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Cambridge International AS & A Level

PSYCHOLOGY **9990/31**

Paper 3 Specialist Options: Theory **May/June 2021**

1 hour 30 minutes

9500986749

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 [ ].

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Psychology and abnormality

Answer **all** questions.

1 **(a)** Explain what is meant by 'systematic desensitisation'. [2]

(b) Describe the cognitive explanation of phobias. [4]

(c) Explain **two** strengths of the cognitive explanation of phobias. [6]

2 **(a)** Describe the treatment and management of obsessive-compulsive and related disorders. [8]

(b) Evaluate the treatment and management of obsessive-compulsive and related disorders, including a discussion about determinism versus free-will. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Explain what is meant by 'effective slogans' in advertising. [2]

(b) Describe the study by Fischer et al. (1991) on brand recognition in advertising. [4]

(c) Discuss the use of children as participants in the study by Fischer et al. [6]

4 **(a)** Describe what psychologists have discovered about intuitive thinking and its imperfections in consumer decision-making (thinking fast and thinking slow, choice blindness, advertising and false memory). [8]

(b) Evaluate what psychologists have discovered about intuitive thinking and its imperfections in consumer decision-making (thinking fast and thinking slow, choice blindness, advertising and false memory), including a discussion of practical applications. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Explain what is meant by 'psychogenic pain'. [2]

(b) Describe cognitive redefinition as a technique for managing pain. [4]

(c) Explain **one** similarity and **one** difference between cognitive redefinition and biochemical techniques for managing pain. [6]

6 **(a)** Describe what psychologists have discovered about measuring non-adherence to medical advice. [8]

(b) Evaluate what psychologists have discovered about measuring non-adherence to medical advice, including a discussion about self-reports. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** McClelland proposed the theory of achievement motivation which included three types of needs.

Identify **two** of these needs, other than the need for achievement. [2]

(b) Describe how equity theory (Adams, 1963) explains motivation at work. [4]

(c) Explain **one** strength and **one** weakness of equity theory. [6]

8 **(a)** Describe what psychologists have discovered about leaders and followers in organisations (leader-member exchange model/individualised leadership model, followership, measuring leadership). [8]

(b) Evaluate what psychologists have discovered about leaders and followers in organisations (leader-member exchange model/individualised leadership model, followership, measuring leadership), including a discussion on reductionism versus holism. [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) Systematic desensitisation is a behavioural therapy for phobias based on gradual exposure. The patient is first taught relaxation techniques and then, while relaxed, is gradually exposed to increasingly feared versions of the phobic object or situation (a fear hierarchy) until the phobic reaction subsides at each step.

1(b) The cognitive explanation says that a phobia develops because of irrational thoughts. The person believes that the phobic object or situation is far more dangerous or harmful than it really is. Because of these thoughts, when the person sees the object they have a strong fear reaction.

These irrational thoughts can develop from a bad experience, for example being bitten by a dog, together with the irrational belief that the bad experience is likely to happen again in the future, e.g. "every dog I meet will bite me". It is this expectation, not just the experience, that keeps the phobia going.

1(c) One strength is that the explanation is backed up by evidence from DiNardo et al. (1988). DiNardo found that people with dog phobia had often had a fearful experience with a dog, and that what distinguished them was that they also believed such an experience was likely to happen again. People who had had a bad experience but did not hold this belief had not developed a phobia. The study collected both quantitative and qualitative interview data, allowing detailed comparisons between fearful and non-fearful participants. This shows that

Question number

irrational thoughts ("I will be bitten again") are what lead to the phobia, which increases the validity of the cognitive explanation.

A second strength is that it has useful practical applications. If phobias are caused by irrational thoughts, then CBT can be used to challenge and change these thoughts, for example by showing the patient how unlikely it is that a dog will bite them. The therapist can also discuss the traumatic past experience that led to the irrational thinking. This means the explanation directly leads to an effective treatment that helps people with phobias in everyday life.

2(a) The biomedical treatment for OCD uses SSRIs (selective serotonin reuptake inhibitors). These block the reuptake of serotonin so that the level of serotonin in the brain increases. This lessens the anxiety the patient experiences, so they no longer need to perform compulsive behaviours such as hand washing to relieve it.

A cognitive treatment is CBT. The therapist challenges faulty thinking, e.g. that hands must be washed excessively to remove germs and keep the person safe.

Lovell et al. (2006) compared CBT given by telephone with face-to-face CBT for OCD. 72 out-patients took part and received 10 weekly sessions of exposure and response prevention therapy. Measures such as the Yale-Brown scale, the Beck inventory and client satisfaction were taken. No significant differences were found at six months, so telephone treatment was concluded to be as effective as face-to-face treatment.

Exposure and response prevention (ERP) was studied by Lehmkuhl et al. (2008) in a case study of Jason, a 12-year-old boy with autism and OCD. He received 10 50-minute sessions of CBT over 16 weeks. In exposure, Jason touched objects he had difficulty with, such as elevator buttons and door handles. In response prevention, he did not perform his compulsion and instead used coping statements. His anxiety was high at first, but he learned that it fell within a few minutes. After therapy his Y-BOCS score dropped from 18 to 3.

Question number	
2(b)	Biomedical treatment with SSRIs is deterministic, as it suggests that it is the increase in serotonin that reduces OCD symptoms by lowering anxiety, not anything the patient thinks or does. However, it is still the patient's free will to choose to take the SSRI. Psychological treatments suggest more free will, as the patient chooses to practise the tasks set by the therapist, such as Jason practising exposures. They do, however, depend on the therapist's insight into the patient's thoughts and behaviours, which is somewhat deterministic. The treatments are supported by evidence. Jason's Y-BOCS score fell from 18 to 3, and Lovell found telephone CBT as effective as face-to-face. However, Lehmkuhl is a single case study of a child with autism, so it may not generalise to adults with OCD, and the improvement may be partly due to his close relationship with the therapist or demand characteristics, which lowers validity. Comparing treatments, SSRIs are quick and need little effort, but they can have side effects and symptoms may return when the drug is stopped because the cause of the thinking is not addressed. Psychological therapies give the patient skills to use after therapy, but ERP can be very distressing, raising ethical issues, and it needs high motivation. Therapy is costly in therapist time, although Lovell shows telephone CBT can cut cost and make treatment more accessible, a useful application to everyday life. SSRIs are reductionist, reducing OCD to serotonin, while CBT considers thoughts and behaviour together. Overall, both types are effective, and combining them may be most appropriate, as this treats both the biology and the patient's thinking.
	Psychology and consumer behaviour
3(a)	A slogan is a short, striking and memorable phrase used in advertising, e.g. "Just Do It". It is effective when the consumer can immediately link the slogan to the

