Cambridge Assessment International Education

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PSYCHOLOGY **9990/31**

Paper 3 Specialist Options: Theory **May/June 2022**

1 hour 30 minutes

9385969674

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.
  - For each chosen option, answer **all** questions.
- 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 **4** pages. Any blank pages are indicated.

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Psychology and abnormality

Answer **all** questions.

1 **(a)** Identify **two** characteristics of bipolar disorder. [2]

(b) Describe rational emotive behaviour therapy (REBT) as a treatment for depression (Ellis, 1962). [4]

(c) Explain **one** similarity and **one** difference between REBT and **one** biological treatment for depression. [6]

2 **(a)** Describe explanations of phobias. [8]

(b) Evaluate explanations of phobias, including a discussion of nature versus nurture. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Lauterborn proposed 'the 4 Cs marketing mix model' of advertising.

Identify **two** of the 'Cs'. [2]

(b) Describe the procedure and **one** result from the study by Auty and Lewis (2004) on product placement in films. [4]

(c) Explain **one** strength and **one** weakness of the study by Auty and Lewis. [6]

4 **(a)** Describe what psychologists have discovered about sound and consumer behaviour. [8]

(b) Evaluate what psychologists have discovered about sound and consumer behaviour, including a discussion about experiments. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Explain why people with Type A personality are more likely to experience stress-related illness. [2]

(b) Describe stress inoculation training (SIT) as a technique for preventing stress (Meichenbaum, 1985). [4]

(c) Explain **one** strength and **one** weakness of stress inoculation training (SIT) as a technique for preventing stress. [6]

6 **(a)** Describe what psychologists have discovered about managing and controlling pain. [8]

(b) Evaluate what psychologists have discovered about managing and controlling pain, including a discussion about determinism versus free-will. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Explain what is meant by 'enrichment' as a job design technique. [2]

(b) Describe the study on workplace sabotage by Giacalone and Rosenfeld (1987). [4]

(c) Explain **two** weaknesses of the study by Giacalone and Rosenfeld. [6]

8 **(a)** Describe what psychologists have discovered about leadership style (contingency theory, situational leadership, styles of leader behaviour). [8]

(b) Evaluate what psychologists have discovered about leadership style (contingency theory, situational leadership, styles of leader behaviour), including a discussion about practical applications. [10]

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

Question number

Answers for paper 9990/31

Psychology and abnormality

1(a) In the manic (high mood) phase the person shows euphoria, increased energy and activity, racing thoughts and impulsive behaviour.

In the depressive (low mood) phase the person has a very low mood, low energy or oversleeping, and loss of interest in normal activities.

1(b) REBT (Ellis, 1962) is a cognitive therapy based on the ABC model. A is the activating event, something that happens in the person's life (e.g. failing a test). B is the belief the person holds about the event, which in depression is irrational and negative (e.g. "I must succeed at everything, so I am worthless"). C is the consequence, the emotional and behavioural response that follows from the belief (low mood, withdrawal). Ellis argued that constant negative, irrational beliefs about life events lead to depression.

The therapist disputes the irrational beliefs (asking for evidence, showing they are illogical) so the person can replace them with more rational, constructive beliefs. Between sessions the patient does homework, practising more helpful thoughts about real experiences, so the depressive symptoms improve.

1(c) The biological treatment I will compare with REBT is drug therapy with SSRIs such as fluoxetine.

Similarity: both are effective treatments for depression. Studies of both REBT and SSRIs compare patients who receive the treatment with a control group who do

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not, and with their own baseline scores at the start of treatment. In both cases patients show significant improvements in depressive symptoms, so valid conclusions can be drawn that the treatment itself is reducing the depression.

Difference: they come from different approaches and treat different causes. SSRIs come from the biological approach, which assumes depression is caused by low serotonin, so they block reuptake to raise serotonin and treat the symptom. If the patient stops taking the drug the depression is likely to return, and SSRIs have side effects such as weight and appetite changes, headaches and disturbed sleep.

REBT comes from the cognitive approach, which assumes depression is caused by faulty, irrational thinking. It teaches the patient skills to challenge irrational beliefs, which they can keep using after therapy ends, so relapse is less likely and there are no physical side effects.

2(a) The behavioural explanation says phobias are learned by classical conditioning (Watson, 1920). A neutral stimulus (NS) is paired with an unconditioned stimulus (UCS) that naturally causes fear. After enough pairings, or one very frightening pairing, the NS becomes a conditioned stimulus (CS) that produces fear on its own, the conditioned response. Watson and Rayner showed this with Little Albert, an 11-month-old baby who was not afraid of a white rat. Each time he touched the rat, Watson struck a steel bar behind his head, making him cry. Eventually the sight of the rat alone made him cry, and the fear generalised to similar furry objects.

The psychoanalytic explanation (Freud, 1909) says a phobia is the result of unconscious conflict. Anxiety from id impulses or a frightening experience is repressed into the unconscious to protect the ego, and the fear is displaced onto an object. In the case of Little Hans, a five-year-old boy's fear of horses was explained as displaced fear of his father during the Oedipus complex, linked to castration anxiety.

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The biomedical/genetic explanation is supported by Ost (1992). Blood-phobic patients had more first-degree relatives with the same phobia than injection-phobic patients (61% vs 29%), and were more likely to fear fainting in the phobic situation (77% vs 48%), suggesting a strong genetic link and a strong physiological response.

The cognitive explanation says we hold irrational thoughts about an object because we believe a bad experience will be repeated. DiNardo et al. (1988) studied dog-phobic and non-phobic female students using self-reports and a behavioural test with a real dog while heart rate was monitored. 56% of the dog-phobic group recalled a frightening experience with a dog, but so did 66% of the non-phobic group, so it is how we think about an event, expecting harm, rather than the event itself that leads to a phobia.

2(b) The explanations take different sides of the nature versus nurture debate. The biomedical explanation is on the nature side: Ost found blood phobia runs in families, suggesting an inherited tendency to faint. The behavioural explanation is nurture, as the fear is learned through experience, as with Little Albert. The psychoanalytic explanation is both, since everyone passes through the psychosexual stages (nature) but whether conflict is resolved depends on experience (nurture). The cognitive explanation is mainly nurture, as the person needs a bad experience and then develops negative thoughts about it. As most people who are bitten do not develop phobias (DiNardo), an interaction of a vulnerability (nature) with experience (nurture) seems most likely.

The behavioural and biomedical explanations are reductionist, reducing a phobia to stimulus-response links or genes, whereas the cognitive explanation adds the role of thinking. They are also deterministic, suggesting the person has no control over whether a phobia develops, although the cognitive view allows thoughts to be changed.

