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AQA

Please write clearly in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____
I declare this is my own work.

GCSE
PSYCHOLOGY

Paper 1 Cognition and Behaviour

Time allowed: 1 hour 45 minutes

Materials
For this paper you may use:
- a calculator.

Instructions
- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 100.
- Question 12 is a synoptic question in which you will be rewarded for your ability to draw together different areas of knowledge and understanding from across the full course of study.
- Questions should be answered in continuous prose. You will be assessed on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

For Examiner's Use	
Section	Mark
A	
B	
C	
D	
TOTAL	

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Section A

Memory

Answer **all** questions in the spaces provided.

Only **one** answer per question is allowed, except where stated otherwise.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD ⬬ WRONG METHODS

If you want to change your answer you must cross out your original answer as shown.

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

0 1 Oscar is learning both French and Spanish at school. Sometimes he gets confused and uses French words when he is speaking Spanish.

Which of the following factors best explains the problem Oscar is experiencing?

Shade **one** box.

[1 mark]

A Context

B False memory

C Interference

D Serial position

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0 2 What is meant by 'storage' as a process of memory?

[2 marks]

Turn over for the next question

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0 3 Read the following information.

Libby and Yasir are talking about how they plan to revise for a Biology test.

Libby: "I will start with a list of the key terms I need to learn. I will look up what each one means in my textbook and write down a definition for each key term."

Yasir: "I will draw pictures and diagrams of what I need to learn. This helps me to remember information."

Outline the process of encoding. Refer to Libby and Yasir's conversation in your answer.

[4 marks]

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0 4 Describe and evaluate the multi-store model of memory.

[9 marks]

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0 5 Bartlett investigated the idea that memory is an active process. He gave each participant a Native American Indian story called 'War of the Ghosts'. He then asked each participant to retell this story several times. He found that participants changed parts of the story when they retold it.

Evaluate Bartlett's 'War of the Ghosts' study.

[5 marks]

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0 6 Read the following information.

> A researcher carried out a study into false memory. Each participant was shown five photos and asked what they remembered about these events from their childhood.
>
> However, only four of these photos showed a genuine event from their childhood. The other photo showed a fake image of the participant on a hot air balloon ride. None of the participants had ever experienced a hot air balloon ride.

0 6 . 1 Calculate what fraction of the photos shown to each participant were fake.

[1 mark]

0 6 . 2 The researcher had to choose the order in which to show a set of five photos.

Describe how the researcher could have used randomisation to decide the order.

[3 marks]

25

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Section B

Perception

Answer **all** questions in the spaces provided.

0 7 Objects that are closer in your visual field appear larger than those that are further away.

Which **one** of the following causes this?

Shade **one** box.

[1 mark]

A Convergence ⬭

B Height in plane ⬭

C Linear perspective ⬭

D Occlusion ⬭

E Relative size ⬭

0 8 Objects that are closer in your visual field can cover part of another object that is further away.

Which **one** of the following causes this?

Shade **one** box.

[1 mark]

A Convergence ⬭

B Height in plane ⬭

C Linear perspective ⬭

D Occlusion ⬭

E Relative size ⬭

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0 9 What is meant by perception?

[2 marks]

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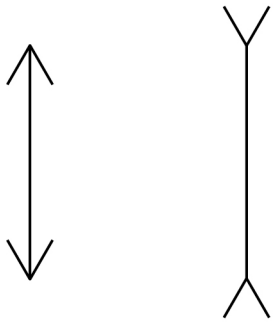
Figure 1: The Müller-Lyer illusion



1 0 Read the following information.

Figure 1 shows the Müller-Lyer illusion. The two vertical lines labelled **a** and **b** are the same length but sometimes people incorrectly perceive that line **b** is longer than line **a**.

A psychologist investigated whether the environment in which people lived affected how they perceived the Müller-Lyer illusion. He tested two groups of participants; there were 50 participants in each group.

Group 1 lived in a city environment so were used to seeing square buildings around them. Group 2 lived in a rainforest environment so were not used to seeing square buildings around them.

He asked each participant if the two vertical lines were the same length.

The results of the study are shown in **Table 1**.

Table 1: The number of participants in each group who incorrectly perceived the Müller-Lyer illusion.

Group 1	Group 2
27	18

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1 0 . 1 Calculate the percentage of participants in **Group 2** who incorrectly perceived the Müller-Lyer illusion.