Question number	
	brand, so "Just Do It" makes people think of Nike, which helps the brand be remembered and chosen.
3(b)	Fischer et al. tested 229 children aged 3 to 6 attending pre-school in Georgia, USA. The children played a game in which they matched 22 logo cards to the products they belong to, pictured on a game board. Logos included children's brands, adults' brands and cigarette brands. The children showed high rates of logo recognition, which increased with age. Recognition was highest for the Disney Channel and for Old Joe, the cartoon character promoting Camel cigarettes, which was matched with the cigarette by about 30% of 3-year-olds and over 90% of 6-year-olds. It was concluded that very young children see, understand and remember advertising, so exposure to tobacco advertising may be a health risk.
3(c)	Using children was useful because it showed that advertising for adult products, such as cigarettes, is remembered by very young children. This revealed a possible health risk that could not have been found with adults, and supports restricting tobacco advertising. Ethically, the study can be defended, as parents were asked for consent and the task was a harmless game. However, it could be considered unethical to show young children tobacco brand logos, although these were just images and the researchers were not trying to advertise cigarettes to them. Children can have low concentration in research. Fischer et al. took this into account by making the task a game, which kept them engaged. Young children also have limited language, which was overcome because they only had to match cards. However, this means they could not explain their responses, so some matches may have been lucky guesses, lowering validity. Finally, the results cannot be generalised to adults: recognising a logo at 3 to 6

Question number

does not mean the recognition, or any effect on buying, will continue into adulthood.

4(a) Shleifer (2012) describes Kahneman's two systems of thinking. System 1 is thinking fast: it is emotional, automatic, unconscious and effortless, so decisions are made quickly, e.g. buying everyday products like milk and bread. System 2 is thinking slow: it is calculating, conscious, controlled, effortful and deliberate, and is used for expensive purchases such as a car or a house. Intuitive System 1 thinking can lead to errors.

Choice blindness was shown by Hall et al. (2010) in a supermarket in Sweden with 180 customers. Participants tasted pairs of jams or smelled pairs of teas, chose the one they preferred and rated it on a 1 to 10 scale. While they were distracted, the samples were switched, so when they sampled their "chosen" item again it was actually the one they had rejected. Only about a third of manipulations were detected (33% for jam, 32% for tea). Detection was higher for the least similar jam pairs, e.g. cinnamon apple versus grapefruit, but not for tea. This shows considerable choice blindness.

Braun-LaTour et al. (2004) studied advertising and false memory. In study 1, 66 undergraduates saw either a truthful advert (shaking hands with Mickey Mouse at Disneyland) or a false one (shaking hands with Bugs Bunny, who is not a Disney character). They rated attitude, affect and likelihood of visiting, and reported memories of past visits. More participants in the false advert group remembered the handshake as a true memory, so post-event information in adverts influences memory. In study 2, 100 participants got information verbally, pictorially or both, and the pictorial group recalled more false information.

4(b) This research has many practical applications. Advertisers could identify whether their product is bought using thinking fast or thinking slow and design adverts to

Question number

appeal to that style. Retailers could place System 1 products near the checkout, and System 2 products in a quieter area with trained sales staff to help customers. Hall et al. shows consumers can be influenced by packaging, so "value" products in packaging similar to branded ones could attract more sales. The false memory research has less application, as it would be unethical or illegal for adverts to contain false information, although sales staff could persuade returning customers that they had liked a product before. Applications that exploit consumers in this way raise ethical concerns.

Hall et al. was a field experiment in a real supermarket, so it has high ecological validity, and customers behaved naturally. However, participants were deceived about the switch, although they were debriefed. Braun-LaTour used a lab experiment, which allows control of variables and shows cause and effect, but the setting is artificial, and the student sample limits generalisation to other consumers.

Both studies used ratings scales and self-reports, giving quantitative data that is easy to compare, but participants may give socially desirable answers, e.g. not wanting to admit they failed to notice a switch. The Hall sample is from one Swedish supermarket, so there may be cultural bias.

Overall, the research is useful as it shows consumer decisions are often less rational than people think, but applications must be used ethically.

Psychology and health

5(a) Psychogenic pain is pain that has a psychological rather than a physical cause, e.g. phantom limb pain, where pain is felt in a limb that is no longer present. It is psychogenic because the pain is produced by the mind rather than by tissue damage.

Question number	
5(b)	Cognitive redefinition is based on the idea that pain is processed in the brain, so altering the patient's thoughts about pain will change their perception of it. The patient is taught to replace anxious, catastrophic thoughts about the pain with more positive, realistic thoughts. For example, they think "this will only hurt a little bit" rather than "this is the worst pain imaginable". It can also involve redefining the pain as a different, less threatening sensation, such as pressure, warmth or cold.
5(c)	One similarity is that both have been shown to be effective in relieving pain, with research support. Cognitive redefinition reduces pain by changing how the patient thinks about it, which changes their perception, while biochemical techniques such as opiates or non-opioid painkillers change the physiology of the body, e.g. blocking pain signals, so the patient feels less pain. Both also need a professional: a doctor to prescribe the drug and a psychologist to teach the cognitive technique. One difference is the role of the patient. In cognitive redefinition the patient must be actively involved and motivated, and may need a certain level of insight, because they have to learn the strategy and use it themselves, which takes time. With biochemical techniques the patient is passive and needs little motivation, as they only have to take the drug, which acts quickly. However, drugs such as opiates can cause side effects like nausea, dizziness and addiction, whereas cognitive redefinition has no side effects.
6(a)	Subjective measures include self-reports, where the patient is asked if they are following their treatment. Riekart and Droter (1999) studied 94 families of adolescents aged 11 to 18 who had had diabetes for over a year and lived with a parent, using a questionnaire, interview and medical data. Families were split into non-consenters (14), non-returners (28) and returners (52). Those who returned the questionnaire had higher adherence scores and tested their blood sugar more

Question number

often, so self-report samples may overestimate adherence.

Objective measures include pill counting. Chung and Naya (2000) gave 57 asthma patients tablets to take twice a day for 12 weeks, with a TrackCap electronic device recording each opening. Compliance was 89% by TrackCap and 92% by tablet count, so TrackCap was concluded to be a convenient and effective monitoring system.

Biochemical tests use blood or urine samples. Roth and Caron (1978) monitored 116 patients' antacid intake. Patients estimated their intake averaged 89%, but actual intake was 47%. Doctors' estimates did not improve with familiarity and pill counts were also inaccurate, so objective tests over several months are needed.

Repeat prescriptions were used by Sherman et al. (2000) with 116 children with asthma. Parents were interviewed and pharmacies they named were telephoned; pharmacy information was 92% accurate. Adherence was 72%, 61% and 38% for the three inhalers, showing refill checks are accurate and doctors cannot judge adherence from consultation alone.