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	The evidence is limited. Little Albert and Little Hans are single case studies, so they cannot be generalised, and Freud's interpretation was based on reports from Hans's father, so it is subjective and unfalsifiable. Little Albert was also unethical, as he was caused distress and never deconditioned. Ost and DiNardo used quantitative data and controlled comparisons, which is more scientific, but DiNardo used only young female students and self-reported memories that may be inaccurate, and family similarity in Ost could be due to shared learning rather than genes. The explanations have useful applications: the behavioural view led to systematic desensitisation and flooding, and the cognitive view to CBT, both of which are effective, supporting their validity. Overall, no single explanation is enough, and a combination of nature and nurture explains phobias best.
	Psychology and consumer behaviour
3(a)	Consumer wants and needs. Communication.
3(b)	Auty and Lewis showed 105 children aged 6 to 7 and 11 to 12 a clip from the film Home Alone. The experimental group saw a clip in which the family ate pizza and Pepsi was mentioned and shown, while the control group saw a clip in which the family ate macaroni cheese and drank milk. Afterwards each child was interviewed by an ex-student of the school, offered a choice of Pepsi or Coca-Cola, and then asked to describe the clip, with prompts if they did not mention Pepsi. Result: children in the experimental group were more likely to choose Pepsi: 62% chose Pepsi compared with 42% of the control group.
3(c)	Strength: the study has good validity because children were randomly assigned to

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the experimental or control condition, and everyone experienced the same standardised procedure (same film, same interview, same drinks choice). This reduces the chance that differences in drink choice were caused by participant variables, so it is more likely the product placement caused more children to choose Pepsi. Quantitative data were also collected so the two groups could be compared statistically.

Weakness: the children chose a drink immediately after watching the clip. This shows only the short-term effect of product placement and not whether it changes what children buy or ask for days or weeks later, so it lacks validity as a measure of real consumer behaviour. Also, children may have guessed the aim after seeing Pepsi in the clip and then being offered it, so their choice may reflect demand characteristics rather than a genuine preference.

4(a) North et al. (2003) carried out a field experiment in a British restaurant. Over 18 evenings, classical music, pop music or no music was played, with 393 diners taking part. The mean spend per table and the time spent in the restaurant were recorded. When classical music was played, diners spent more in total and were more likely to buy starters and coffee than with pop or no music. This may be because classical music primes upmarket associations, so people are prepared to spend more.

Guéguen et al. (2007) carried out a field experiment at an open-air market stall in France selling toys and knick-knacks, over two days. 154 men and 86 women were randomly selected and assigned to a popular music or no music condition. With music customers stayed longer at the stall (5.27 vs 3.72 minutes), more bought an item (18% vs 10%, near significant) and they spent slightly more (6.3 vs 5.67 euros, not significant).

Woods et al. (2010) carried out a lab experiment with 58 Manchester University student volunteers. Blindfolded and wearing headphones, they ate sweet and salty

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	foods, some crunchy and some soft, while hearing no sound, quiet or loud white noise, and rated sweetness, saltiness, crunchiness and liking. Sweetness and saltiness were rated lower with loud noise than quiet noise, but crunchiness was rated as more intense. In a second study with 34 students, ratings of liking for the background noise correlated with liking for the food. This suggests that loud sound, such as on aeroplanes, affects how food tastes.
4(b)	The research uses experiments of different types. North et al. and Guéguen et al. were field experiments in a real restaurant and market, so they have high ecological validity and few demand characteristics, as customers did not know they were in a study. However, there is less control: in North et al. different diners came on different evenings, so the type of customer or day of the week may explain the spending, and Guéguen's spending difference was not significant. Studying people without their consent also raises ethical issues, although the music was harmless. Woods et al. used a lab experiment, which gave strict control of the sound level and food, so cause and effect can be established and consent could be gained. However, eating blindfolded with headphones is artificial, lowering ecological validity, and participants may have guessed the aim and shown demand characteristics. Generalisability is limited. North et al. used one British restaurant and Guéguen one market in France, so the findings may not apply to other cultures or types of shop. Woods used only students, who may have different tastes from older consumers. The studies collected quantitative data, such as spend per table, time at the stall and ratings, which are objective and allow comparison, but they do not explain why music changes behaviour. The research is useful. Restaurants can play classical music to raise spending, market traders can play music to keep customers at the stall, and airlines can

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design food with stronger flavours to compensate for loud cabin noise. Overall, experiments show sound does influence consumers, but field and lab studies need to be combined to be confident the effects are both real and caused by the sound.

Psychology and health

5(a) Friedman and Rosenman found that Type A people are competitive, impatient and controlling. This makes them work long hours and feel time pressure, so their stress response is aroused more often, which damages the heart and makes them more prone to coronary heart disease than relaxed Type B people.

5(b) SIT (Meichenbaum, 1985) is a form of CBT that prepares people for stress before it happens, like a vaccine. It has three phases.

1 Conceptualisation: the client discusses the nature of their stress with the therapist and is taught about stressors and how they affect the body and their thinking.

2 Skills acquisition and rehearsal: the client learns coping skills such as relaxation, positive self-statements and problem solving, and practises them in the session.

3 Application and follow-through: the client uses the skills in real situations between sessions, then reviews with the therapist how it went and adjusts the techniques. As a result they experience less stress and can apply the skills to new situations.

5(c) Strength: SIT allows individual differences to be addressed. Every person faces different stressors and different coping techniques suit different people, so the therapy is tailored to each client's life and the effectiveness of each strategy is reviewed and adjusted. This means it can give a long-lasting toolkit of coping

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strategies that prevents stress in the future, so if one technique fails the client can try another, and it involves no medication with side effects or risk of addiction.

Weakness: SIT may not be appropriate for everyone. It requires the client to talk about private experiences and feelings, and to commit time and effort over many sessions and homework tasks. Some people will be unwilling or unable to do this. It is also reductionist as it ignores biological causes of stress: some people may have a more reactive nervous system, so they find the coping strategies do not work or are much harder to use.

6(a) Medical techniques use biochemical treatments such as analgesics (painkillers). These act on the central nervous system or at the site of injury to reduce pain. For example, aspirin acts against pain, inflammation and fever, paracetamol reduces mild pain, and opioids such as morphine are used for severe pain, sometimes with a patient-controlled analgesia pump. Surgery can also be used to remove the cause of pain.

Psychological techniques are cognitive strategies. Attention diversion means focusing on something other than the pain, such as listening to music, reading or playing a computer game. Non-pain imagery means imagining a scene far removed from the painful situation, such as a beach or park, which acts as a distraction. Cognitive redefinition means changing how the pain is thought about, replacing anxious thoughts with positive ones, or redefining the pain as a different sensation such as pressure, warmth or cold.

Alternative techniques include acupuncture, from Chinese medicine, where fine needles are inserted into the skin at points on a body map. Electrical impulses or heat may be applied to the needles. It is believed to increase the flow of Chi and reduce muscle tension. Stimulation therapy (TENS) passes a mild electric current between electrodes on the skin. The impulses flood the nervous system, reducing

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its ability to transmit pain signals to the spinal cord and brain, which fits gate control theory (Melzack and Wall, 1965), and also reduces muscle tension.

6(b) The techniques can be discussed in terms of determinism and free will. The experience of pain often feels out of the patient's control, determined by biological causes such as injury and nerve signals, and medical techniques fit this view, as the drug determines the pain relief. Whether a patient receives medication or an alternative therapy is also partly determined by whether the practitioner is willing and able to offer it. However, the patient uses free will in choosing to take medication or try acupuncture, and a patient-controlled device lets them decide when to self-administer. Cognitive strategies show the most free will, as the patient chooses to distract themselves or redefine the pain, which gate control theory suggests can close the gate. A balanced view is that pain is biologically caused but its management involves choice.

