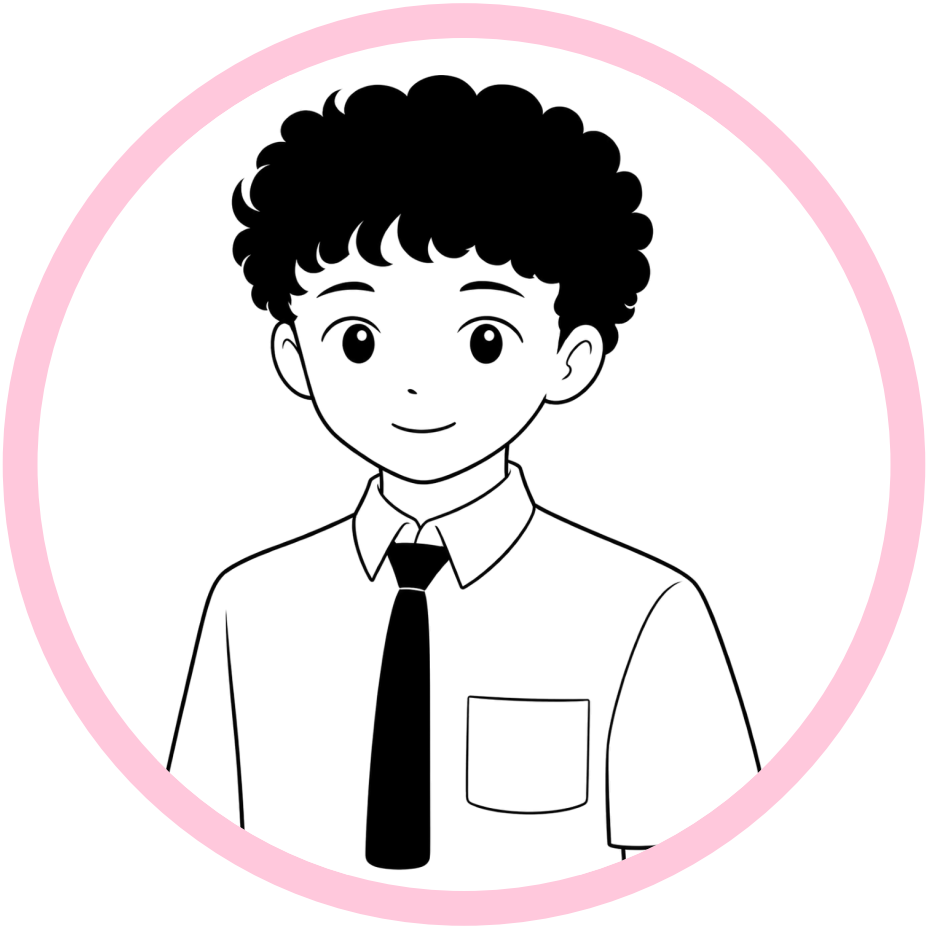
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



MARK SCHEME

3.3.6 FOOD PREFERENCES

SCORE	PERCENTAGE
/64	%

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Q1.

[AO1 = 3 AO3 = 5]

Level	Marks	Description
4	7 – 8	Knowledge of evolutionary explanation for food preferences is accurate with some detail. Evaluation is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5 – 6	Knowledge of evolutionary explanation for food preferences is evident but there are occasional inaccuracies/omissions. Evaluation is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3 – 4	Limited knowledge of evolutionary explanation for food preferences is present. Focus is mainly on description. Any evaluation is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 2	Knowledge of evolutionary explanation for food preferences is very limited. Evaluation 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.
	0	No relevant content.

Possible content:

- varied diet high in energy and essential nutrients aids survival so genetic preferences for certain foods are bred into a population
- salt preference appears innate – essential for hydration/cell function
- high calorie foods (eg fat) are preferred as they provide energy, essential for survival
- sweet taste preference – sugar is high energy, enabling survival
- avoidance of bitter/sour foods that may be toxic ensures survival to reproduce so aversions are bred into the population
- neophobia – avoidance of novel/unusual foods is adaptive, reducing the likelihood of ingesting harmful food, ensuring survival
- biological preparedness – Seligman proposed humans are genetically prepared to rapidly learn avoidance of harmful foods.