6(b) Self-reports give primary data on what the patient, or their parent, thinks and does, and are quick and cheap. However, they suffer from social desirability bias: Roth and Caron found patients reported 89% intake when it was really 47%. Much of this research aimed to show that self-reports do not give an accurate picture.

Riekart and Droter used the Adherence in IDDM Questionnaire-R and a semi-structured interview, but those who returned questionnaires were more adherent, so the sample was biased. Sherman et al. only used an interview to find the pharmacy, then checked objectively.

Objective measures are more valid, as they do not rely on honesty. Biochemical tests show the drug is in the body. However, pill counts and TrackCap only show tablets were removed, not swallowed, and patients may dump pills before a visit.

Biochemical tests are expensive and invasive, raising ethical issues, and repeat

Question number

prescriptions only show the medicine was collected.

The measures give quantitative data, e.g. 89% versus 92% compliance, which is easy to compare, but miss the qualitative reasons for non-adherence, such as side effects, which self-reports can reveal.

The research is useful, as it shows doctors cannot judge adherence from consultations, so they should use objective checks. However, no single method measures all non-adherence, e.g. taking doses at the wrong time. Samples were specific, e.g. children with asthma, limiting generalisability. Overall, a combination of subjective and objective measures gives the most accurate picture.

Psychology and organisations

7(a) Need for affiliation.

Need for power.

7(b) Equity theory says that people consider what is fair in a relationship by comparing their input into it with the output they get from it. At work, an employee compares their inputs (effort, hours, skill) and outcomes (pay, recognition) with those of other employees at the same organisation.

If the employee perceives they are putting in more than they get out compared with others, they feel under-rewarded and will not be motivated. For example, an employee working 50 hours a week when most others work 40 hours for the same pay will not be motivated. If they feel they put in less than they get out compared with others, they will feel motivated.

7(c) One strength is that equity theory has practical applications. Because motivation depends on perceived fairness, an employer can discuss with employees how they perceive their inputs and outputs and then try to make things fairer, e.g. adjusting

Question number

pay or workload. The theory also recognises the free will of the employee, as they judge for themselves whether their contribution is equal to others, so the employer knows to ask staff rather than assume.

One weakness is the reductionist, mechanistic nature of the theory. It suggests employees calculate their inputs and outputs and compare them with others like a machine, assuming they make rational, conscious decisions. Many employees may be unaware of how they view their work compared with others. Also, some inputs are less tangible, e.g. the quality of a report rather than its length, so employees may not recognise the input of others, and it is not possible to make everything equal.

8(a) The leader-member exchange model (Dansereau, 1994), from vertical dyad linkage theory, says relationships develop in three stages: role taking, where leader and followers meet and the leader makes expectations clear; role making, where the team begins to work together; and role routinisation, where routines and high-quality exchanges exist. Leaders treat followers differently in respect, trust and obligation, creating an in-group of trusted followers and an out-group with a more formal relationship. The individualised leadership model (Dansereau, 1995) focuses on the one-to-one relationship and what each person invests and gets back. The leader must support each employee and develop their self-worth, varying the approach to each person, otherwise the employee will not see the manager as their leader.

Kelley (1988) described followership. Qualities of effective followers are self-management, commitment, competence and courage. Types are: sheep, passive and uncritical; yes people, committed but dependent and conformist; alienated followers, critical but passive; survivors, who wait for the majority before supporting change; and effective (star) followers, who think for themselves and work with energy.

Question number

Kouzes and Posner (1987) measured leadership with the Leadership Practices Inventory. It measures five practices: model the way, inspire a shared vision, challenge the process, enable others to act and encourage the heart. 30 behavioural statements, six per practice, are rated on a 10-point scale by the leader and by observers such as co-workers, so each practice scores 6 to 60. Scores are compared with over 1 million other leaders, and open-ended questions are included.

8(b)

Dansereau's theories are mainly holistic, as they consider three stages of how relationships develop and the one-to-one relationship between each leader and follower, both sides contributing. Kelley is also fairly holistic, considering qualities and types of followers. However, it is reductionist in placing each follower into one type, when a follower may show several types or act differently with different managers. The LPI is mainly holistic, collecting quantitative and qualitative data from the leader and observers and comparing with 1 million leaders, though reducing leadership to five practices and a number is reductionist.

The LPI has good validity, as using observers as well as the leader reduces social desirability bias, and its large database allows meaningful comparisons. However, ratings are still subjective, and co-workers may rate a manager favourably out of fear.

The theories may be culturally biased, developed in the USA, an individualist culture; in collectivist cultures leaders may treat followers more equally and in-groups may be less acceptable. Kouzes and Posner suggest leadership is learned rather than innate, a nurture view, so leaders can be trained.

The research is useful. Managers can avoid creating an out-group, which may lower motivation, and identify alienated followers to support. However, Kelley's types are deterministic, suggesting followers are fixed. Overall the research gives a fairly holistic, useful picture, though it underplays situational factors.

Question number

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PSYCHOLOGY **9990/32**

Paper 3 Specialist Options: Theory **May/June 2021**

1 hour 30 minutes

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You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **four** questions in total:
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INFORMATION

- The total mark for this paper is 60.
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Psychology and abnormality

Answer **all** questions.

1 **(a)** Explain what is meant by 'bipolar' disorder. [2]

(b) Describe cognitive restructuring (Beck, 1979) as a treatment for depression. [4]

(c) Explain **one** strength and **one** weakness of cognitive restructuring as a treatment for depression. [6]

2 **(a)** Describe the causes of impulse control disorders and non-substance addictive disorder. [8]

(b) Evaluate the causes of impulse control disorders and non-substance addictive disorder, including a discussion about nature versus nurture. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Explain what is meant by the 'cognition-emotion model' of the effects of ambience. [2]

(b) Describe the study by Chebat and Michon (2003) on the effects of odour on shopper arousal and emotion. [4]

(c) Explain **two** strengths of the study by Chebat and Michon. [6]

4 **(a)** Describe what psychologists have discovered about menu design psychology. [8]

(b) Evaluate what psychologists have discovered about menu design psychology, including a discussion about ecological validity. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Outline how **one** biochemical technique reduces stress. [2]

(b) Describe the study by Chandola et al. (2008) on work as a cause of stress. [4]

(c) Discuss the generalisability of the study by Chandola et al. [6]

6 **(a)** Describe what psychologists have discovered about strategies for promoting health. [8]

(b) Evaluate what psychologists have discovered about strategies for promoting health, including a discussion of the longitudinal research method. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Explain what is meant by 'empowerment' as a motivator at work. [2]

(b) Describe how ERG theory (Alderfer, 1972) explains motivation at work. [4]

(c) Explain **one** strength and **one** weakness of ERG theory. [6]

8 **(a)** Describe what psychologists have discovered about physical and psychological work conditions in organisations. [8]

(b) Evaluate what psychologists have discovered about physical and psychological work conditions in organisations, including a discussion about validity. [10]

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Question number

Answers for paper 9990/32

Psychology and abnormality

1(a) Bipolar disorder is a mood disorder with two strongly contrasting phases of mood: periods of severely elevated mood (mania) followed by periods of very low mood (depression), each lasting for several weeks or months.

