Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/42**

Paper 4 Specialist Options: Application **February/March 2022**

1 hour 30 minutes

7583201635

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **four** questions in total:
  - Answer questions from **two** options.
    - Section A: answer **two** questions.
    - Section B: answer **one** question.
    - Section C: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.

INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **8** pages. Any blank pages are indicated.

© UCLES 2022

[Turn over

stemup.co.uk

Section A

You must answer **two** questions from this section.
Answer all the parts for the two questions you choose.

Psychology and abnormality

1 One drug treatment for depression is monoamine oxidase inhibitors (MAOIs). The effectiveness of this treatment can be tested using randomised control trials.

(a) Explain how MAOIs work when treating depression. [2]

(b) **(i)** Suggest how randomised control trials can be used to study the effectiveness of MAOIs. [2]

(ii) Give **one** strength of a randomised control trial. [2]

(c) Suggest **one** treatment for depression, other than MAOIs. [4]

(d) Discuss the strengths and weaknesses of using drugs to treat depression. You should include a conclusion in your answer. [5]

Psychology and consumer behaviour

2 Woods et al. conducted two laboratory experiments into the effect of background noise on food perception. Participants ate different foods, such as crisps, cheese and flapjack, while listening through headphones to either:

- no sound
- quiet background white noise
- loud background white noise.

(a) Suggest **two** relevant participant variables that were **not** controlled in this study. [2]

(b) **(i)** Explain how the dependent variables (DV) were measured in Experiment 1. [2]

(ii) Give **one** finding from Experiment 1. [2]

(c) **(i)** Explain how counterbalancing was used in this study. [2]

(ii) Suggest **one** effect if counterbalancing had **not** been used in this study. [2]

(d) Discuss the strengths and weaknesses of using controls in the study by Woods et al. You should include a conclusion in your answer. [5]

© UCLES 2022

stemup.co.uk

Psychology and health

3 Food Dudes to the rescue.
Prior to the study by Tapper et al. (2003), children in the UK aged 4 to 11 were not eating enough fruit and vegetables. Tapper et al. used the Food Dudes to present three food consumption techniques to children in three schools.

(a) Suggest why it was important that Tapper et al. measured unhealthy food consumption as well as fruit and vegetable consumption. [2]

(b) Explain **two** of the food consumption techniques used by Tapper et al. [4]

(c) Suggest how **two** ethical guidelines apply to the use of children in this study. [4]

(d) Discuss the strengths and weaknesses of using health promotion strategies in schools. Do **not** refer to ethics in your answer. You should include a conclusion in your answer. [5]

Psychology and organisations

4 In his theory, Maslow originally proposed a hierarchy of five needs. Several years later, he added three more needs, giving eight in total. These needs are: physiological, safety, social, esteem, cognitive, aesthetic, self-actualisation and transcendence. These needs can be understood in relation to individual and situational explanations.

(a) Explain what is meant by 'self-actualisation'. [2]

(b) **(i)** Explain how **one** need, other than self-actualisation, could be 'individual'. [2]

(ii) Explain how **one** need, other than self-actualisation, could be 'situational'. [2]

(c) Suggest why Alderfer's ERG theory is more reductionist than Maslow's theory. [4]

(d) Discuss the advantages and disadvantages of using interviews to gather data on need theories of motivation. You should include a conclusion in your answer. [5]

© UCLES 2022

[Turn over

stemup.co.uk

Section B

You must answer **one** question from this section.

Psychology and abnormality

5 **(a)** Design a study to investigate gender differences in the effectiveness of imaginal desensitisation for the treatment of impulse control disorders. [10]

(b) Explain the psychological and methodological evidence on which your study is based. [8]

Psychology and consumer behaviour

6 Consumers may not buy what they plan to buy. They may intend to make a purchase but may not do this.

(a) Design a study using a questionnaire to investigate whether consumers buy what they plan to buy. [10]

(b) Explain the psychological and methodological evidence on which your study is based. [8]

Psychology and health

7 **(a)** Design an experiment to investigate the effectiveness of biofeedback in the management of stress. [10]

(b) Explain the psychological and methodological evidence on which your experiment is based. [8]

Psychology and organisations

8 **(a)** Design a study using a questionnaire to investigate the effectiveness of adaptive leadership to manage employees' experiences during organisational change within a company. [10]

(b) Explain the psychological and methodological evidence on which your study is based. [8]

© UCLES 2022

stemup.co.uk

Section C

You must answer **one** question from this section.