Possible evaluation:

- use of evidence for innate taste preference/avoidance, eg Desor 1973 – neonates prefer sweet foods; Harris 1990 – infants prefer salty cereal
- evidence for conditioning in food preference, eg Birch 1987 – neophobia reduces with continued exposure; Garcia and Koelling 1966 – rats learn to avoid sweet liquid paired with aversive chemical
- cultural differences in food preferences counter to evolutionary view

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- individual differences – preferences/avoidances are not universal, contradicting the evolutionary explanation; only some people have an inherited ability to taste the bitter chemical PROP (Drewnowski 2001)
- neophobia restricts diet and may be harmful if individuals are unable to adapt to variability in food sources
- variability in levels of neophobia at different ages
- food preferences may arise for benefit of gut microbes rather than host
- mediating effects of hunger levels and brain chemistry, eg leptin inhibits taste of sweetness
- evaluation linked to broader issues, eg nature-nurture, reductionism
- contrast with alternative explanations.

Credit other relevant material.

Q2.

[AO2 = 4]

Level	Marks	Description
2	3 – 4	Knowledge of the role of learning in food preference is clear and mostly accurate. The material is used appropriately to explain how parents might encourage a healthy diet. The answer is generally coherent with effective use of psychological terminology.
1	1 – 2	Some knowledge the role of learning in food preference is evident. Explanation of how parents might encourage a healthy diet is not always effective or not presented in psychological terms. The answer lacks accuracy and detail.
	0	No relevant content.

Possible content:

- social learning / culture, eg role of others (parents and peers) as models
- concepts of observation, imitation, identification, vicarious reinforcement
- although less likely also credit answers based on associative learning, eg operant conditioning and direct reinforcement; classical conditioning and pleasurable association between UCS and CS
- research evidence is creditworthy where it exemplifies a particular method.

Credit other relevant suggestions based on learning theory.

Q3.

[AO3 = 2]

Possible content:

- Evolutionary explanation based on the environment of evolutionary adaptation and the need for a balanced diet
- Social and cultural evolution has completely altered the availability of food in contemporary advanced cultures
- So biological requirements for eg fats, carbohydrates, proteins, can be easily satisfied
- The food industry has exploited our evolutionary bias towards sugary foods,

leading to the ‘obesogenic’ diet, high in sugar and carbohydrates and low in fruit and vegetables
- Food preference is also influenced by food availability, and social and cultural factors
- The evolutionary approach therefore does not provide a full explanation for contemporary food preferences

Credit other relevant material.

2 marks for a clear and coherent limitation
1 mark for a vague/muddled limitation or limitation merely identified.

Q4.

[AO1 = 2]

Possible content:
- Neophobia is ‘fear of the new’. In this context it is fear of new foods
- Animals have a natural aversion to new foods
- This is an adaptation to avoid possible toxic foods

2 marks for a clear and coherent outline
1 mark for a vague/muddled outline or outline merely identified.

Q5.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

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Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Research includes both theory and studies. It is likely that students will outline factors then discuss their contribution to attitudes to food and / or eating behaviour. Credit references to social / cultural influences, mood and health concerns and other relevant material.

'Attitudes' include emotional, cognitive and behavioural components and attitudes to food can be shaped by individual concerns or social / cultural influences that can affect eating behaviour. Although from different parts of the specification, factors such as biological (neural and hormonal) mechanisms and eating disorders can also influence attitudes to food and / or eating behaviour. Therefore such material would be creditworthy.

Credit also the possible role of serotonin in mood effects on our attitudes to food, or accurate and specific examples of health concerns in relation to diet.

AO3

Use of research studies is creditworthy. Methodological evaluation of studies may earn credit if discussed in the context of the influence of factors on attitudes to food and eating behaviour.

Comparison with alternative approaches such as the biological would be relevant. Alternatively, commentary might include the complex nature of the control of eating behaviour, with attitudes interacting with biological control systems.

Other relevant issues include the nature-nurture debate, free will / determinism and gender issues.

Q6.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used

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		inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

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AO1

There is a range of material available in this area. Candidates are likely to focus on neophobia and / or taste preferences (preferences for sweet, salty and umami, avoidance of sour and bitter) and their adaptive significance. Other approaches might include the value of moving to an omnivorous diet and the significance of meat eating for the development for brain size and intelligence.
Examiners must be alert to unfamiliar material that is in fact relevant to the question and creditable.