1(b) In cognitive restructuring the patient attends a number of therapy sessions over weeks or months. Beck believed depressive symptoms are due to faulty thinking, so the therapist helps the patient identify this faulty thinking, e.g. negative views of the self, the world and the future (the cognitive triad), and correct it to more helpful ways of viewing them.

First, patient and therapist identify the thinking patterns and the patient is helped to produce alternative thoughts. The patient then practises these alternative thoughts between sessions, as homework. This leads to more helpful behaviours, so the patient feels more hopeful and positive.

1(c) One strength is that cognitive restructuring is effective and has no side effects. It has been shown to be as effective as SSRIs for depression, but without side effects such as nausea. Also, the patient learns a toolkit of techniques to challenge negative thoughts, so if symptoms return in the future they can use these skills themselves, lowering the risk of relapse. It also empowers the patient, recognising their free will and involving them actively in treatment.

One weakness is that it is not appropriate for all patients. It needs a lot of effort

Question number

and motivation, as the patient must engage in sessions and complete homework. Some patients may be so severely depressed that they cannot engage, and others may not want to discuss personal problems, or may not be honest about their thoughts. It also takes time, 6 to 8 sessions or up to 12, possibly almost six months, which may be dangerous for a very depressed patient who might self-harm while waiting for it to help.

2(a) The biochemical explanation links impulse control and addictive disorders to dopamine. Dopamine is released in response to rewarding stimuli, such as pleasurable behaviours, so a pyromaniac feels the reward of this "happy chemical" when they start a fire. As the behaviour increases, dopamine levels in the striatum are reduced, so the person needs to repeat the behaviour more to feel the same reward. This keeps the compulsion or addiction going and is known as reward deficiency syndrome.

The behavioural explanation is positive reinforcement. Operant conditioning states that the frequency of a behaviour increases when it is rewarded. For the gambler the reward is money, while for the kleptomaniac or pyromaniac it is the thrill of the behaviour. Gambling is explained by partial reinforcement schedules, where a reward is not received every time, so the gambler is compelled to continue because they "might" win next time, which makes the behaviour very resistant to extinction.

The cognitive explanation is feeling-state theory (Miller, 2010). Intense positive feelings become linked with specific behaviours such as gambling or shopping. These links form a state-dependent memory called a feeling state, made up of all the emotions, thoughts and physiological arousal of that moment. A person with negative thoughts about themselves, such as "I am a failure", may feel intense euphoria and power when they do the behaviour, overcoming the negative thought. Whenever the negative feeling returns, the feeling state is triggered, creating an

Question number	
	urge to repeat the behaviour, which leads to impulse control problems.
2(b)	The behavioural explanation is nurture, as the disorder is learned through rewards from the environment. The dopamine explanation could be nature, if a person is born with a stronger dopamine response, or nurture, if they learn the behaviour because of the dopamine release. Feeling-state theory is mainly nurture, as the feeling state develops from experiences of the behaviour. If a cause is nature, the person may be unable to change, although medication can alter biochemistry. If it is nurture, the environment can be changed so rewarding experiences no longer happen, e.g. limiting gambling websites' maximum payouts, so the behaviour is not learned or is easier to stop. An interactionist view is probably most accurate. The explanations are deterministic, suggesting a gambler has no control over their behaviour, due to dopamine or reinforcement. This ignores free will and could reduce personal responsibility, e.g. for theft in kleptomania. They have practical applications: dopamine suggests drug treatments, reinforcement suggests changing reward schedules or aversion therapy, and feeling-state theory led to a therapy that targets the feeling state. Evidence for dopamine comes partly from animal research and brain scans, so it may not generalise, and it is unclear whether low dopamine is a cause or an effect. Partial reinforcement explains gambling well but explains pyromania less well, where there is no obvious external reward. Feeling-state theory is hard to test. Overall, each explanation is partial, so a combined approach explains these disorders best.
	Psychology and consumer behaviour
3(a)	Zajonc and Markus (1984) proposed that emotion can be generated by biological,

Question number	
	sensory and cognitive events, so cognition may produce emotion but does not necessarily cause it. Therefore the ambience of a shop can produce cognitions that lead to emotions in the consumer, e.g. a light colour produces the thought "expensive", which makes the consumer feel good when buying.
3(b)	Chebat and Michon carried out a field experiment in a shopping mall in Canada over two weeks. In week 1, the control condition, no scent was added; in week 2 a pleasant citrus scent was released into the mall's main corridor. 145 shoppers took part in the scent week and 447 in the control week. Graduate marketing students, who did not wear perfume, gave shoppers a self-administered questionnaire about their shopping trip, covering product quality, the shopping environment, and the pleasure and arousal felt. With the scent, shoppers reported a more favourable perception of product quality and of the shopping environment.
3(c)	One strength is high ecological validity. The study took place in a real shopping mall, and some malls do use scents, so it was a realistic situation. Shoppers were going about their normal shopping and did not know they were in a study until questioned at the end, so their perceptions and behaviour were natural. This means the findings can be applied to how real shoppers respond to scent in retail settings. A second strength is good control and reliability. The level of citrus scent was controlled, with 10 diffusers releasing scent every 3 seconds for 10 minutes. The same questionnaire was used with all participants, and the students giving it out wore no perfume so they did not add a scent in the control week. The questionnaire also gave quantitative data on product quality, environment, pleasure and arousal, so the scent and control weeks could be compared objectively, making it more likely that the scent caused the difference in perceptions.

Question number	
4(a)	Pavesic (2005) wrote a review article outlining how customers use menus and how restaurants can design better ones. He describes eye movement patterns and the use of "eye magnets", such as a box around an appetiser or a different coloured font, to draw attention to items the restaurant wants to sell. He also discusses common menu mistakes, such as menus being hard to read and overemphasising prices. Customers spend on average 109 seconds looking at a menu. Dayan and Bar-Hillel (2011) studied primacy, recency and item position. In study 1, 240 Hebrew-speaking students were given one of four pizza menu designs and chose more often items at the extremes (top or bottom) of a list than in the middle. Study 2 was a field experiment in a cafe over 30 days, which confirmed that items were selected more often if placed at the beginning or end of their category. They suggested putting healthier items at the top and bottom of the menu and less healthy ones in the middle. Wansink et al. (2005) studied sensory perception and food names in a 6-week experiment in a university cafeteria with 140 customers. Foods with descriptive, evocative names, such as "Succulent Italian Seafood Filet", were rated as more appealing, tasty and caloric than the same foods with regular names, such as "Seafood Filet". Open-ended comments were also more favourable for descriptive labels. They concluded that descriptive names can improve perceptions of food in institutional settings and help introduce unfamiliar foods.
4(b)	Wansink et al. has good ecological validity, as it took place in a real cafeteria in America, the menu labels were realistic, and customers did not know they were in a study, so their choices were natural. In contrast, Dayan and Bar-Hillel's first study was a lab experiment: although menus were realistic, participants did not really buy or eat the food, so they may have taken choices less seriously, lowering validity. However, they replicated the findings in a real restaurant, increasing