Effectiveness and appropriateness differ. Analgesics work quickly and are supported by strong scientific evidence, but they have side effects (aspirin can cause stomach bleeding) and opioids are addictive. Psychological techniques have no side effects and are cheap, but they work best for mild or short-term pain and need effort from the patient, so they may not suit young children or severe pain. TENS is non-invasive and can be used at home, and acupuncture has few side effects, but the scientific basis for Chi is weak and some benefits may be placebo effects.

The approaches can be compared: medical techniques are reductionist, treating only the physical cause, while psychological techniques recognise that thoughts and emotions affect pain, which is more holistic.

These techniques have practical applications in hospitals and pain clinics. Overall, combining medical, psychological and alternative techniques is likely to be most effective.

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Psychology and organisations

7(a) Enrichment is redesigning a job to make it more challenging and interesting for the employee, by adding tasks that need more skills and a higher level of responsibility, such as planning and checking their own work.

7(b) Giacalone and Rosenfeld studied 38 unionised workers in an electrical factory who volunteered. A list of reasons for sabotage was used to split them, at the median, into high-reason acceptors and low-reason acceptors. They were then given a list of 29 sabotage methods (slowdowns, destructiveness, dishonesty and causing chaos) and rated how justifiable each was on a scale from 1 to 7 (7 = totally justifiable).

High-reason acceptors justified production slowdowns and destruction of machinery or premises more than low-reason acceptors. Both groups accepted a variety of reasons and justified all forms of sabotage except dishonesty.

7(c) Weakness 1: the findings have low generalisability. The sample was only 38 unionised volunteers from one electrical factory. Workers in other industries, non-unionised workers or workers in other countries may have different attitudes to sabotage, and volunteers may be more willing to discuss it than other workers, so the results cannot be applied to all employees.

Weakness 2: the data came from self-reports, so they may suffer from social desirability bias. Workers may have worried about who would see their answers, such as their managers, and so rated sabotage as less justifiable than they really thought. Also, the median split means workers close to the median were classed as high- or low-reason acceptors when they may not really have been either, which lowers the validity of the comparison between the two groups.

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8(a)	Fiedler's contingency theory (1967) says the effectiveness of a leader depends on the situation: on the nature of the task, the leader's personality and the make-up of the group. Effective leadership depends on the leader's style and on their control over the situation, which comes from good leader-member relations, a task with clear goals and procedures, and the power to give rewards and punishments. Lacking these in the right combination leads to leadership failure. Fiedler created the least preferred co-worker (LPC) scale, where a leader rates the co-worker they like least. A low LPC score indicates a task-focused leader and a high score a relationship-focused leader. Hersey and Blanchard's situational leadership (1988) says no single style is best: a good leader adapts their style to the task and to the maturity (ability and willingness) of the followers, from M1 (low) to M4 (high). There are four styles: telling (directive), selling (directive but with two-way communication), participating (less direction, shared decisions) and delegating (responsibility given to the group, leader monitors). Muczyk and Reimann (1987) described styles of leader behaviour on two dimensions: whether the leader involves workers in decisions (democratic or autocratic) and how closely they direct the work (directive or permissive). This gives four types: directive autocrat, directive democrat, permissive autocrat and permissive democrat. An autocratic, directive style suits new employees who are learning the job or when fast decisions are needed, whereas more permissive and democratic styles suit experienced, motivated workers.
8(b)	The theories vary in practical application. Fiedler's theory is less practical because it does not say which style suits which type of organisation; it depends on the group being led, which is vague for managers. However, the LPC scale gives a quick way to identify a leader's style so they can be placed in a situation that suits them. Hersey and Blanchard say leaders should adapt to followers' maturity, but

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give little guidance on how to adapt, though organisations can train managers in telling, selling, participating and delegating. Muczyk and Reimann are the most practical, as they identify which situations and employees suit each leader type, so an organisation can decide whether workers need to participate in decisions: if so a democratic leader is suitable, if not an autocratic leader.

The theories differ on the individual versus situational debate. Fiedler sees leadership style as a fixed individual trait, so the situation must be changed to suit the leader, whereas Hersey and Blanchard see the leader as flexible, adapting to the situation. Situational leadership is therefore more holistic, considering both leader and followers, while Fiedler's task versus relationship split is reductionist, as a leader may be both.

The theories may be culturally biased, as they were developed in the USA. In collectivist or high power-distance cultures, workers may expect an autocratic leader, so democratic styles may not be as effective there.

The evidence is also limited: the LPC scale is a self-report that may suffer from social desirability, and its reliability has been questioned. Overall, the theories are useful for training, but organisations need to consider culture and follower needs when applying them.

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PSYCHOLOGY **9990/32**

Paper 3 Specialist Options: Theory **May/June 2022**

1 hour 30 minutes

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Psychology and abnormality

Answer **all** questions.

1 **(a)** Explain what is meant by 'blood phobia'. [2]

(b) Describe features of the blood injection phobia inventory (BIPI). [4]

(c) Explain **one** similarity and **one** difference between the BIPI and the Generalised Anxiety Disorder assessment (GAD-7). [6]

2 **(a)** Describe the characteristics of impulse control disorders and non-substance addictive disorder (definitions, types, measures). [8]

(b) Evaluate the characteristics of impulse control disorders and non-substance addictive disorder (definitions, types, measures), including a discussion about self-reports. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Identify **two** of the virtual store layouts in the study by Vrechopoulos (2004) on the interior layout of grocery stores. [2]

(b) Describe **two** results from the study by Vrechopoulos. [4]

(c) Explain **one** strength and **one** weakness of the study by Vrechopoulos. [6]

4 **(a)** Describe what psychologists have discovered about choice heuristics in consumer decision-making (availability/representativeness, anchoring and purchase quantity decisions, pre-cognitive decisions). [8]

(b) Evaluate what psychologists have discovered about choice heuristics in consumer decision-making (availability/representativeness, anchoring and purchase quantity decisions, pre-cognitive decisions), including a discussion about generalisability. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Outline **one** reason why patients do **not** adhere to medical advice. [2]

(b) Describe the study on improving adherence using the Funhaler by Watt et al. (2003). [4]

(c) Explain **one** strength and **one** weakness of the study by Watt et al. [6]

6 **(a)** Describe what psychologists have discovered about individual factors in changing health beliefs (unrealistic optimism, transtheoretical model, health change in adolescents). [8]

(b) Evaluate what psychologists have discovered about individual factors in changing health beliefs (unrealistic optimism, transtheoretical model, health change in adolescents), including a discussion of practical applications. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Outline **one** universalist theory of leadership. [2]

(b) Describe the contingency theory of leadership proposed by Fiedler (1967). [4]

(c) Explain **one** strength and **one** weakness of the contingency theory of leadership. [6]

8 **(a)** Describe what psychologists have discovered about temporal conditions of work environments (shift-work, effects of shift-work on health, shift-work and accidents). [8]

(b) Evaluate what psychologists have discovered about temporal conditions of work environments (shift-work, effects of shift-work on health, shift-work and accidents), including a discussion about ecological validity. [10]

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

Question number

Answers for paper 9990/32

Psychology and abnormality

1(a) Blood phobia is an irrational and persistent fear of blood, blood-related products or certain medical procedures. People with it avoid these situations and may faint or feel sick at the sight of blood.