Psychology and abnormality

9 *'Behavioural explanations of impulse control disorders are too reductionist to be useful.'*

To what extent do you agree with this statement? Use examples of research you have studied to support your answer. [12]

Psychology and consumer behaviour

10 *'If playing one type of music in one restaurant increases the amount of money spent, this cannot be generalised to all restaurants.'*

To what extent do you agree with this statement? Use examples of research you have studied to support your answer. [12]

Psychology and health

11 *'A questionnaire is the only way that unrealistic optimism can be assessed.'*

To what extent do you agree with this statement? Use examples of research you have studied to support your answer. [12]

Psychology and organisations

12 *'Situational leadership is no longer relevant. Only individual styles of leader behaviour are relevant to modern organisations.'*

To what extent do you agree with this statement? Use examples of research you have studied to support your answer. [12]

© UCLES 2022

stemup.co.uk

BLANK PAGE

© UCLES 2022

stemup.co.uk

BLANK PAGE

© UCLES 2022

stemup.co.uk

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2022

stemup.co.uk

Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number

Section A

Psychology and abnormality

1(a) MAOIs inhibit (block) the enzyme monoamine oxidase. This enzyme normally breaks down the monoamine neurotransmitters noradrenaline, serotonin and dopamine in the synapse. Because they are not broken down, these neurotransmitters stay at higher, more normal levels, which reduces the symptoms of depression.

1(b)(i) Depressed participants are randomly allocated (for example by drawing names from a hat) so each has an equal, 50/50 chance of being in the experimental group, who take the MAOI, or the control group, who take a placebo or no MAOI. Depression scores, for example on the Beck Depression Inventory, are then compared after several weeks.

1(b)(ii) The researchers do not choose who goes into each condition, so there is no researcher bias. Allocation is by chance, so participant variables such as how severe the depression is are spread evenly across the groups, reducing extraneous variables, so any improvement can be put down to the MAOI.

1(c) Cognitive restructuring (Beck et al., 1979). The therapist first explains the therapy, then helps the patient identify unpleasant emotions, the situations in which they occur and the negative automatic thoughts linked to them, such as "I always fail". The patient is taught to challenge these thoughts by looking for evidence against

Question number	
	them, for example through homework diaries, and to replace them with more positive, realistic thoughts. Finally the underlying dysfunctional beliefs, such as "I must be liked by everyone", are challenged before therapy ends, so the patient's thinking, and therefore mood, changes.
1(d)	One strength is that drugs are easy to take, as the patient only has to swallow a pill, so treatment is cheap and convenient. A second strength is that the patient can be passive, which suits severely depressed people who lack the motivation to take part in a talking therapy. Drugs such as MAOIs also act directly on the neurochemistry linked to depression, raising levels of serotonin and noradrenaline. However, one weakness is that some drugs can cause dependence, so they should only be used short term. Another is non-adherence: patients may not take them as prescribed, for example because of side effects. Drugs also treat the symptoms rather than the cause, ignoring cognitive or life-event causes, so relapse is likely when the drug is stopped. In conclusion, drugs are useful to lift mood quickly in severe depression, but because they do not remove the cause, they should be combined with a therapy such as cognitive restructuring for long-term recovery.
	Psychology and consumer behaviour
2(a)	Some participants may not have liked some of the foods, such as cheese, which would affect their liking ratings. Some participants may have been more or less sensitive to noise, so loud white noise affected them more.
2(b)(i)	Participants rated each food for sweetness, saltiness and liking on a labelled magnitude scale, showing an increase or decrease in intensity from a baseline,