Question number	
	ecological validity. Lab experiments allow control of variables, so cause and effect can be established, e.g. position causing choice. Field experiments have less control, so other factors, such as daily specials, may affect choices. Pavesic is a review based on industry experience rather than controlled research, so it is less scientific. There may be cultural bias and limited generalisability: Dayan used Hebrew-speaking students, who read right to left, and Wansink used American cafeteria diners, so results may not apply to other cultures or fine dining. The research is useful: restaurants can use eye magnets and descriptive names to raise sales, and item position can promote healthy eating. However, there are ethical issues: customers in Wansink's study were not told they were participants, and manipulating menus could be seen as exploiting consumers. The theories are deterministic, suggesting menu position causes choice, ignoring free will and preferences, and reductionist, focusing on single features rather than the whole dining experience. Overall the research is useful but should be applied with care.
	Psychology and health
5(a)	Benzodiazepines, e.g. diazepam, reduce stress by enhancing the effect of the neurotransmitter GABA, which slows down the body's functions, so the person experiences sedation, reduced anxiety and muscle relaxation.
5(b)	Chandola et al. studied 10,308 male and female London civil servants (aged 35 to 55 at the start) in the Whitehall II longitudinal study. Questionnaire data on work stress and health behaviours were collected alongside clinical data, such as heart rate and markers of the metabolic syndrome. Chronic work stress was associated with coronary heart disease (CHD), and the

Question number

link was stronger among participants aged under 50. About 32% of the effect of work stress on CHD was attributed to its effect on health behaviours and the metabolic syndrome.

5(c) The study has a very large sample of 10,308 participants, including both men and women, which makes it more representative, so the findings are more generalisable to working populations.

However, all participants were civil servants, so results may only generalise to office workers and not to jobs such as manual or factory work, where stress has different causes. Also, all participants were from London, so the study may be ethnocentric and not generalise to other cultures with different work patterns.

The age range of 35 to 55 is good for working adults, but the findings may not generalise to younger workers or the very old; the oldest participants would have been about 74 by the end of the study in 2004.

The measures, e.g. heart rate, are typical of a visit to the doctor, so they generalise well to everyday life. Completing a stress questionnaire could be atypical, although many patients do complete such questionnaires.

6(a) Janis and Feshbach (1953) studied fear arousal using 200 high school students (mean age 15) in an independent groups design. Group 1 (50) heard a lecture on dental hygiene with high fear, including slides of diseased mouths and consequences such as cancer. Group 2 had moderate fear with less disturbing images, group 3 minimal fear without pictures or consequences, and a control group heard a lecture on the eye. Questionnaires one week before, after and one week after measured reactions and conformity. Minimal fear was most effective in getting students to follow the recommendations.

Cowpe (1989) tested two 60-second adverts showing how chip pan fires start (overfilling and leaving pans unattended), shown in ten UK regions between 1976

Question number

and 1984. There was a 12% drop in fires and high awareness.

The Yale model of communication says persuasion depends on: the source, who should be credible and trustworthy, e.g. a doctor; the message, which should be clear and vivid; the medium, e.g. social media for young people and TV for older people; the audience, e.g. using simple images such as smoking damage for a less knowledgeable audience; and the situation, where people are most receptive, e.g. the doctor's surgery. The stages are attention, comprehension and acceptance.

Lewin et al. (1992) randomly allocated 176 heart attack patients to a self-help rehabilitation programme or standard care plus placebo information and counselling. The rehabilitation group had better psychological adjustment at one year, fewer GP visits and fewer hospital readmissions in six months.

6(b) Longitudinal studies show changes in behaviour over time and give more detail because researchers spend longer with participants. Cowpe's campaign ran from 1976 to 1984, so it showed a lasting fall in chip pan fires, and Lewin followed patients for up to a year. However, longitudinal research needs a lot of time, commitment and funding, and attrition is likely. Janis and Feshbach was a snapshot over about one week, so it cannot show whether oral hygiene changes lasted, limiting its usefulness.

The research is useful: health campaigns can avoid excessive fear, use credible sources and target the right medium, as the Yale model suggests, and information packages like Lewin's reduce hospital costs.

Generalisability is limited: Janis and Feshbach used only high school students, and Lewin only heart attack patients. Cowpe used real UK regions, so it has high ecological validity, but other factors, such as fire safety changes, could explain the fall, as there was less control. Janis and Feshbach had more control but used an artificial lecture setting.

The studies used quantitative data, such as the 12% drop and questionnaire scores,

Question number

allowing comparison, but self-reports of hygiene may be affected by social desirability. The Yale model is holistic, considering the source, message, medium, audience and situation together.

Most strategies focus on the individual and ignore situational factors, such as cost of healthy food. Overall, fear arousal should be moderate and longitudinal evaluation is needed.

Psychology and organisations

7(a) Empowerment is when an employee is given autonomy to work independently in their job, e.g. making their own decisions. Because they feel trusted to complete the work, they feel more motivated to work hard and complete it to a high standard.

7(b) ERG theory identifies three needs. Existence needs are survival needs, physiological and safety; at work these are met by healthy meals and an anti-bullying policy, so the employee feels healthy and safe and is motivated. Relatedness needs are social and self-esteem needs, met by praising staff and work social events, so the employee feels good about their work and works harder. Growth needs are self-development and advancement, met through clear progression, so the employee sees hard work leading to a better job. Unlike Maslow, the needs are not a strict hierarchy, and several can motivate at once.

7(c) One strength is that ERG theory has good practical applications. It identifies the needs of workers, so employers know what to provide to motivate them, e.g. regular feedback and praise for relatedness, healthy food in the staff canteen and action on bullying complaints for existence, and training for growth. Meeting these needs should increase motivation and productivity, leading to higher profits, and some

Question number

needs, such as praise, are inexpensive to meet.

One weakness is that it is difficult for employers to know whether needs are being met outside work. For example, an employee may already be meeting growth needs through charity work, so offering development at work would not motivate them. It may also be difficult to apply across all jobs and businesses: small businesses may not be able to offer promotion. The theory, from 1972, may also lack temporal validity, as work has changed, with more part-time work and frequent job changes.

