cells use more blood/need more oxygen than passive ones, so the scanner can see which parts of the brain are particularly active. PET scans can highlight brain pathways as well as specific areas of activity, and they can show if there are blockages in the blood flow around the brain.

5. Evaluate Tulving’s ‘gold’ memory study. (6 marks)

• The study was one of the first to show how we can investigate cognitive processes in the living brain.

• The study showed different areas of brain activity are related to cognitive processes.

• Only three participants showed the effects, so they may not apply to everyone.

• There was no way of controlling what people were actually thinking about at the exact moment of the scan.

• The participants were fully informed volunteers who may have tried very hard to get the procedure to work.

Chapter 8: Psychological problems (Page 191)

1. Read the following information and answer the question that follows.

‘Researchers have released a new report into how today’s teenagers are coping with exam stress. Their research shows that some teenagers are able to deal with the difficulties and challenges of exams more effectively than others. Those teenagers who cope best with exam stress were found to have good relationships with their peers and family members. They were also able to deal with disappointments and problems, and were more able to make decisions. The researchers believe that these characteristics help to reduce the effects of exam stress.’

From the passage above, identify three characteristics of mental health. (3 marks)

• Having good relationships with peers and family members.

• Able to deal with disappointments and problems.

• Able to make decisions.

2. Explain how the International Classification of Diseases (ICD) is used to diagnose unipolar depression. (3 marks)

• ICD: lists of symptoms and other features of different physical and mental health problems, which also provide the criteria for diagnosing them.

• Only a doctor can give a formal diagnosis of depression. In order to diagnose depression, doctors ask a number of standard questions based around the diagnostic criteria set out in the ICD-10.

• The ICD-10 gives a number of possible symptoms for depression.
• The number and severity of the symptoms an individual is experiencing determines whether a depressive episode is considered to be mild, moderate, or severe.
• Symptoms would generally need to be continuously present for at least two weeks for a diagnosis of depression.

3. **Evaluate the use of cognitive behaviour therapy (CBT) in the treatment of depression. (4 marks)**
   • CBT is a talking therapy that helps people to change their thinking patterns.
   • Research has shown positive results for the use of CBT to treat depression. One such study was Wiles’ study.
   • CBT only looks at ‘here and now’ problems instead of looking at those from the past, and this may mean that not all relevant psychological factors are being dealt with.
   • CBT only considers an individual’s thinking and does not look at biological or social factors.

4. **Complete the table below, by writing the terms ‘addiction’, ‘dependence’ and ‘substance abuse’ in the correct boxes. Use each term only once. (3 marks)**

<table>
<thead>
<tr>
<th>Terms used in relation to the use of addictive substances</th>
<th>Descriptions of terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance abuse</td>
<td>Using a substance in a way that is harmful or dangerous.</td>
</tr>
<tr>
<td>Addiction</td>
<td>When an individual becomes entirely focused on a substance which they need to have regularly in order to avoid withdrawal symptoms.</td>
</tr>
<tr>
<td>Dependence</td>
<td>When a substance is not present, withdrawal symptoms occur.</td>
</tr>
</tbody>
</table>

5. **Outline how peer influence might be linked to addiction. (4 marks)**
   • Psychologists studying social influence and conformity have found that we change our behaviour as a result of social pressure.
   • We do this in order to avoid rejection and to feel that we are part of a group.
   • Research shows that age is a factor affecting conformity and that young people are more likely to conform.
   • E.g.: A report by the National Institute on Drug Abuse found that 90 per cent of cigarette users in the United States started smoking when they were teenagers. Most of them believe that they were strongly influenced by seeing others, such as their friends, smoking.
   • E.g.: A study into peer influence found that individuals whose friends used drugs were more likely to start to use drugs.

6. a) **Describe Kaij’s twin study of alcohol abuse. Include in your answer the aim of the study, the method used, the results obtained and the conclusion drawn. (4 marks)**
   • Aim: To see if hereditary factors influence the development of alcohol addiction.
   • Method: Case study. Using the information from the public register of alcohol abusers, and the information from the questionnaires and interviews, Kaij categorised each twin depending on their level of alcohol use. There were five categories ranging from not drinking at all to being a chronic alcoholic.
   • Results: Found that 54 per cent of identical twins were in the same category of alcohol use but only 28 per cent of non-identical twins were in the same category of alcohol use. He also found that as the level of alcohol use increased, there was a higher concordance rate for identical twins, with 72 per cent of chronic alcoholic twins being in the same category as their co-twin.
b) Kaij’s twin study of alcohol abuse was a case study. Outline one strength and one weakness of case studies. (4 marks)

Strengths:
- Case studies provide detailed information about individuals rather than collecting just a score on a test.
- Case studies record behaviour over time, so changes in behaviour can be seen.
- A single case study that shows us a theory is not correct will encourage researchers to change the theory and make it more accurate.

Weaknesses:
- The data collected can be very subjective. The method relies on the individual who is being studied remembering events accurately.
- The interpretations made by the psychologist could be biased and therefore the case study might be unreliable.
- The information from the case study cannot be applied to anyone else because it is unique.
- There are ethical issues, especially of confidentiality, right to withdraw, and protection from harm.