Question number	
	ranging from +7 through 0 to −7.
2(b)(ii)	Reported sweetness and saltiness of the foods were significantly lower in the loud background noise condition than in the quiet condition. Liking was also lower with loud noise, but this difference was not significant.
2(c)(i)	Each participant experienced all three sound conditions (repeated measures), but in a different order. With A = quiet, B = loud and C = no sound, participant 1 did A, B, C, participant 2 did B, C, A and participant 3 did C, A, B, so each condition came first, second and third equally often.
2(c)(ii)	Order effects would occur. For example, if every participant heard loud noise first, it could carry over and affect their ratings in the quiet and no sound conditions, or they could become bored or tired by the third condition, so ratings would change because of the order, not the noise.
2(d)	A strength is that controls reduce confounding variables. The type of noise (white noise or no sound) and its level (quiet 45 to 55 dB, loud 75 to 85 dB) were controlled, so changes in taste ratings can be put down to the noise. Situational variables were also controlled because the same laboratory was used throughout. Including a no sound control condition gave a baseline against which the two noise conditions could be compared. However, a weakness is that participant variables were not controlled; for example one participant may like salty food and another may not, which affects ratings. Also, controlling variables is reductionist: in real life, such as on an aeroplane, noise does not exist in isolation from other factors like lighting, smells and company, so ecological validity is low. In conclusion, controls were essential for establishing that loud noise reduces

Question number	
	sweetness and saltiness, but the findings should be tested in real settings, such as restaurants or aeroplanes, before being applied there.
	Psychology and health
3(a)	Unhealthy food consumption acts as a baseline and a check. If the Food Dudes really changed eating habits, then as fruit and vegetable consumption increased, consumption of unhealthy snacks such as crisps and sweets should decrease, showing healthy food replaced unhealthy food rather than children just eating more overall.
3(b)	Taste exposure: the more a child tastes a novel food, the more they learn to like it, so getting a child to repeatedly taste a new fruit or vegetable may result in them learning to like the flavour. Modelling: children imitate models through observational learning, and this is more effective if the model is liked or admired, is the same age or slightly older, and is rewarded. The Food Dudes are slightly older heroic children who eat fruit and vegetables, and observing multiple models is more effective than one.
3(c)	Informed consent: young children aged 4 to 11 cannot fully understand the study, so they could not give consent themselves. Consent had to be obtained from parents and through class teachers, and the children should still be asked if they were happy to take part. Protection from harm: taste exposure involves children repeatedly tasting foods they may dislike, which could cause distress, so the researchers must make sure no child is pressured to eat and that any child who is upset can stop without being made to feel they have failed.

Question number	
3(d)	One strength is that children in schools are receptive to new learning, so healthy eating messages are likely to be accepted. Children also see their class teacher as a role model, which is ideal for modelling. Children spend most of the day at school, including mid-morning break and lunch time, giving ideal opportunities for taste exposure, modelling and rewards, as the Food Dudes programme used. Schools are also where children can be given balanced meals. However, schools should not replace the family, where eating behaviour is mainly taught, and messages may contradict what is taught at home. Children are not at school all day, so healthy eating may not be reinforced at home, and television adverts may provide unhealthy role models that undo the school's work. In conclusion, schools are an effective place to promote health, but changes are most likely to last if the programme also involves parents so healthy behaviour is reinforced at home.
	Psychology and organisations
4(a)	Self-actualisation is the need to reach one's full individual potential and to feel fulfilled. A self-actualised person feels life has been successful because they have achieved all they wanted to achieve, for example an employee who becomes the best at their creative work.
4(b)(i)	Cognitive needs are individual because each person has their own need for information, knowledge and meaning, for example one employee may want to learn new skills while another does not.
4(b)(ii)	Safety needs are situational because they depend on the situation provided by society and the workplace, such as a stable society with no war and a secure job contract, so the employee and their family are safe.