8(a) Wikstrom and Bendix (2000) reviewed the Hawthorne studies of the 1920s at the Hawthorne Plant in Chicago, which tested the effect of changes in the physical environment on productivity. Researchers changed many aspects, such as lighting and work structures, but productivity increased in both the experimental group and a control group with no changes. This was concluded to be due to the special privileges received by those in the study and better relationships between workers and with management. Later research did not replicate the findings, possibly because Hawthorne workers had higher income and positive attention.

Einarsen (1999) reviewed research on bullying at work. He identified four stages: aggressive behaviour, bullying, stigmatisation and severe trauma. He also identified five types of bullying behaviour: physical, verbal, social isolation, personal attack (e.g. ridicule or gossip) and work-related (e.g. making tasks harder to perform).

Oldham and Brass (1979) studied 123 employees of a newspaper in the Midwest, USA, moving to an open plan office. 76 experienced all three waves of the move, 26 experienced two waves, and a control group had no change. Questionnaires measured job characteristics such as autonomy, skill variety, task identity, task significance and feedback, as well as ease of interaction, conflict and concentration. After the move, employees' internal motivation and satisfaction with work and colleagues decreased, and they found it harder to concentrate and complete tasks.

Question number

8(b)

The research may lack temporal validity, as the studies are old: the Hawthorne studies were in the 1920s, Oldham and Brass in 1979 and Einarsen in 1999. Modern open plan offices, with headphones and quiet rooms, and online bullying may differ. Population validity is limited, as the Hawthorne studies were in one factory and Oldham and Brass in one US newspaper.

Oldham and Brass used self-report questionnaires, giving quantitative data that allows comparison before and after the move, but answers might lack validity due to social desirability. Both studies have good ecological validity, investigating employees in their normal jobs. However, Hawthorne workers were placed in a separate area, and the attention they received may have increased productivity rather than the changes themselves, the Hawthorne effect, lowering internal validity.

There is a debate between situational and individual explanations: open plan offices and bullying suggest the situation affects motivation, but individual personality may affect how a person responds, e.g. some people enjoy open plan offices.

The research is useful: employers can see that open plan designs may lower motivation, that attention to workers increases productivity, and that bullying policies are needed. However, conclusions can be deterministic and reductionist, focusing on one condition at a time. Overall the research is useful but should be updated to keep it valid.

Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/33**

Paper 3 Specialist Options: Theory **May/June 2021**

1 hour 30 minutes

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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)** Explain what is meant by 'systematic desensitisation'. [2]

(b) Describe the cognitive explanation of phobias. [4]

(c) Explain **two** strengths of the cognitive explanation of phobias. [6]

2 **(a)** Describe the treatment and management of obsessive-compulsive and related disorders. [8]

(b) Evaluate the treatment and management of obsessive-compulsive and related disorders, including a discussion about determinism versus free-will. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Explain what is meant by 'effective slogans' in advertising. [2]

(b) Describe the study by Fischer et al. (1991) on brand recognition in advertising. [4]

(c) Discuss the use of children as participants in the study by Fischer et al. [6]

4 **(a)** Describe what psychologists have discovered about intuitive thinking and its imperfections in consumer decision-making (thinking fast and thinking slow, choice blindness, advertising and false memory). [8]

(b) Evaluate what psychologists have discovered about intuitive thinking and its imperfections in consumer decision-making (thinking fast and thinking slow, choice blindness, advertising and false memory), including a discussion of practical applications. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Explain what is meant by 'psychogenic pain'. [2]

(b) Describe cognitive redefinition as a technique for managing pain. [4]

(c) Explain **one** similarity and **one** difference between cognitive redefinition and biochemical techniques for managing pain. [6]

6 **(a)** Describe what psychologists have discovered about measuring non-adherence to medical advice. [8]

(b) Evaluate what psychologists have discovered about measuring non-adherence to medical advice, including a discussion about self-reports. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** McClelland proposed the theory of achievement motivation which included three types of needs.

Identify **two** of these needs, other than the need for achievement. [2]

(b) Describe how equity theory (Adams, 1963) explains motivation at work. [4]

(c) Explain **one** strength and **one** weakness of equity theory. [6]

8 **(a)** Describe what psychologists have discovered about leaders and followers in organisations (leader-member exchange model/individualised leadership model, followership, measuring leadership). [8]

(b) Evaluate what psychologists have discovered about leaders and followers in organisations (leader-member exchange model/individualised leadership model, followership, measuring leadership), including a discussion on reductionism versus holism. [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) Systematic desensitisation is a behavioural therapy for phobias based on gradual exposure. The patient is first taught relaxation techniques and then, while relaxed, is gradually exposed to increasingly feared versions of the phobic object or situation (a fear hierarchy) until the phobic reaction subsides at each step.

1(b) The cognitive explanation says that a phobia develops because of irrational thoughts. The person believes that the phobic object or situation is far more dangerous or harmful than it really is. Because of these thoughts, when the person sees the object they have a strong fear reaction.

These irrational thoughts can develop from a bad experience, for example being bitten by a dog, together with the irrational belief that the bad experience is likely to happen again in the future, e.g. "every dog I meet will bite me". It is this expectation, not just the experience, that keeps the phobia going.

1(c) One strength is that the explanation is backed up by evidence from DiNardo et al. (1988). DiNardo found that people with dog phobia had often had a fearful experience with a dog, and that what distinguished them was that they also believed such an experience was likely to happen again. People who had had a bad experience but did not hold this belief had not developed a phobia. The study collected both quantitative and qualitative interview data, allowing detailed comparisons between fearful and non-fearful participants. This shows that

Question number

irrational thoughts ("I will be bitten again") are what lead to the phobia, which increases the validity of the cognitive explanation.

A second strength is that it has useful practical applications. If phobias are caused by irrational thoughts, then CBT can be used to challenge and change these thoughts, for example by showing the patient how unlikely it is that a dog will bite them. The therapist can also discuss the traumatic past experience that led to the irrational thinking. This means the explanation directly leads to an effective treatment that helps people with phobias in everyday life.

2(a) The biomedical treatment for OCD uses SSRIs (selective serotonin reuptake inhibitors). These block the reuptake of serotonin so that the level of serotonin in the brain increases. This lessens the anxiety the patient experiences, so they no longer need to perform compulsive behaviours such as hand washing to relieve it.

A cognitive treatment is CBT. The therapist challenges faulty thinking, e.g. that hands must be washed excessively to remove germs and keep the person safe.

Lovell et al. (2006) compared CBT given by telephone with face-to-face CBT for OCD. 72 out-patients took part and received 10 weekly sessions of exposure and response prevention therapy. Measures such as the Yale-Brown scale, the Beck inventory and client satisfaction were taken. No significant differences were found at six months, so telephone treatment was concluded to be as effective as face-to-face treatment.