1(b) The BIPI is a self-report questionnaire that lists 18 situations related to blood and injections, for example "when I see blood on my arm or finger after pricking myself with a needle" or "when I think of the colour red".

For each situation the person rates a set of possible reactions, which cover cognitive, physiological and behavioural responses, such as "I faint" or "my mind goes blank". Each response is rated for how often it happens on a 4-point scale from 0 (never) to 3 (always), and the ratings are added to give a score for the severity of the phobia.

1(c) Similarity: both are self-report questionnaires that collect quantitative data, asking the patient to rate their responses to statements on a 4-point scale from 0 to 3. This means scores can be compared, for example before and after treatment, to see whether symptoms have improved. However, both are also open to social desirability bias, as a patient may want to appear to have improved and so rate their symptoms lower than they really are.

Difference: the GAD-7 is short, with only 7 items, and asks how many days over the past two weeks the patient has felt anxious, so it measures generalised anxiety

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over a set time. The BIPI is much longer and specific to blood and injection phobia, and does not specify a time period. This means the GAD-7 is quick to complete, so the patient is less likely to get bored and answer carelessly, and it is often used by GPs as a screening test, whereas the BIPI gives the practitioner much more detail about the phobia and can support a formal diagnosis.

2(a) An impulse control disorder or non-substance addiction is when a person feels a compulsion to carry out a behaviour, rather than take a substance such as alcohol, and finds it difficult to resist. Types include kleptomania, pyromania and gambling disorder.

Griffiths (2005) argued that all addictions share six components: salience (the activity dominates thinking), mood modification, tolerance (more is needed for the same effect), withdrawal, conflict with others or within the self, and relapse. He saw addiction as a biopsychosocial process.

Kleptomania is a recurrent urge to steal items that are not needed for personal use or profit. The person feels tension and anxiety before stealing, and the act gives pleasure, gratification or relief.

Pyromania is deliberately and intentionally setting fires on more than one occasion. The person feels tension or arousal before the act and relief afterwards, and is fascinated by fire. Burton et al. (2012) distinguished fire setting, a behaviour that is often normal and not criminal; arson, a criminal act of wilfully and maliciously setting fire to property; and pyromania, a psychiatric diagnosis of pathological fire setting that need not involve arson.

Gambling disorder is persistent, problematic gambling that the person cannot control, similar to substance addiction: they crave gambling and may go seriously into debt.

Kleptomania can be measured with the Kleptomania Symptom Assessment Scale (K-SAS), an 11-item self-report measuring severity over the past week, e.g. "how

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much were you able to control your thoughts of stealing?" rated from 0 (very much) to 4 (no control). The higher the total score, the more severe the symptoms.

2(b) Measures such as the K-SAS are self-reports. A strength is that they give quantitative data, so a patient's score can be compared with population norms to decide whether they have kleptomania, and scores can be compared before and after treatment. Rating a number may also be easier than describing embarrassing behaviour in an interview. However, there is no qualitative data, so the clinician does not learn why the person had urges to steal that week, and it is easy to lie, as no explanation is needed. As stealing and arson are crimes, social desirability may lead people to under-report symptoms, lowering validity.

The K-SAS has good psychometric properties: it has fixed questions and scoring, so it is standardised and reliable, and it is short and quick to complete. However, it only covers the past week, so it may miss how the disorder varies over time.

The validity of the definitions can be questioned. Griffiths' six components give a clear, universal checklist for diagnosing gambling and other behavioural addictions, but applying it may over-diagnose normal enthusiasm, such as for video games, as addiction. Burton et al.'s distinctions are useful because they stop clinicians confusing a criminal act (arson) with a psychiatric disorder (pyromania).

The characteristics have applications to everyday life: clear definitions and measures help clinicians and courts identify people who need treatment rather than punishment. In terms of nature versus nurture, Griffiths' biopsychosocial view takes both into account, whereas diagnosing from symptoms alone is reductionist as it ignores the person's circumstances. Overall the characteristics and self-report measures are useful, but should be combined with interviews.

Psychology and consumer behaviour

Question number	
3(a)	Free-form layout. Grid layout.
3(b)	Result 1: the free-form layout was the most useful for finding the products on the shopping list, so it suits planned purchases. It was also perceived as the most entertaining layout, with no difference in entertainment between the grid and racetrack layouts. Result 2: the grid layout was the easiest to use and the racetrack layout was the least easy to use. The racetrack and free-form layouts engaged consumers for longer than the grid layout.
3(c)	Strength: the study has practical applications for companies selling products online. If most customers are making planned purchases, as in grocery shopping, the free-form layout would be most useful, while racetrack or free-form layouts keep the customer in the store for longer, which could encourage impulse buying. Vrechopoulos concluded that a mix of grid and free-form is best, so online retailers can design their websites to increase ease of use and sales. Weakness: the study may lack ecological validity. The participants shopped in virtual stores, which were unusual in 2004, they knew they were in a study and they were not spending their own money. They may therefore have behaved differently from how they would when doing their own everyday online shopping, for example taking more time to explore, so the findings may not reflect real consumer behaviour.
4(a)	A heuristic is a mental shortcut that helps us make quick decisions. The availability heuristic is judging something by how easily examples come to mind. For example, if your car of one brand kept breaking down you may avoid that

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brand, even if statistics show it is reliable, because your own experience is more available. The representativeness heuristic is judging by comparison with the best known example: a new smartphone is judged by how similar it is to the market leader, which is why some companies use packaging similar to the leader.

Wansink et al. (1998) studied anchoring and purchase quantity. In a field experiment in 86 shops for a week, 13 products were priced as single units ("50c each") or multiple-unit prices ("6 for $3"), and multiple-unit pricing increased sales by 32%. In a field experiment in three Iowa supermarkets, Campbell's soup was given a small discount with a purchase limit of none, 4 or 12 cans. Of 914 shoppers, those with no limit bought 3.3 cans on average, a limit of 4 gave 3.7 and a limit of 12 gave 7, as the number acted as an anchor. In lab experiments with 120 students, selling anchors such as "grab 6 for studying" and expansion anchors such as "buy for all your friends" increased purchase intentions.

Knutson et al. (2007) studied pre-cognitive decisions. 26 participants were given $20 and had fMRI scans while seeing a product (4 s), then the product with its price (4 s), then choosing whether to buy (4 s). Liking the product correlated with activity in the nucleus accumbens. Activity in the medial prefrontal cortex increased when the price seemed good value, and the insula was activated by excessive prices and deactivated when people bought. Brain activity predicted purchases before people consciously decided.