Question number	
4(c)	Maslow reduces motivation to a list of five (later eight) needs, but Alderfer's ERG theory reduces it even further, to just three needs. Existence needs combine Maslow's physiological and safety needs into one need. Relatedness needs combine social needs and the external part of esteem needs. Growth needs combine internal esteem and self-actualisation. So several separate needs become one, and needs Maslow added later, such as cognitive, aesthetic and transcendence needs, are ignored, making ERG more reductionist.
4(d)	One advantage is that interviews ask employees directly, so they can express their feelings and explain which needs, such as esteem or social needs, motivate them, rather than the researcher guessing from behaviour. Interviewees can give as much detail as they want, and follow-up questions can be asked in a semi-structured interview. Data can be qualitative but also quantitative if closed questions are used, such as rating how far each need is satisfied. However, employees may give socially desirable answers, for example claiming to be motivated by self-actualisation rather than pay, or respond to demand characteristics, especially if interviewed by a manager. Qualitative data is hard to analyse statistically to compare groups, and the interviewer must avoid leading questions, which would reduce the validity of the data. In conclusion, interviews are valuable for understanding which needs motivate people, but they are most valid when they are anonymous, conducted by an independent researcher and include closed questions so data can be compared.
	Section B
	Psychology and abnormality

Question number	
5(a)	I would conduct a longitudinal field experiment in an outpatient clinic. The IV is gender (male or female), so this is a quasi-experiment with an independent measures design. The DV is the effectiveness of imaginal desensitisation, measured by the number of times the impulsive behaviour (for example gambling) happens per week, recorded in a daily diary, and by a self-rated urge score from 0 (no urge) to 10 (overwhelming urge). The sample would be 40 adults (20 men and 20 women) aged 18 to 60 diagnosed with gambling disorder, recruited by volunteer sampling through clinic posters. Using one disorder controls the type of problem. Participants would be matched on age and how long they had the disorder. Every participant receives the same procedure: one session a week for five weeks with the same therapist. They learn progressive muscle relaxation, then imagine a trigger situation, such as walking past a betting shop, imagine wanting to gamble, then imagine leaving the situation relaxed without gambling. Each receives the same audio recording for daily home practice, a standardised procedure that improves reliability. Measurements are taken before therapy (baseline), at the end of therapy, and at 6 and 12 month follow-ups. Quantitative data is analysed using mean change in gambling episodes and urge ratings for each gender, shown on a line graph. A short interview at 12 months gives qualitative data about why therapy helped. Ethics: informed consent is obtained, participants can withdraw at any time without losing treatment, data is confidential, and anyone whose gambling worsens is referred for other help.
5(b)	Psychological evidence: imaginal desensitisation (Blaszczynski and Nower, 2002) involves teaching a brief progressive muscle relaxation procedure; clients then visualise being exposed to a situation that triggers their impulse, contemplate acting on the urge, but leave the situation in a state of continued relaxation

Question number

without acting. Sessions can be recorded on audiotape for home practice, which is why I gave each participant the same recording. It is based on classical conditioning: relaxation replaces the arousal linked to the trigger, so the urge reduces. I chose gambling because the technique was developed with problem gamblers.

Methodological evidence: gender cannot be manipulated, so this must be a quasi-experiment with independent measures, and matching on age and duration of disorder reduces participant variables. A longitudinal design is needed because impulse control disorders often relapse, so a 12 month follow-up shows whether effects last, although participants may drop out (attrition). Using the same therapist and recording standardises the procedure, increasing reliability and reducing extraneous variables. Diaries give quantitative data that can be compared statistically, but they are self-reports that may be affected by social desirability, so the interview adds qualitative detail and improves validity. Volunteer sampling is ethical, as patients choose to take part, but volunteers may be more motivated, so generalisability is reduced.

Psychology and consumer behaviour

6(a) I would use two questionnaires with the same shoppers at a large supermarket. Before entering, shoppers complete questionnaire 1 listing what they plan to buy; after paying, they complete questionnaire 2 and show their receipt, so planned and actual purchases can be compared.

Questionnaire 1 has closed questions: "List the items you plan to buy today", "How likely are you to buy each item? (1 = very unlikely, 7 = very likely)", "My family think I should buy this product (1 = strongly disagree, 7 = strongly agree)" and "I can easily afford this item (1 to 7)". Questionnaire 2 asks "Which planned items did you buy?" (yes/no for each) and an open question: "If you did not buy a

Question number

planned item, why not?"

The sample is 100 adult shoppers selected by opportunity sampling at different times on weekdays and weekends. The questionnaires are standardised, take about 3 minutes each and are given in the same way by the same researcher.

