Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/31**

Paper 3 Specialist Options: Theory **October/November 2021**

1 hour 30 minutes

5024604252

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)** Outline **one** cognitive explanation of schizophrenia and delusional disorder. [2]

(b) Describe the procedure in the study by Sensky et al. (2000) of cognitive-behavioural therapy (CBT) for schizophrenia. [4]

(c) Explain **one** similarity and **one** difference between CBT and biochemical treatments for schizophrenia/delusional disorder. [6]

2 **(a)** Describe characteristics and measures of bipolar and related disorders. [8]

(b) Evaluate characteristics and measures of bipolar and related disorders, including a discussion of validity. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** One stage in the consumer decision model when buying a product is 'recognition of need'.

Identify **two** other stages from this model. [2]

(b) Describe **two** ways to close a sale. [4]

(c) For **one** of the ways you described in **(b)**:

Explain **one** advantage and **one** disadvantage of this way to close a sale. [6]

4 **(a)** Describe what psychologists have discovered about lighting, colour and smell in the physical environment. [8]

(b) Evaluate what psychologists have discovered about lighting, colour and smell in the physical environment, including a discussion about control of variables. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Outline the Yale model of communication in relation to health promotion. [2]

(b) Describe the study by Lau et al. (1990) on health change in adolescents. [4]

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

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

(b) Evaluate what psychologists have discovered about measuring pain, including a discussion of psychometrics. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Kouzes and Posner (1987) produced the Leadership Practices Inventory (LPI) which measures five practices of exemplary leadership.

Identify **two** of these practices. [2]

(b) Describe the styles of leader behaviour proposed by Muczyk and Reimann (1987). [4]

(c) Explain **one** similarity and **one** difference between styles of leader behaviour (Muczyk and Reimann, 1987) and situational leadership (Hersey and Blanchard, 1988). [6]

8 **(a)** Describe what psychologists have discovered about group development and roles in organisations. [8]

(b) Evaluate what psychologists have discovered about group development and roles in organisations, including a discussion of 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) Frith describes schizophrenia as an abnormality of self-monitoring. The person fails to recognise that their own inner speech is self-generated, so they believe the voices they hear belong to someone else, which explains auditory hallucinations and delusions such as being controlled by an outside force.

1(b) Sensky et al. used a randomised controlled design. 90 patients aged 16 to 60 whose schizophrenia had not responded to medication were referred by clinicians from five centres (West London, Durham, Cleveland and Newcastle), with eligibility confirmed by the researchers using a clinical interview. Patients were randomly allocated to CBT (46) or a befriending control (44), which gave the same amount of therapist contact but was empathic and non-directive and focused on neutral topics such as hobbies.

Both interventions were given individually by two experienced psychiatric nurses, at least 45 minutes a week, with sessions able to be reduced after about 2 months and therapy completed within 9 months. Antipsychotic medication and routine care continued. Sessions were audiotaped. Raters who were blind to the patient's group assessed patients at baseline, after treatment and at a 9-month follow-up, using the Comprehensive Psychiatric Rating Scale, the Scale for Assessment of Negative Symptoms and the Montgomery-Asberg Depression Rating Scale, and patients completed a 10-item satisfaction questionnaire.

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1(c)	One similarity is that both treatments have good evidence that they work. Antipsychotic drugs such as chlorpromazine, which block dopamine receptors, have been shown in drug trials (e.g. Lindstrom et al., 1999) to reduce positive symptoms such as hallucinations. Sensky et al. found that CBT reduced positive and negative symptoms and depression, and that at the 9-month follow-up the CBT group had kept improving while the befriending group had lost some benefits. So both can be justified as effective ways of managing schizophrenia, and both need a professional (a psychiatrist to prescribe, a therapist to deliver CBT). One difference is the approach and the role of the patient. Biochemical treatment comes from the biological approach and assumes the cause is excess dopamine, so the patient is passive and only has to take the drug, although drugs can have side effects such as tardive dyskinesia and symptoms often return if medication stops. CBT comes from the cognitive approach and is active: the patient must work with the therapist to challenge the meaning of their voices and delusional beliefs. This means CBT is not suited to patients who lack motivation or insight or who are acutely psychotic, whereas drugs can be given to almost anyone.
2(a)	Bipolar and related disorders are disorders of abnormal affect, classified as mood disorders in DSM-5. Unlike the normal ups and downs everyone feels, the emotions are amplified and persistent, e.g. despair, emptiness, anger or euphoria, and they significantly impair the person's ability to function normally. Unipolar depression (major depressive disorder) involves a depressed mood for an extended period (at least two weeks in DSM-5), with loss of pleasure in most activities (anhedonia), weight change, changes in sleep (insomnia or hypersomnia), psychomotor agitation, fatigue, feelings of worthlessness and reduced ability to concentrate. Bipolar disorder, previously called manic depression, is characterised by episodes of mania that cannot be explained physically. Mania may include euphoria, rage or