State your answer rounded to **one** significant figure. Show your workings.

[3 marks]

Workings:

Answer _____

1 0 . 2 What is the ratio of participants who incorrectly perceived the Müller-Lyer illusion in Group 1 compared to Group 2?

Write this ratio in its simplest form.

[2 marks]

_____

_____

_____

_____

_____

_____

_____

Question 10 continues on the next page

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1 0 . 3 Outline **one** conclusion about the participants' perception of the Müller-Lyer illusion that the researcher could draw from his results.

How can this conclusion be explained using Gregory's constructivist theory of perception?

[4 marks]

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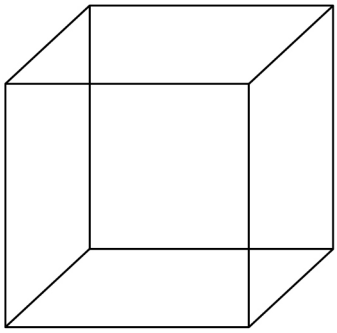
Figure 2: The Necker cube illusion



1 1 **Figure 2** shows the Necker cube illusion.

Outline how psychologists would explain the Necker cube illusion.

[3 marks]

Turn over for the next question

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1 2 Describe Gilchrist and Nesberg's study into how motivation affects perception.

Evaluate the research method used in this study.

[9 marks]

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Section C

Development

Answer **all** questions in the spaces provided.

1 3 Research suggests that nature plays a role in early brain development.

Which of the following is a way that nature can affect brain development?

Shade **one** box only.

[1 mark]

A Experiences with other people

B Genes

C Getting an infection

D Neglect

1 4 Which of the following **best** describes the function of the cortex?

Shade **one** box only.

[1 mark]

A Controls basic autonomic functions

B Controls cognitive processes

C Coordinates movement and balance

D Passes on information from the sense organs

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1 5 Read the following information.

> Megan and her dad are visiting a farm.
>
> Megan is very excited to see the animals and shouts, "Look at the little horse, daddy. It is so cute!"
>
> Her dad explains, "Actually it is a donkey, Megan. Although it looks very similar to a horse, a donkey has a thicker coat, longer ears and a shorter tail than a horse."

Briefly describe Piaget's concept of accommodation.

According to this concept, how will her dad's explanation affect Megan's understanding of horses?

[4 marks]

Turn over for the next question

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1 6 Read the following information.

> Four-year-old Ibrahim and his auntie go to a café for a drink. His auntie buys two cartons of apple juice which are identical in size. She pours Ibrahim's carton into a tall narrow glass. She pours her own carton into a short wide glass. Ibrahim says to his auntie "I have got more juice than you".

Briefly describe Piaget's concept of conservation.

Refer to Ibrahim in your answer.

[4 marks]

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1 7 McGarrigle and Donaldson investigated conservation in the 'naughty teddy study'.

Describe and evaluate this study.

[6 marks]

Turn over for the next question

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1 8 You have been asked to compare the effects of using different learning styles to revise the structure of the brain. Describe how you would design an experiment to do this.

You need to include:

- the tasks participants would be asked to do to revise the structure of the brain using a verbaliser **and** a visualiser learning style
- one example of a standardised procedure that you would use **and** a justification for why this should be used
- one ethical consideration you would need to address **and** how you would deal with this.

[6 marks]

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1 9 Willingham has criticised the use of learning styles.

Briefly outline his criticism of learning styles.

[3 marks]

25

Turn over for the next section

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Section D

Research Methods

Answer **all** questions in the spaces provided.

2 0 Which of the following is **most likely** to give secondary data?

Shade **one** box.

[1 mark]

A Asking participants to complete a questionnaire about their favourite shops

B Collecting information already published by high street retailers

C The researcher interviewing shoppers in a supermarket

D The researcher observing participants in a shopping centre

2 1 Which of the following sets of data is normally distributed?

Shade **one** box only.

[1 mark]

A mean = 24 median = 26 mode = 29

B mean = 26 median = 26 mode = 26

C mean = 29 median = 20 mode = 25

D mean = 29 median = 26 mode = 24

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2 2 Read the following information.

A researcher wanted to investigate whether the timing of the school day affected student attendance. The head teacher at a local school allowed him to carry out an experiment with all 190 Year 9 students over an eight-week period.