Analysis: quantitative data gives the percentage of planned items actually bought, and the intention ratings of bought and not bought items are compared using means and a bar chart. The open question gives qualitative data which is put into themes, such as "too expensive", "out of stock" or "changed my mind". A correlation between intention rating and buying is also calculated.

Ethics: shoppers give informed consent, are anonymous (receipt details are not kept), and can withdraw at any time.

6(b) Psychological evidence: the theory of planned behaviour (Ajzen, 1991) proposes that behaviour is predicted by behavioural intention, which is determined by three factors: attitude towards the behaviour, subjective norms (what important others think) and perceived behavioural control (how easy the person thinks the behaviour is). Perceived behavioural control can also affect behaviour directly. My questionnaire 1 measures all three, through the likelihood, family and affordability questions, so I can test whether strong intentions lead to purchase. The theory accepts that intentions do not always become behaviour, for example when actual control is low, such as an item being out of stock, which my open question can reveal.

Methodological evidence: a questionnaire is quick to give to a large sample, and closed rating scales give quantitative data that is easy to compare and analyse, increasing reliability. The open question adds qualitative data, giving reasons, which improves validity. Collecting intentions before shopping avoids memory errors, and checking receipts gives an objective measure of actual purchase, reducing social desirability bias. However, asking about plans could act as a demand characteristic,

Question number

making shoppers stick to their list. Opportunity sampling is quick, but may be biased, so I sample at different times to make it more representative.

Psychology and health

7(a) I would conduct a laboratory experiment with an independent measures design. The IV is the stress management technique: the experimental group receives biofeedback training and the control group receives no training and just sits quietly for the same time. The DV is stress level measured physiologically using galvanic skin response (GSR) and heart rate, and psychologically using a self-rated stress scale from 1 (very relaxed) to 10 (very stressed).

The sample is 40 university students who report high stress, recruited by volunteer sampling, and randomly allocated to the two groups so participant variables are spread evenly.

Procedure: all participants first have baseline stress measured while doing a stressful task, a timed mental arithmetic test. The biofeedback group then has eight 30 minute sessions over four weeks. Sensors are attached to the fingers (GSR) and forehead (EMG muscle tension) and a tone becomes lower as they relax; they are taught to use breathing and muscle relaxation to lower the tone and to practise at home. After four weeks, both groups repeat a similar arithmetic test and stress is measured again.

Controls: the same laboratory, temperature and equipment are used, and the instructions are standardised.

Analysis: the mean reduction in GSR, heart rate and stress ratings from baseline for each group is compared, shown on a bar chart.

Ethics: informed consent, right to withdraw, debriefing and the control group are offered biofeedback afterwards.

Question number	
7(b)	Psychological evidence: biofeedback is a technique in which people learn to control their own biological functions. A physiological measure such as GSR, which records skin conductance that changes with physiological arousal, is converted into a tone or meter reading. By relaxing, the person can reduce the tone, and the change acts as a reward (operant conditioning), so they learn to control their stress response. Budzynski et al. (1969) showed that feedback of muscle tension (EMG) helped people relax and reduce tension, which is why I used forehead muscle tension and home practice in my design. Methodological evidence: a laboratory experiment allows control of extraneous variables, such as noise and temperature, so cause and effect can be established between biofeedback and lower stress. Random allocation removes researcher bias. Independent measures avoids order effects, because a participant who had learned biofeedback could not "unlearn" it. A no-treatment control group gives a baseline for comparison. Physiological measures are objective and reliable because they are not affected by social desirability, while the self-rating shows whether participants feel less stressed, improving validity. However, a timed arithmetic test is artificial, so findings may not generalise to real-life stress at work or home.
	Psychology and organisations
8(a)	I would give a questionnaire to all employees in a company that is going through organisational change, such as merging two departments, where the managers have been trained to use adaptive leadership. A second department undergoing the same change with managers who use their usual style acts as a comparison. The questionnaire is given at the start of the change and again 6 months later. Questions use a 5 point rating scale (1 = strongly disagree, 5 = strongly agree), for example: "My manager explained the challenges we face during the change", "My manager kept stress at a level I could cope with", "I was given responsibility

Question number

to solve problems myself" and "My views were listened to, even when they disagreed with management". The last questions are about experiences: "I feel positive about the change" and "I feel stressed by the change". One open question asks: "Describe how your manager helped or did not help you during the change."