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	irritability, with racing thoughts, being easily distracted, over-confidence, speaking quickly and risky behaviour such as gambling or promiscuity. Mania is one pole, and depression is the other pole, although depression is not essential for diagnosis. There must be some change in polarity for a diagnosis of bipolar disorder. Depression is measured with the Beck Depression Inventory (BDI), a 21-item psychometric questionnaire. Each item has four statements scored 0 to 3, and the person chooses the one that best fits how they have felt in the past week or two weeks, e.g. for unhappiness: 0 "I do not feel unhappy" to 3 "I am so unhappy that I can't stand it". The total score indicates severity: about 10 and above suggests mild depression, 19 to 29 moderate depression and 30 or more severe depression. The BDI has been revised twice since it was introduced.
2(b)	Validity is a key issue. There is no single key symptom for diagnosis, so two people with very different symptoms could both be diagnosed with major depressive disorder, and DSM-5 and ICD-10 do not use exactly the same criteria or length of symptoms. This questions whether the categories measure one real disorder. Co-morbidity also lowers validity, as symptoms overlap with anxiety or schizophrenia, e.g. a manic patient with grandiose beliefs may look psychotic. However, the BDI has been used in some form for over 50 years and appears to capture the essence of depression, so it is thought to have good validity. The BDI is a self-report, so people may exaggerate or minimise symptoms because of social desirability, and a depressed person may not judge their own mood accurately. On the other hand, it is standardised and gives quantitative scores, so it is reliable: a patient's score can be compared over time, e.g. before and after treatment, and between clinicians. Reliability of diagnosis of bipolar disorder is lower, because the clinician must decide whether mood swings are extreme enough to be abnormal. The descriptions are useful, as clear characteristics help clinicians diagnose and

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	treat people quickly, and the BDI is quick to use. However, they are reductionist, as reducing depression to a score out of 63 ignores the person's experience and social situation, which a clinical interview might capture. There may also be gender bias, as women are diagnosed with depression about twice as often as men, which may partly reflect men being less willing to report symptoms rather than a real difference, and cultural bias, as symptoms may be expressed physically in some cultures. Overall, the characteristics and the BDI are useful and reliable but their validity is limited, so they are best used alongside an interview rather than alone.
	Psychology and consumer behaviour
3(a)	1. Information search. 2. Evaluation of alternatives.
3(b)	Reciprocity (Cialdini, 1984): people feel obliged to give something back when they are given something, so the seller gives the customer something first, e.g. a free sample, a free trial or a small discount. The customer then feels they owe the seller and is more likely to say yes to the purchase. Scarcity: people value things more when they seem to be in short supply, so the seller says the product is limited, e.g. "only two left", "last few days of the sale" or Black Friday offers. The fear of missing out pushes the customer to buy now rather than wait or shop elsewhere.
3(c)	For reciprocity, one advantage is that the customer can be better informed and feel valued. A free sample or free trial lets them try the product before paying, so if they then buy, it is more likely to be a product that really meets their need. Because they feel the salesperson was generous rather than pushy, they are more

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likely to trust the salesperson and the store, return in future and recommend it, which builds customer loyalty as well as closing this sale.

One disadvantage is that it can be manipulative. The customer may buy because of social pressure from the norm of reciprocity, feeling they owe the seller, rather than because the product is suitable, so they may spend more than they can afford and regret it afterwards. If they realise they were pressured, they may feel uncomfortable, see the seller as pushy and avoid the store in future, so the sale is lost long term. It is also costly for the business to give away samples to people who never buy.

4(a) Two models explain the effects of ambience. In the pleasure-arousal model (Mehrabian and Russell), mood is a mediating factor between environmental cues and behaviour: cues such as music, smell, lighting and colour affect pleasure and arousal, and we react with approach or avoidance. A positive response increases the time a consumer spends in a shop and so the amount spent. The cognition-emotion model says emotion is not only produced by cognition: Zajonc and Markus (1984) propose emotion can be generated by biological, sensory and cognitive events, while Lazarus (1966) argues cognitions are a necessary but not sufficient precursor of emotion.