Exposure and response prevention (ERP) was studied by Lehmkuhl et al. (2008) in a case study of Jason, a 12-year-old boy with autism and OCD. He received 10 50-minute sessions of CBT over 16 weeks. In exposure, Jason touched objects he had difficulty with, such as elevator buttons and door handles. In response prevention, he did not perform his compulsion and instead used coping statements. His anxiety was high at first, but he learned that it fell within a few minutes. After therapy his Y-BOCS score dropped from 18 to 3.

Question number	
2(b)	Biomedical treatment with SSRIs is deterministic, as it suggests that it is the increase in serotonin that reduces OCD symptoms by lowering anxiety, not anything the patient thinks or does. However, it is still the patient's free will to choose to take the SSRI. Psychological treatments suggest more free will, as the patient chooses to practise the tasks set by the therapist, such as Jason practising exposures. They do, however, depend on the therapist's insight into the patient's thoughts and behaviours, which is somewhat deterministic. The treatments are supported by evidence. Jason's Y-BOCS score fell from 18 to 3, and Lovell found telephone CBT as effective as face-to-face. However, Lehmkuhl is a single case study of a child with autism, so it may not generalise to adults with OCD, and the improvement may be partly due to his close relationship with the therapist or demand characteristics, which lowers validity. Comparing treatments, SSRIs are quick and need little effort, but they can have side effects and symptoms may return when the drug is stopped because the cause of the thinking is not addressed. Psychological therapies give the patient skills to use after therapy, but ERP can be very distressing, raising ethical issues, and it needs high motivation. Therapy is costly in therapist time, although Lovell shows telephone CBT can cut cost and make treatment more accessible, a useful application to everyday life. SSRIs are reductionist, reducing OCD to serotonin, while CBT considers thoughts and behaviour together. Overall, both types are effective, and combining them may be most appropriate, as this treats both the biology and the patient's thinking.
	Psychology and consumer behaviour
3(a)	A slogan is a short, striking and memorable phrase used in advertising, e.g. "Just Do It". It is effective when the consumer can immediately link the slogan to the

Question number	
	brand, so "Just Do It" makes people think of Nike, which helps the brand be remembered and chosen.
3(b)	Fischer et al. tested 229 children aged 3 to 6 attending pre-school in Georgia, USA. The children played a game in which they matched 22 logo cards to the products they belong to, pictured on a game board. Logos included children's brands, adults' brands and cigarette brands. The children showed high rates of logo recognition, which increased with age. Recognition was highest for the Disney Channel and for Old Joe, the cartoon character promoting Camel cigarettes, which was matched with the cigarette by about 30% of 3-year-olds and over 90% of 6-year-olds. It was concluded that very young children see, understand and remember advertising, so exposure to tobacco advertising may be a health risk.
3(c)	Using children was useful because it showed that advertising for adult products, such as cigarettes, is remembered by very young children. This revealed a possible health risk that could not have been found with adults, and supports restricting tobacco advertising. Ethically, the study can be defended, as parents were asked for consent and the task was a harmless game. However, it could be considered unethical to show young children tobacco brand logos, although these were just images and the researchers were not trying to advertise cigarettes to them. Children can have low concentration in research. Fischer et al. took this into account by making the task a game, which kept them engaged. Young children also have limited language, which was overcome because they only had to match cards. However, this means they could not explain their responses, so some matches may have been lucky guesses, lowering validity. Finally, the results cannot be generalised to adults: recognising a logo at 3 to 6

Question number	
	does not mean the recognition, or any effect on buying, will continue into adulthood.
4(a)	Shleifer (2012) describes Kahneman's two systems of thinking. System 1 is thinking fast: it is emotional, automatic, unconscious and effortless, so decisions are made quickly, e.g. buying everyday products like milk and bread. System 2 is thinking slow: it is calculating, conscious, controlled, effortful and deliberate, and is used for expensive purchases such as a car or a house. Intuitive System 1 thinking can lead to errors. Choice blindness was shown by Hall et al. (2010) in a supermarket in Sweden with 180 customers. Participants tasted pairs of jams or smelled pairs of teas, chose the one they preferred and rated it on a 1 to 10 scale. While they were distracted, the samples were switched, so when they sampled their "chosen" item again it was actually the one they had rejected. Only about a third of manipulations were detected (33% for jam, 32% for tea). Detection was higher for the least similar jam pairs, e.g. cinnamon apple versus grapefruit, but not for tea. This shows considerable choice blindness. Braun-LaTour et al. (2004) studied advertising and false memory. In study 1, 66 undergraduates saw either a truthful advert (shaking hands with Mickey Mouse at Disneyland) or a false one (shaking hands with Bugs Bunny, who is not a Disney character). They rated attitude, affect and likelihood of visiting, and reported memories of past visits. More participants in the false advert group remembered the handshake as a true memory, so post-event information in adverts influences memory. In study 2, 100 participants got information verbally, pictorially or both, and the pictorial group recalled more false information.
4(b)	This research has many practical applications. Advertisers could identify whether their product is bought using thinking fast or thinking slow and design adverts to

Question number

appeal to that style. Retailers could place System 1 products near the checkout, and System 2 products in a quieter area with trained sales staff to help customers. Hall et al. shows consumers can be influenced by packaging, so "value" products in packaging similar to branded ones could attract more sales. The false memory research has less application, as it would be unethical or illegal for adverts to contain false information, although sales staff could persuade returning customers that they had liked a product before. Applications that exploit consumers in this way raise ethical concerns.

Hall et al. was a field experiment in a real supermarket, so it has high ecological validity, and customers behaved naturally. However, participants were deceived about the switch, although they were debriefed. Braun-LaTour used a lab experiment, which allows control of variables and shows cause and effect, but the setting is artificial, and the student sample limits generalisation to other consumers.

Both studies used ratings scales and self-reports, giving quantitative data that is easy to compare, but participants may give socially desirable answers, e.g. not wanting to admit they failed to notice a switch. The Hall sample is from one Swedish supermarket, so there may be cultural bias.

Overall, the research is useful as it shows consumer decisions are often less rational than people think, but applications must be used ethically.

Psychology and health

5(a) Psychogenic pain is pain that has a psychological rather than a physical cause, e.g. phantom limb pain, where pain is felt in a limb that is no longer present. It is psychogenic because the pain is produced by the mind rather than by tissue damage.