The sample is all 200 employees in the two departments, so the sample is self-selected from those who return it. Questionnaires are online, anonymous and take 10 minutes.

Analysis: mean scores for each question are compared between the adaptive and comparison departments and between the two times, shown on a bar chart. The open question answers are put into themes.

Ethics: informed consent, anonymity so managers cannot identify employees, and the right to withdraw.

8(b) Psychological evidence: adaptive leadership (Heifetz, 1997) is the practice of mobilising people to tackle tough challenges and thrive. It has six principles: get on the balcony (step back to see the whole picture), identify the adaptive challenge, regulate distress, maintain disciplined attention, give the work back to the people, and protect leadership voices from below. Change is an adaptive challenge with no simple technical solution, so it suits this style. My rating questions are based on these principles: explaining challenges, regulating stress, giving work back and listening to views from below, so the questionnaire tests whether each principle improves employees' experience of change.

Methodological evidence: a questionnaire is suitable because it can be given to many employees quickly, and rating scales give quantitative data that can be compared between departments and over time, so it is reliable. Anonymity reduces social desirability bias, which matters because employees may fear criticising their manager. The open question gives qualitative data, which increases validity by showing how the leader helped. Measuring before and after shows change over

Question number

time, and the comparison department acts as a control. However, the departments may differ in other ways, and those who return questionnaires may hold strong views, so the sample may not be fully representative.

Section C

Psychology and abnormality

9 The behavioural explanation states that impulse control disorders, such as kleptomania, pyromania and gambling disorder, are learned through positive reinforcement. The behaviour is followed by something pleasant, such as the excitement of a win or the thrill and relief of stealing, which increases the likelihood that it will be repeated. In gambling, wins come on a variable ratio schedule, which Skinner showed makes behaviour very resistant to extinction, explaining why gamblers keep playing despite losing.

There is evidence that the explanation is reductionist. It reduces complex behaviour to stimulus and response principles of operant or classical conditioning and ignores thinking, emotion and biology. The cognitive feeling-state theory (Miller, 2010) argues that impulse control disorders are caused by an intense positive feeling, such as feeling powerful, becoming linked with a specific behaviour, which a simple reinforcement account does not fully explain. Biological explanations point to dopamine and the brain's reward system, and drugs such as naltrexone, an opioid antagonist, can reduce urges, which behaviourism ignores. Also, many people are reinforced by gambling wins but never develop a disorder, so reinforcement alone cannot explain why only some people do. A more holistic, interactionist view combining all three would be more complete.

However, there is strong evidence that being reductionist makes the explanation useful. Because it reduces behaviour to clear, observable principles, it can be

Question number

studied scientifically and precisely, unlike untestable psychodynamic explanations, and studies can be replicated. Its principles apply to many disorders, so they generalise widely. Most importantly, it has led to effective treatments: covert sensitisation pairs the urge with an aversive image, and imaginal desensitisation (Blaszczynski and Nower, 2002) uses relaxation to break the link between triggers and the urge, both of which are based on conditioning.

In conclusion, I partly agree. The behavioural explanation is reductionist because it ignores cognitive and biological factors, but this simplicity has made it testable and has produced useful therapies. It is therefore useful as part of an explanation, but it is most useful when combined with cognitive and biological factors.

Psychology and consumer behaviour

10 North et al. (2003) investigated the effect of music in a restaurant in the UK. Over several evenings, they played classical music, pop music or no music, and found that diners spent significantly more on starters, coffee and overall total when classical music was played than with pop or no music. They suggested classical music creates an up-market atmosphere, so diners feel they should spend more.

There is support for the statement. The study took place in one restaurant in one town, so it may not generalise to all restaurants, such as cheap fast food chains, where an up-market atmosphere would not suit the customers. Music preferences differ between cultures and age groups: classical music may not be valued in all cultures, and there is no single type of music preferred within a culture. People are also influenced by other atmospheric variables, such as lighting, smell, crowding and decor, so in a different restaurant these may outweigh the effect of music. As a field experiment, other variables such as the type of customer on different evenings could not be fully controlled, which further limits generalisation.