4(b)

Generalisability is mixed. Wansink et al.'s field experiments used a large number of genuine shoppers in many stores, such as 914 shoppers in the soup study, so these findings generalise well to everyday shoppers. However, the lab experiments used undergraduates, who may have less disposable income than older people and buy different, more non-essential products. Knutson et al. used only 26 participants aged 18 to 26, and the brain continues to change with age, so older consumers may show different activity. On the other hand, brain regions involved in reward

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are likely to be similar across adults, so the findings may generalise better than the sample suggests. Both studies used American participants from a wealthy, consumer-driven culture, so the findings may not apply in poorer countries with less choice of products.

Ecological validity varies. Wansink's field experiments in real supermarkets were high in ecological validity, but Knutson's participants made choices lying in a scanner with money given to them, which is very different from real shopping. Wansink's lab studies measured purchase intentions by self-report, which may not match actual buying and may be affected by social desirability.

The research is useful. Retailers can use multiple-unit pricing and purchase limits as anchors to increase the quantity bought, and knowing that decisions are partly pre-cognitive helps with designing displays. However, this raises ethical questions about manipulating consumers to buy more than they need.

The research focuses on situational factors such as pricing, but individual factors, such as how impulsive a shopper is, are also important. Overall, heuristics clearly influence consumers, but more research with different cultures and ages is needed before the findings can be generalised.

Psychology and health

5(a) Rational non-adherence: the patient decides not to adhere after weighing up the treatment, because they pay more attention to its costs and risks, such as side effects, than to its benefits, which may not be visible to them.

5(b) Watt et al. studied 32 Australian children aged 1.5 to 6 years with asthma. Each child used their usual Breath-a-Tech spacer device for two weeks and then the Funhaler for two weeks, and parents completed questionnaires after each. The Funhaler rewards correct use: breathing correctly makes a disc spin and a whistle

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	sound, giving the child an incentive to take their medication.
	With the Funhaler, 38% more parents had medicated their child the previous day, and 60% more children adhered to the recommended four or more breathing cycles, compared with the standard device.
5(c)	Strength: the study collected quantitative data, such as the percentage of parents who medicated their child the previous day, using the same questionnaire for both devices. Because the same children used both devices (repeated measures), adherence with the Funhaler could be compared directly with adherence with the standard spacer without participant variables affecting the results, showing that the Funhaler improved adherence.
	Weakness: adherence was measured by parents' self-reports, which may suffer from social desirability bias. Parents may have known the researchers hoped the Funhaler would work, or felt they should appear to be good parents, and so reported that their child took the medication more often than they really did. There was no objective measure such as counting doses, so the validity of the adherence data is reduced.
6(a)	Weinstein (1980) studied unrealistic optimism. In study 1, 258 college students rated their chances of experiencing 42 life events compared with other students, on a 15-point scale. They rated their own chances of positive events (e.g. a good job) as above average and of negative events (e.g. illness) as below average, which cannot be true for everyone. In study 2, students listed the factors they thought would influence their own chances of 8 events. When another group read these lists, they showed less unrealistic optimism, so Weinstein concluded that people focus on their own advantages and do not realise others have as many factors in their favour.
	The transtheoretical model (Prochaska et al., 1997) says health behaviour change

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involves moving through six stages: pre-contemplation, contemplation, preparation, action, maintenance and termination. Ten processes of change, such as self-liberation and helping relationships, help people move from one stage to the next. Stage matched interventions, where help is matched to the person's current stage, and proactive recruitment have greatly improved recruitment, retention and progress in changing health behaviours such as smoking.

Lau (1990) carried out a longitudinal study of 947 Carnegie Mellon University students and their parents using self-report questionnaires on health beliefs and behaviours such as drinking, diet, exercise and wearing seat belts. There was substantial change in health behaviour during the first three years of college. Peers had an increasing influence, but parents remained more important sources of influence on beliefs and behaviours, and direct modelling by parents and peers had the greatest effect.

6(b) The research has many practical applications. If we understand the beliefs that affect health behaviour, they can be challenged through the media, doctors, parents, schools and universities. Weinstein's findings suggest leaflet campaigns for college students showing that they are as much at risk as others. Prochaska's model lets practitioners tailor treatment to the stage the person is at, for example raising awareness in pre-contemplation rather than giving an action plan. Lau's findings suggest targeting parents, making them aware that their behaviour shapes their children's health beliefs, and running lessons on peer influence in schools.

The research covers both individual and situational factors. Weinstein and Prochaska focus on individual thinking and readiness, while Lau shows situational influences from parents and peers matter too, so a full explanation needs both.

Generalisability is limited, as Weinstein and Lau both used American college students, who are young and educated, so the findings may not apply to older adults or other cultures. Lau's large sample of 947 does improve generalisability.

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	Methodologically, Lau's longitudinal design shows change over time within the same people, a strength, but participants may drop out. All three rely on self-reports, which are quick and give quantitative data but may suffer from social desirability, for example under-reporting drinking. The transtheoretical model has been criticised because people do not always move through the stages in order. Overall, the research is very useful for health promotion, but its findings should be tested with more diverse samples.
	Psychology and organisations
7(a)	The Great Person theory is a universalist theory which says that leaders are born, not made: effective leaders share inborn traits, such as confidence and intelligence, that make them leaders in any situation.
7(b)	Fiedler's contingency theory says the effectiveness of a leader depends on the situation, as there are many factors such as the nature of the task, the leader's personality and the make-up of the group being led. Effective leadership depends not only on style but on the leader's control over the situation, which needs good leader-member relations, a task with clear goals and procedures, and the power to give rewards and punishments. Lacking these in the right combination leads to leadership failure. Fiedler created the least preferred co-worker (LPC) scale, where a leader rates the traits of the co-worker they like least. A low LPC score shows a task-oriented leader and a high score a relationship-oriented leader.
7(c)	Strength: the theory has practical applications. Fiedler shows that different leadership styles are needed in different situations, and the LPC scale makes it possible to find out whether a person is a task-oriented or relationship-oriented

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leader. As it produces quantitative scores, applicants can be compared, so an organisation can choose the most appropriate leader for a role, for example a task-oriented leader for a project with a tight deadline.

Weakness: the theory is reductionist. It assumes every leader is either task-oriented or relationship-oriented, but many leaders have a combination of both, or can switch style depending on the situation. Classifying them by one LPC score may be inaccurate, and the LPC is a self-report, so a respondent may give the answers they think the organisation wants rather than honestly rating their least preferred co-worker.

8(a) Shift-work is when a worker does not keep the same work pattern each week, e.g. 6am to 2pm one week and 2pm to 10pm the next. Rapid rotation means frequent shift changes. The metropolitan rota is 2 day shifts, 2 twilight shifts, 2 night shifts, then 2 days off. The continental rota is 2 day shifts, 2 twilight shifts, 3 night shifts, 2 days off, 2 day shifts, 3 twilight shifts, 2 night shifts, then 3 days off. Slow rotation is when shifts change infrequently, e.g. twilight shifts for 3 weeks, then 3 days off, then nights for 3 weeks. Pheasant (1991) argued that because it takes time to adjust physiologically to a new pattern, changes should be rare, so a permanent night shift is better than a continental rota as it disrupts circadian rhythms less.