In the first part of the experiment, the school day began at 8.30 am and finished at 3.30 pm for four weeks (the early start condition).

In the second part of the experiment, the school day began at 10.00 am and finished at 5.00 pm for four weeks (the late start condition).

The researcher recorded the total number of school days missed for Year 9 students during the first and second parts of the experiment.

2 2 . 1 Identify the independent variable in this experiment.

[1 mark]

2 2 . 2 Identify the dependent variable in this experiment.

[1 mark]

2 2 . 3 Write a null hypothesis that the researcher can use in this experiment.

[2 marks]

Question 22 continues on the next page

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Table 2: Total number of days missed by 190 Year 9 students in the early and late start conditions.

	Early start condition	**Late start condition**
Total number of days missed	266	76

2 2 . 4 **Table 2** shows the total number of days missed by 190 Year 9 students in the early and late start conditions.

Calculate the **mean** number of days missed by students in the late start condition.

Show your workings.

[2 marks]

Workings:

Answer _____

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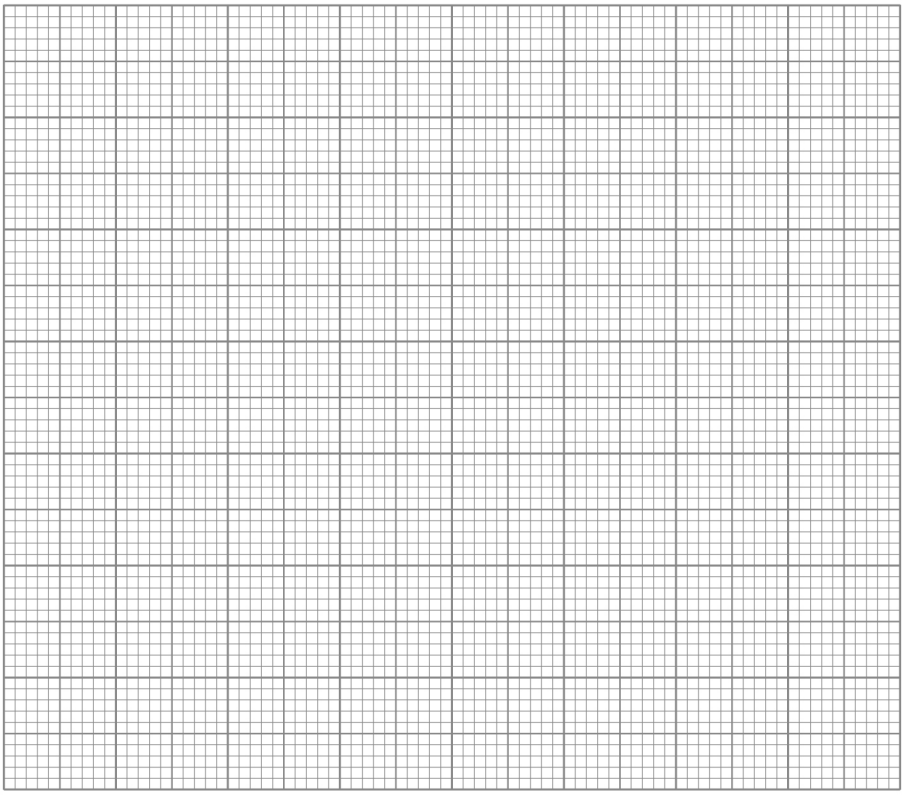
2 2 . 5 The mean for the early start condition was 1.4

Use this mean and your calculated mean from question **22.4** to sketch a suitable graph to show the mean number of days missed by each student in the early and late start conditions.

Label the axes and provide a suitable title for your graph.

[4 marks]



2 2 . 6 The researcher used a repeated measures experimental design. He also used counterbalancing.

Explain why researchers often use counterbalancing with a repeated measures experimental design.

[2 marks]

_____

_____

_____

_____

_____

Question 22 continues on the next page

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2 2 . 7 This study is an example of a field experiment.

Evaluate the use of field experiments in psychological research.

[5 marks]

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2 2 . 8 The psychologist wanted to interview a sample of the students in his experiment to find out how they felt about starting school earlier and later in the day. He thought about using either opportunity or systematic sampling to get his sample of students.

Outline **both** opportunity **and** systematic sampling.

Compare the use of these sampling methods using your knowledge of their strengths **and/or** weaknesses.

[6 marks]

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