Question number

However, there is strong evidence that the effect can be generalised. People generally like music, and North et al. found both classical and pop music increased spending compared with no music. Areni and Kim (1993) found classical music led customers in a wine shop to buy more expensive wine than top-40 music, so the classical music effect generalises to other up-market settings. Milliman (1986) found slow music made restaurant diners stay longer and spend more at the bar. North et al. (1999) found French or German music increased sales of French or German wine in a supermarket, showing music can be matched to the setting. This suggests the underlying principle generalises, even if the specific music must change, so each culture or type of restaurant can play the music its customers prefer.

In conclusion, I partly agree. One specific type of music in one restaurant cannot be generalised to all restaurants, but the principle that music congruent with the restaurant and customers increases spending is supported by several studies, so it can be generalised if the music is chosen to suit each restaurant.

Psychology and health

11 Unrealistic optimism is the belief that negative events are less likely to happen to oneself than to other people, and positive events are more likely. Weinstein (1980) assessed it using a questionnaire: college students rated how much more or less likely than other students in their class they were to experience 42 events, such as having a drinking problem or owning their own home. Most rated themselves as more likely to experience positive events and less likely to experience negative events than others, showing unrealistic optimism.

There is support for the statement. A questionnaire is ideal because unrealistic optimism is a belief, so asking people directly is the most obvious way to measure it. Questionnaires can be completed in private, at the person's own pace, without

Question number

pressure, and anonymously, so honest answers are more likely. Rating scales give quantitative data, such as Weinstein's comparison scale, allowing comparisons between events and groups, while open questions can give qualitative reasons. They can also be given to a large sample quickly, which helped Weinstein show the effect across many students and events.

However, there is strong evidence that a questionnaire is not the only way. People may not answer honestly, or may give socially desirable answers, and they may not answer as fully as they would in an interview, where follow-up questions can explore why someone thinks they are at less risk. Unrealistic optimism can also be assessed through observation of behaviour, such as whether people visit a health practitioner, attend screening or wear a seat belt, which shows whether optimism affects real health behaviour. A person's estimate of their risk could also be compared with their actual risk calculated from medical records, which is more objective. Weinstein's sample was also only students, so questionnaires might not suit younger children, where interviews may work better.

In conclusion, I disagree with the statement. A questionnaire is an efficient and effective way to assess unrealistic optimism, but interviews, observation of health behaviour and comparison with actual risk can also assess it, and using several methods together gives a more valid assessment.

Psychology and organisations

12 Situational theories state that the best leadership style depends on the situation. Hersey and Blanchard's situational leadership theory proposes four styles, telling, selling, participating and delegating, chosen according to how able and willing followers are. Fiedler's contingency theory suggests that leader effectiveness depends on the match between the leader's style and the situation, such as task structure and leader-member relations. Individual style theories focus on the

Question number

leader's own behaviour and qualities.

There is some support for the statement. Many modern theories focus on styles of leader behaviour. Muczyk and Reimann (1987) described four styles based on whether a leader is directive or participative in decision making and autocratic or democratic in carrying out decisions, such as the directive democrat. Scouller (2011) proposed three levels of leadership, public, private and personal, and emphasises the leader's personal development, such as self-mastery, which is individual. These theories help organisations select and train appropriate individuals. However, there is strong evidence that situational leadership is still relevant. There are many different styles and no single style is best in every case: Muczyk and Reimann themselves argue that the most effective style depends on the situation, for example a directive autocrat suits new, inexperienced employees, so even an individual style theory includes the situation. Leadership will always be needed and the situation will always be a factor, because organisations face constant change, for example new technology. Heifetz's adaptive leadership (1997), a modern theory, focuses on leaders adapting to changing situations, such as regulating distress during change. Rather than one or the other, individual and situational factors interact: a leader's style is only effective if it fits the followers and task.

In conclusion, I disagree with the statement. Individual styles are important, but modern organisations change quickly, so leaders must adapt their style to the situation. Situational leadership is therefore still relevant, and the best approach combines individual qualities with sensitivity to the situation.