Knutsson (2003) reviewed studies on shift-work and health. Little or no link was found with mortality (studies in the UK and Denmark). Gastrointestinal disease, such as peptic ulcers, was significantly more common in shift-workers. Studies in many countries found a significant link with cardiovascular disease. There was an increased risk of breast cancer in women working nights, such as nurses and flight attendants, though exposure to carcinogens was not controlled. Evidence for diabetes was lacking, though BMI was higher, and shift-work was linked to premature birth, low birth weight and miscarriage.

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Gold et al. (1992) gave a survey on shift-work, sleep and accidents to 878 nurses in Massachusetts, and 687 returned it. Compared with nurses working only day or evening shifts, rotating nurses had more sleep/wake disruption and nodded off more at work. Rotators had twice the odds of nodding off while driving to or from work and twice the odds of an accident or error related to sleepiness.

8(b)

Ecological validity is generally high in this area. Gold et al. studied real nurses working real shifts in hospitals, and Knutsson reviewed studies of workers who actually experienced shift-work, so the findings reflect the effects of real working patterns. However, Gold used a self-report survey, which is not part of everyday life and may suffer from social desirability or inaccurate recall, which could lower ecological validity. On the other hand, employers often run staff surveys like Gold's, so it is not completely artificial.

Much of the research is correlational. Knutsson found links between shift-work and heart disease, but this does not show shift-work causes it, as other variables, such as smoking, diet or exposure to carcinogens, were not controlled. This also links to reductionism, as blaming circadian disruption alone ignores lifestyle and social factors.

Generalisability is limited in Gold et al., as all the nurses were female and from one US state, so results may not apply to male workers or other jobs. Knutsson's review covers many countries and occupations, so it is more generalisable.

There are individual differences: some people, such as "owls", adapt to night work better than others, so the effects are not determined by the shift pattern alone.

The research is useful. Pheasant's ideas and Gold's findings suggest that hospitals and factories should use slow, forward rotation based on circadian principles, which could improve the health and safety of workers and the public. Overall, the research is valid for real workplaces but needs more controlled studies to establish cause and effect.

Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/33**

Paper 3 Specialist Options: Theory **May/June 2022**

1 hour 30 minutes

0802759275

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.
  - For each chosen option, answer **all** questions.
- 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 **4** pages. Any blank pages are indicated.

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Psychology and abnormality

Answer **all** questions.

1 **(a)** Identify **two** characteristics of bipolar disorder. [2]

(b) Describe rational emotive behaviour therapy (REBT) as a treatment for depression (Ellis, 1962). [4]

(c) Explain **one** similarity and **one** difference between REBT and **one** biological treatment for depression. [6]

2 **(a)** Describe explanations of phobias. [8]

(b) Evaluate explanations of phobias, including a discussion of nature versus nurture. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Lauterborn proposed 'the 4 Cs marketing mix model' of advertising.

Identify **two** of the 'Cs'. [2]

(b) Describe the procedure and **one** result from the study by Auty and Lewis (2004) on product placement in films. [4]

(c) Explain **one** strength and **one** weakness of the study by Auty and Lewis. [6]

4 **(a)** Describe what psychologists have discovered about sound and consumer behaviour. [8]

(b) Evaluate what psychologists have discovered about sound and consumer behaviour, including a discussion about experiments. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Explain why people with Type A personality are more likely to experience stress-related illness. [2]

(b) Describe stress inoculation training (SIT) as a technique for preventing stress (Meichenbaum, 1985). [4]

(c) Explain **one** strength and **one** weakness of stress inoculation training (SIT) as a technique for preventing stress. [6]

6 **(a)** Describe what psychologists have discovered about managing and controlling pain. [8]

(b) Evaluate what psychologists have discovered about managing and controlling pain, including a discussion about determinism versus free-will. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Explain what is meant by 'enrichment' as a job design technique. [2]

(b) Describe the study on workplace sabotage by Giacalone and Rosenfeld (1987). [4]

(c) Explain **two** weaknesses of the study by Giacalone and Rosenfeld. [6]

8 **(a)** Describe what psychologists have discovered about leadership style (contingency theory, situational leadership, styles of leader behaviour). [8]

(b) Evaluate what psychologists have discovered about leadership style (contingency theory, situational leadership, styles of leader behaviour), including a discussion about practical applications. [10]

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

Question number

Answers for paper 9990/33

Psychology and abnormality

1(a) In the manic (high mood) phase the person shows euphoria, increased energy and activity, racing thoughts and impulsive behaviour.

In the depressive (low mood) phase the person has a very low mood, low energy or oversleeping, and loss of interest in normal activities.

1(b) REBT (Ellis, 1962) is a cognitive therapy based on the ABC model. A is the activating event, something that happens in the person's life (e.g. failing a test). B is the belief the person holds about the event, which in depression is irrational and negative (e.g. "I must succeed at everything, so I am worthless"). C is the consequence, the emotional and behavioural response that follows from the belief (low mood, withdrawal). Ellis argued that constant negative, irrational beliefs about life events lead to depression.

The therapist disputes the irrational beliefs (asking for evidence, showing they are illogical) so the person can replace them with more rational, constructive beliefs. Between sessions the patient does homework, practising more helpful thoughts about real experiences, so the depressive symptoms improve.

1(c) The biological treatment I will compare with REBT is drug therapy with SSRIs such as fluoxetine.

Similarity: both are effective treatments for depression. Studies of both REBT and SSRIs compare patients who receive the treatment with a control group who do

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not, and with their own baseline scores at the start of treatment. In both cases patients show significant improvements in depressive symptoms, so valid conclusions can be drawn that the treatment itself is reducing the depression.
Difference: they come from different approaches and treat different causes. SSRIs come from the biological approach, which assumes depression is caused by low serotonin, so they block reuptake to raise serotonin and treat the symptom. If the patient stops taking the drug the depression is likely to return, and SSRIs have side effects such as weight and appetite changes, headaches and disturbed sleep.
REBT comes from the cognitive approach, which assumes depression is caused by faulty, irrational thinking. It teaches the patient skills to challenge irrational beliefs, which they can keep using after therapy ends, so relapse is less likely and there are no physical side effects.

2(a) The behavioural explanation says phobias are learned by classical conditioning (Watson, 1920). A neutral stimulus (NS) is paired with an unconditioned stimulus (UCS) that naturally causes fear. After enough pairings, or one very frightening pairing, the NS becomes a conditioned stimulus (CS) that produces fear on its own, the conditioned response. Watson and Rayner showed this with Little Albert, an 11-month-old baby who was not afraid of a white rat. Each time he touched the rat, Watson struck a steel bar behind his head, making him cry. Eventually the sight of the rat alone made him cry, and the fear generalised to similar furry objects.
The psychoanalytic explanation (Freud, 1909) says a phobia is the result of unconscious conflict. Anxiety from id impulses or a frightening experience is repressed into the unconscious to protect the ego, and the fear is displaced onto an object. In the case of Little Hans, a five-year-old boy's fear of horses was explained as displaced fear of his father during the Oedipus complex, linked to castration anxiety.