Question number	
5(b)	Cognitive redefinition is based on the idea that pain is processed in the brain, so altering the patient's thoughts about pain will change their perception of it. The patient is taught to replace anxious, catastrophic thoughts about the pain with more positive, realistic thoughts. For example, they think "this will only hurt a little bit" rather than "this is the worst pain imaginable". It can also involve redefining the pain as a different, less threatening sensation, such as pressure, warmth or cold.
5(c)	One similarity is that both have been shown to be effective in relieving pain, with research support. Cognitive redefinition reduces pain by changing how the patient thinks about it, which changes their perception, while biochemical techniques such as opiates or non-opioid painkillers change the physiology of the body, e.g. blocking pain signals, so the patient feels less pain. Both also need a professional: a doctor to prescribe the drug and a psychologist to teach the cognitive technique. One difference is the role of the patient. In cognitive redefinition the patient must be actively involved and motivated, and may need a certain level of insight, because they have to learn the strategy and use it themselves, which takes time. With biochemical techniques the patient is passive and needs little motivation, as they only have to take the drug, which acts quickly. However, drugs such as opiates can cause side effects like nausea, dizziness and addiction, whereas cognitive redefinition has no side effects.
6(a)	Subjective measures include self-reports, where the patient is asked if they are following their treatment. Riekart and Droter (1999) studied 94 families of adolescents aged 11 to 18 who had had diabetes for over a year and lived with a parent, using a questionnaire, interview and medical data. Families were split into non-consenters (14), non-returners (28) and returners (52). Those who returned the questionnaire had higher adherence scores and tested their blood sugar more

Question number

often, so self-report samples may overestimate adherence.

Objective measures include pill counting. Chung and Naya (2000) gave 57 asthma patients tablets to take twice a day for 12 weeks, with a TrackCap electronic device recording each opening. Compliance was 89% by TrackCap and 92% by tablet count, so TrackCap was concluded to be a convenient and effective monitoring system.

Biochemical tests use blood or urine samples. Roth and Caron (1978) monitored 116 patients' antacid intake. Patients estimated their intake averaged 89%, but actual intake was 47%. Doctors' estimates did not improve with familiarity and pill counts were also inaccurate, so objective tests over several months are needed.

Repeat prescriptions were used by Sherman et al. (2000) with 116 children with asthma. Parents were interviewed and pharmacies they named were telephoned; pharmacy information was 92% accurate. Adherence was 72%, 61% and 38% for the three inhalers, showing refill checks are accurate and doctors cannot judge adherence from consultation alone.

6(b) Self-reports give primary data on what the patient, or their parent, thinks and does, and are quick and cheap. However, they suffer from social desirability bias: Roth and Caron found patients reported 89% intake when it was really 47%. Much of this research aimed to show that self-reports do not give an accurate picture.

Riekart and Droter used the Adherence in IDDM Questionnaire-R and a semi-structured interview, but those who returned questionnaires were more adherent, so the sample was biased. Sherman et al. only used an interview to find the pharmacy, then checked objectively.

Objective measures are more valid, as they do not rely on honesty. Biochemical tests show the drug is in the body. However, pill counts and TrackCap only show tablets were removed, not swallowed, and patients may dump pills before a visit.

Biochemical tests are expensive and invasive, raising ethical issues, and repeat

Question number

prescriptions only show the medicine was collected.

The measures give quantitative data, e.g. 89% versus 92% compliance, which is easy to compare, but miss the qualitative reasons for non-adherence, such as side effects, which self-reports can reveal.

The research is useful, as it shows doctors cannot judge adherence from consultations, so they should use objective checks. However, no single method measures all non-adherence, e.g. taking doses at the wrong time. Samples were specific, e.g. children with asthma, limiting generalisability. Overall, a combination of subjective and objective measures gives the most accurate picture.

Psychology and organisations

7(a) Need for affiliation.

Need for power.

7(b) Equity theory says that people consider what is fair in a relationship by comparing their input into it with the output they get from it. At work, an employee compares their inputs (effort, hours, skill) and outcomes (pay, recognition) with those of other employees at the same organisation.

If the employee perceives they are putting in more than they get out compared with others, they feel under-rewarded and will not be motivated. For example, an employee working 50 hours a week when most others work 40 hours for the same pay will not be motivated. If they feel they put in less than they get out compared with others, they will feel motivated.

7(c) One strength is that equity theory has practical applications. Because motivation depends on perceived fairness, an employer can discuss with employees how they perceive their inputs and outputs and then try to make things fairer, e.g. adjusting

Question number

pay or workload. The theory also recognises the free will of the employee, as they judge for themselves whether their contribution is equal to others, so the employer knows to ask staff rather than assume.

One weakness is the reductionist, mechanistic nature of the theory. It suggests employees calculate their inputs and outputs and compare them with others like a machine, assuming they make rational, conscious decisions. Many employees may be unaware of how they view their work compared with others. Also, some inputs are less tangible, e.g. the quality of a report rather than its length, so employees may not recognise the input of others, and it is not possible to make everything equal.

8(a) The leader-member exchange model (Dansereau, 1994), from vertical dyad linkage theory, says relationships develop in three stages: role taking, where leader and followers meet and the leader makes expectations clear; role making, where the team begins to work together; and role routinisation, where routines and high-quality exchanges exist. Leaders treat followers differently in respect, trust and obligation, creating an in-group of trusted followers and an out-group with a more formal relationship. The individualised leadership model (Dansereau, 1995) focuses on the one-to-one relationship and what each person invests and gets back. The leader must support each employee and develop their self-worth, varying the approach to each person, otherwise the employee will not see the manager as their leader.

Kelley (1988) described followership. Qualities of effective followers are self-management, commitment, competence and courage. Types are: sheep, passive and uncritical; yes people, committed but dependent and conformist; alienated followers, critical but passive; survivors, who wait for the majority before supporting change; and effective (star) followers, who think for themselves and work with energy.

Question number

Kouzes and Posner (1987) measured leadership with the Leadership Practices Inventory. It measures five practices: model the way, inspire a shared vision, challenge the process, enable others to act and encourage the heart. 30 behavioural statements, six per practice, are rated on a 10-point scale by the leader and by observers such as co-workers, so each practice scores 6 to 60. Scores are compared with over 1 million other leaders, and open-ended questions are included.

8(b)

Dansereau's theories are mainly holistic, as they consider three stages of how relationships develop and the one-to-one relationship between each leader and follower, both sides contributing. Kelley is also fairly holistic, considering qualities and types of followers. However, it is reductionist in placing each follower into one type, when a follower may show several types or act differently with different managers. The LPI is mainly holistic, collecting quantitative and qualitative data from the leader and observers and comparing with 1 million leaders, though reducing leadership to five practices and a number is reductionist.

The LPI has good validity, as using observers as well as the leader reduces social desirability bias, and its large database allows meaningful comparisons. However, ratings are still subjective, and co-workers may rate a manager favourably out of fear.

The theories may be culturally biased, developed in the USA, an individualist culture; in collectivist cultures leaders may treat followers more equally and in-groups may be less acceptable. Kouzes and Posner suggest leadership is learned rather than innate, a nurture view, so leaders can be trained.

The research is useful. Managers can avoid creating an out-group, which may lower motivation, and identify alienated followers to support. However, Kelley's types are deterministic, suggesting followers are fixed. Overall the research gives a fairly holistic, useful picture, though it underplays situational factors.

Question number