AO3

Research studies on food preferences in babies, children and non-human animals would be a key source of material when evaluating the evolutionary explanations of food preference.

More general commentary may include changes in food preference with age and experience, and the possible role of associative learning, modelling and social / cultural factors. These must be discussed in the context of evolutionary explanations to gain credit.

Generic evaluation of evolutionary explanations would also be relevant and creditable, while evolutionary explanations of eating disorders can earn marks if explicitly shaped towards the issue of food preference.

Issues such as the use of non-human animals in research; reductionism; free will / determinism etc could be relevant if used effectively.

Q7.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies.

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		Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

There are many factors shown to influence our attitudes to food. These include innate / evolutionary influences, early learning experience and familiarity, neophobia, parental attitudes, weight concern, cultural factors, the food industry etc. The key to effective answers will be appropriate selection and accurate description of the role of such factors in influencing attitudes to food.
Candidates are often tempted to describe brain mechanisms involved in eating behaviour. This can only receive credit in this question if explicitly linked to the issue of attitudes.

AO3

For each of the factors mentioned above research studies can provide an effective source of commentary and evaluation on their role in attitudes to food. More general commentary could include the relative role of different factors in, for instance, childhood food preferences, or the change in relevant factors with age. Examiners should be sensitive to the wide range of potential material that would be creditworthy on this question. This includes methodological evaluation of relevant research evidence, analysis and interpretation of data, application and implications and use of scientific findings in society's decision making (eg factors contributing to obesity, the increasing awareness of healthy diets etc).

Issues that may be discussed in relation to this question include: gender and cultural issues, nature / nurture, reductionism, free will / determinism etc.

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Q1.

Despite evident knowledge, this question was not usually well answered. Most students could happily give a long list of innate food preferences, often supporting the information with references to research, but in many cases there was no explanation of these preferences in terms of evolution. As an example, it was often stated that people have an 'innate dislike of bitter tasting foods because they are toxic', but there was no explanation of how this might have come about, ie only people who had this dislike would have survived and their genes would thus continue in the gene pool, perpetuating and reinforcing the dislike in the population.

Q5.

Answers on this topic have been improving over the years. It is now far more common for students not just to list a number of potential factors in haphazard fashion, but to systematically present factors, mechanisms and relevant research evidence together. Popular factors were culture, parental and peer attitudes, media and mood. At the top end students could present relevant findings for each factor in coherent answers; in addition there were some impressive outlines of the underlying mechanisms for mood-related effects. Weaker answers were less well organised with restricted use of studies and a greater reliance on methodological evaluation.

'Factors affecting attitudes' is a general term and could include other aspects of eating behaviour such as eating disorders or brain mechanisms of feeding. Although eating disorders in particular were occasionally used effectively, there was a strong tendency for such answers to focus on the disorder (including symptoms and treatments) rather than the research into factors influencing attitudes to food and / or feeding behaviour.

Unusually this was a question that elicited some relevant and effective IDA, in the form of gender issues and practical application of findings.

Q6.

Although many candidates knew a good deal of relevant material, the organisation was often ineffective. AO1 consisted of evolutionary explanations but many answers launched into various studies without presenting the broader perspective of explanations. However there were many impressive answers that reviewed the evolutionary approach to food preference, referring to dietary needs and food availability in the EEA, the range of taste receptors, anatomy of the digestive tract etc. The embryo protection hypothesis was also popular.
Studies were used as evaluation, with the work of Garcia and others on taste aversion learning and neophobia were very popular. At the top end candidates used counter evidence for the role of familiarity, parents, peers and culture effectively; although in some cases they spent too long on material not related to the question. There was often some sensible commentary on the range of factors that influence contemporary western diets and the role of evolutionary impulses in the increasing level of obesity.

Weaker answers demonstrated little understanding of evolution or of the evolutionary perspective on food preference.

Q7.

There was a range of answers to this question, varying greatly in quality. Weaker answers were virtually anecdotal, with mention of parents, peers, mood and media influence but with little or no psychological content eg in terms of social learning theory. Better answers explained how these factors, or others, might influence attitudes to food. Research studies were the key to effective commentary, but again some candidates were inclined to provide too much methodological evaluation without bringing out the impact on findings and their implications. Effective IDA included cultural and gender issues, and free will / determinism. Some candidates discussed eating disorders, and these earned credit insofar as they were shaped to the question.