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The biomedical/genetic explanation is supported by Ost (1992). Blood-phobic patients had more first-degree relatives with the same phobia than injection-phobic patients (61% vs 29%), and were more likely to fear fainting in the phobic situation (77% vs 48%), suggesting a strong genetic link and a strong physiological response.

The cognitive explanation says we hold irrational thoughts about an object because we believe a bad experience will be repeated. DiNardo et al. (1988) studied dog-phobic and non-phobic female students using self-reports and a behavioural test with a real dog while heart rate was monitored. 56% of the dog-phobic group recalled a frightening experience with a dog, but so did 66% of the non-phobic group, so it is how we think about an event, expecting harm, rather than the event itself that leads to a phobia.

2(b) The explanations take different sides of the nature versus nurture debate. The biomedical explanation is on the nature side: Ost found blood phobia runs in families, suggesting an inherited tendency to faint. The behavioural explanation is nurture, as the fear is learned through experience, as with Little Albert. The psychoanalytic explanation is both, since everyone passes through the psychosexual stages (nature) but whether conflict is resolved depends on experience (nurture). The cognitive explanation is mainly nurture, as the person needs a bad experience and then develops negative thoughts about it. As most people who are bitten do not develop phobias (DiNardo), an interaction of a vulnerability (nature) with experience (nurture) seems most likely.

The behavioural and biomedical explanations are reductionist, reducing a phobia to stimulus-response links or genes, whereas the cognitive explanation adds the role of thinking. They are also deterministic, suggesting the person has no control over whether a phobia develops, although the cognitive view allows thoughts to be changed.

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	The evidence is limited. Little Albert and Little Hans are single case studies, so they cannot be generalised, and Freud's interpretation was based on reports from Hans's father, so it is subjective and unfalsifiable. Little Albert was also unethical, as he was caused distress and never deconditioned. Ost and DiNardo used quantitative data and controlled comparisons, which is more scientific, but DiNardo used only young female students and self-reported memories that may be inaccurate, and family similarity in Ost could be due to shared learning rather than genes. The explanations have useful applications: the behavioural view led to systematic desensitisation and flooding, and the cognitive view to CBT, both of which are effective, supporting their validity. Overall, no single explanation is enough, and a combination of nature and nurture explains phobias best.
	Psychology and consumer behaviour
3(a)	Consumer wants and needs. Communication.
3(b)	Auty and Lewis showed 105 children aged 6 to 7 and 11 to 12 a clip from the film Home Alone. The experimental group saw a clip in which the family ate pizza and Pepsi was mentioned and shown, while the control group saw a clip in which the family ate macaroni cheese and drank milk. Afterwards each child was interviewed by an ex-student of the school, offered a choice of Pepsi or Coca-Cola, and then asked to describe the clip, with prompts if they did not mention Pepsi. Result: children in the experimental group were more likely to choose Pepsi: 62% chose Pepsi compared with 42% of the control group.
3(c)	Strength: the study has good validity because children were randomly assigned to

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the experimental or control condition, and everyone experienced the same standardised procedure (same film, same interview, same drinks choice). This reduces the chance that differences in drink choice were caused by participant variables, so it is more likely the product placement caused more children to choose Pepsi. Quantitative data were also collected so the two groups could be compared statistically.

Weakness: the children chose a drink immediately after watching the clip. This shows only the short-term effect of product placement and not whether it changes what children buy or ask for days or weeks later, so it lacks validity as a measure of real consumer behaviour. Also, children may have guessed the aim after seeing Pepsi in the clip and then being offered it, so their choice may reflect demand characteristics rather than a genuine preference.

4(a) North et al. (2003) carried out a field experiment in a British restaurant. Over 18 evenings, classical music, pop music or no music was played, with 393 diners taking part. The mean spend per table and the time spent in the restaurant were recorded. When classical music was played, diners spent more in total and were more likely to buy starters and coffee than with pop or no music. This may be because classical music primes upmarket associations, so people are prepared to spend more.

Guéguen et al. (2007) carried out a field experiment at an open-air market stall in France selling toys and knick-knacks, over two days. 154 men and 86 women were randomly selected and assigned to a popular music or no music condition. With music customers stayed longer at the stall (5.27 vs 3.72 minutes), more bought an item (18% vs 10%, near significant) and they spent slightly more (6.3 vs 5.67 euros, not significant).

Woods et al. (2010) carried out a lab experiment with 58 Manchester University student volunteers. Blindfolded and wearing headphones, they ate sweet and salty

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	foods, some crunchy and some soft, while hearing no sound, quiet or loud white noise, and rated sweetness, saltiness, crunchiness and liking. Sweetness and saltiness were rated lower with loud noise than quiet noise, but crunchiness was rated as more intense. In a second study with 34 students, ratings of liking for the background noise correlated with liking for the food. This suggests that loud sound, such as on aeroplanes, affects how food tastes.
4(b)	The research uses experiments of different types. North et al. and Guéguen et al. were field experiments in a real restaurant and market, so they have high ecological validity and few demand characteristics, as customers did not know they were in a study. However, there is less control: in North et al. different diners came on different evenings, so the type of customer or day of the week may explain the spending, and Guéguen's spending difference was not significant. Studying people without their consent also raises ethical issues, although the music was harmless. Woods et al. used a lab experiment, which gave strict control of the sound level and food, so cause and effect can be established and consent could be gained. However, eating blindfolded with headphones is artificial, lowering ecological validity, and participants may have guessed the aim and shown demand characteristics. Generalisability is limited. North et al. used one British restaurant and Guéguen one market in France, so the findings may not apply to other cultures or types of shop. Woods used only students, who may have different tastes from older consumers. The studies collected quantitative data, such as spend per table, time at the stall and ratings, which are objective and allow comparison, but they do not explain why music changes behaviour. The research is useful. Restaurants can play classical music to raise spending, market traders can play music to keep customers at the stall, and airlines can

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design food with stronger flavours to compensate for loud cabin noise. Overall, experiments show sound does influence consumers, but field and lab studies need to be combined to be confident the effects are both real and caused by the sound.

Psychology and health

5(a) Friedman and Rosenman found that Type A people are competitive, impatient and controlling. This makes them work long hours and feel time pressure, so their stress response is aroused more often, which damages the heart and makes them more prone to coronary heart disease than relaxed Type B people.

5(b) SIT (Meichenbaum, 1985) is a form of CBT that prepares people for stress before it happens, like a vaccine. It has three phases.

1 Conceptualisation: the client discusses the nature of their stress with the therapist and is taught about stressors and how they affect the body and their thinking.

2 Skills acquisition and rehearsal: the client learns coping skills such as relaxation, positive self-statements and problem solving, and practises them in the session.

3 Application and follow-through: the client uses the skills in real situations between sessions, then reviews with the therapist how it went and adjusts the techniques. As a result they experience less stress and can apply the skills to new situations.

5(c) Strength: SIT allows individual differences to be addressed. Every person faces different stressors and different coping techniques suit different people, so the therapy is tailored to each client's life and the effectiveness of each strategy is reviewed and adjusted. This means it can give a long-lasting toolkit of coping

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strategies that prevents stress in the future, so if one technique fails the client can try another, and it involves no medication with side effects or risk of addiction.

Weakness: SIT may not be appropriate for everyone. It requires the client to talk about private experiences and feelings, and to commit time and effort over many sessions and homework tasks. Some people will be unwilling or unable to do this. It is also reductionist as it ignores biological causes of stress: some people may have a more reactive nervous system, so they find the coping strategies do not work or are much harder to use.

6(a) Medical techniques use biochemical treatments such as analgesics (painkillers). These act on the central nervous system or at the site of injury to reduce pain. For example, aspirin acts against pain, inflammation and fever, paracetamol reduces mild pain, and opioids such as morphine are used for severe pain, sometimes with a patient-controlled analgesia pump. Surgery can also be used to remove the cause of pain.

Psychological techniques are cognitive strategies. Attention diversion means focusing on something other than the pain, such as listening to music, reading or playing a computer game. Non-pain imagery means imagining a scene far removed from the painful situation, such as a beach or park, which acts as a distraction. Cognitive redefinition means changing how the pain is thought about, replacing anxious thoughts with positive ones, or redefining the pain as a different sensation such as pressure, warmth or cold.

Alternative techniques include acupuncture, from Chinese medicine, where fine needles are inserted into the skin at points on a body map. Electrical impulses or heat may be applied to the needles. It is believed to increase the flow of Chi and reduce muscle tension. Stimulation therapy (TENS) passes a mild electric current between electrodes on the skin. The impulses flood the nervous system, reducing

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its ability to transmit pain signals to the spinal cord and brain, which fits gate control theory (Melzack and Wall, 1965), and also reduces muscle tension.

6(b) The techniques can be discussed in terms of determinism and free will. The experience of pain often feels out of the patient's control, determined by biological causes such as injury and nerve signals, and medical techniques fit this view, as the drug determines the pain relief. Whether a patient receives medication or an alternative therapy is also partly determined by whether the practitioner is willing and able to offer it. However, the patient uses free will in choosing to take medication or try acupuncture, and a patient-controlled device lets them decide when to self-administer. Cognitive strategies show the most free will, as the patient chooses to distract themselves or redefine the pain, which gate control theory suggests can close the gate. A balanced view is that pain is biologically caused but its management involves choice.

Effectiveness and appropriateness differ. Analgesics work quickly and are supported by strong scientific evidence, but they have side effects (aspirin can cause stomach bleeding) and opioids are addictive. Psychological techniques have no side effects and are cheap, but they work best for mild or short-term pain and need effort from the patient, so they may not suit young children or severe pain. TENS is non-invasive and can be used at home, and acupuncture has few side effects, but the scientific basis for Chi is weak and some benefits may be placebo effects.

The approaches can be compared: medical techniques are reductionist, treating only the physical cause, while psychological techniques recognise that thoughts and emotions affect pain, which is more holistic.

These techniques have practical applications in hospitals and pain clinics. Overall, combining medical, psychological and alternative techniques is likely to be most effective.

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Psychology and organisations

7(a) Enrichment is redesigning a job to make it more challenging and interesting for the employee, by adding tasks that need more skills and a higher level of responsibility, such as planning and checking their own work.

7(b) Giacalone and Rosenfeld studied 38 unionised workers in an electrical factory who volunteered. A list of reasons for sabotage was used to split them, at the median, into high-reason acceptors and low-reason acceptors. They were then given a list of 29 sabotage methods (slowdowns, destructiveness, dishonesty and causing chaos) and rated how justifiable each was on a scale from 1 to 7 (7 = totally justifiable).

High-reason acceptors justified production slowdowns and destruction of machinery or premises more than low-reason acceptors. Both groups accepted a variety of reasons and justified all forms of sabotage except dishonesty.

7(c) Weakness 1: the findings have low generalisability. The sample was only 38 unionised volunteers from one electrical factory. Workers in other industries, non-unionised workers or workers in other countries may have different attitudes to sabotage, and volunteers may be more willing to discuss it than other workers, so the results cannot be applied to all employees.

Weakness 2: the data came from self-reports, so they may suffer from social desirability bias. Workers may have worried about who would see their answers, such as their managers, and so rated sabotage as less justifiable than they really thought. Also, the median split means workers close to the median were classed as high- or low-reason acceptors when they may not really have been either, which lowers the validity of the comparison between the two groups.

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8(a)	Fiedler's contingency theory (1967) says the effectiveness of a leader depends on the situation: on the nature of the task, the leader's personality and the make-up of the group. Effective leadership depends on the leader's style and on their control over the situation, which comes from good leader-member relations, a task with clear goals and procedures, and the power to give rewards and punishments. Lacking these in the right combination leads to leadership failure. Fiedler created the least preferred co-worker (LPC) scale, where a leader rates the co-worker they like least. A low LPC score indicates a task-focused leader and a high score a relationship-focused leader. Hersey and Blanchard's situational leadership (1988) says no single style is best: a good leader adapts their style to the task and to the maturity (ability and willingness) of the followers, from M1 (low) to M4 (high). There are four styles: telling (directive), selling (directive but with two-way communication), participating (less direction, shared decisions) and delegating (responsibility given to the group, leader monitors). Muczyk and Reimann (1987) described styles of leader behaviour on two dimensions: whether the leader involves workers in decisions (democratic or autocratic) and how closely they direct the work (directive or permissive). This gives four types: directive autocrat, directive democrat, permissive autocrat and permissive democrat. An autocratic, directive style suits new employees who are learning the job or when fast decisions are needed, whereas more permissive and democratic styles suit experienced, motivated workers.
8(b)	The theories vary in practical application. Fiedler's theory is less practical because it does not say which style suits which type of organisation; it depends on the group being led, which is vague for managers. However, the LPC scale gives a quick way to identify a leader's style so they can be placed in a situation that suits them. Hersey and Blanchard say leaders should adapt to followers' maturity, but

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give little guidance on how to adapt, though organisations can train managers in telling, selling, participating and delegating. Muczyk and Reimann are the most practical, as they identify which situations and employees suit each leader type, so an organisation can decide whether workers need to participate in decisions: if so a democratic leader is suitable, if not an autocratic leader.

The theories differ on the individual versus situational debate. Fiedler sees leadership style as a fixed individual trait, so the situation must be changed to suit the leader, whereas Hersey and Blanchard see the leader as flexible, adapting to the situation. Situational leadership is therefore more holistic, considering both leader and followers, while Fiedler's task versus relationship split is reductionist, as a leader may be both.

The theories may be culturally biased, as they were developed in the USA. In collectivist or high power-distance cultures, workers may expect an autocratic leader, so democratic styles may not be as effective there.

The evidence is also limited: the LPC scale is a self-report that may suffer from social desirability, and its reliability has been questioned. Overall, the theories are useful for training, but organisations need to consider culture and follower needs when applying them.