Kutlu et al. (2013) studied lighting and colour in retail stores. 121 participants aged 15 to 60 (85% female) answered an 8-question questionnaire evaluating the image of four retail stores in Istanbul, Turkey. 75% thought lighting affected brand image and 31% found the lighting relaxing. It was concluded that the perceived image and identity of the store are influenced by both lighting and colour scheme, with a light-coloured, highly reflective scheme contributing to an exclusive brand image.

Chebat and Michon (2003) carried out a field experiment in a shopping mall in Canada over two weeks. In week 1 (control) no scent was used; in week 2 a

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pleasant citrus scent was diffused into the main corridor. 145 shoppers took part in the scent week and 447 in the control week. Graduate marketing students who wore no perfume gave out a self-administered questionnaire on product quality, the shopping environment and the pleasure and arousal felt. With the scent, shoppers had a more favourable perception of product quality and of the shopping environment, suggesting that smell works through cognition (perception of the mall) rather than only through mood.

4(b) Control of variables is an important issue. Both studies were carried out in real environments, actual stores and a mall, so it was difficult to control variables such as crowding, weather or the reason for the shopping trip. Kutlu et al. did not manipulate any variables, so there was even less control, and the conclusions about lighting are correlational. Chebat and Michon did control some factors: the mall director cancelled special promotions during the two weeks, there was a no-scent control week, and the scent was released for 3 seconds every 6 minutes to keep its intensity constant. This control makes us more confident the scent caused the more positive perceptions. However, the two weeks may have differed in other ways, e.g. different shoppers, and tight control can create a situation that does not reflect real life.

Both studies have high ecological validity, as they measured real shoppers in real stores, so the findings are likely to apply to everyday shopping and are useful to retailers, who can use light colours to create an exclusive image or a pleasant scent to improve perceptions of quality.

Both relied on self-report questionnaires, which give quantitative data that is easy to compare but may lack validity, as shoppers may give socially desirable answers or not be aware of the effect of a subtle scent or light. Kutlu et al.'s sample was 85% female in Istanbul and Chebat and Michon's was in one Canadian mall, so findings may not generalise to other cultures, where colours have different

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meanings.

The models are reductionist, as they reduce shopping behaviour to mood or cognition and ignore factors such as price and budget. Ethically, shoppers in the scent week did not consent to being exposed to the scent, although it was harmless.

Overall, the research suggests ambience does affect consumers, but because control was limited, cause and effect cannot be fully established.

Psychology and health

5(a) The Yale model says that for health promotion to work, the message must pass through stages: attention (it must grab attention so the person notices the advice), comprehension (it must be understood) and acceptance (the person must accept it and change their health behaviour). Its success depends on the source, the message, the medium and the audience.

5(b) Lau et al. carried out a longitudinal study to investigate the influence of parents and peers on changes in young people's preventive health beliefs and behaviours about drinking, diet, exercise and wearing seatbelts. Participants were over 1000 students at Carnegie Mellon University in the USA. Data was gathered by questionnaires from the students and their parents at the start (baseline views) and again in the spring of the students' second and third years at university. Parents had the greatest influence on young people's health beliefs and practices, with modelling of the parents' own behaviour being the most powerful influence. However, views changed significantly during the study as the influence of peers increased, so once the young person leaves home, peers have a stronger influence on their health behaviour.

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5(c)	One strength is that it was a longitudinal study, following the same students over three years. This means changes in health beliefs and behaviours, such as drinking, could be seen in the same specific participants as they moved from home to university and peer influence increased. Because the same people were compared with themselves, individual differences between participants could not explain the change, which increases validity. It also collected data from the parents themselves rather than asking students what they thought their parents believed. One weakness is the high attrition rate: 1029 students took part at the start, but only 635 in year 2 and 532 in year 3. The students who dropped out may have been different from those who stayed, e.g. heavier drinkers who were less willing to report their behaviour, so the remaining sample may be biased. This, together with the sample being mostly well-educated, affluent and male students at one university, means the findings may not generalise to all adolescents.
6(a)	Self-report: the clinical interview is a dialogue between practitioner and patient to help with diagnosis. It can be semi-structured or unstructured, so the patient can elaborate on their symptoms in their own words, e.g. how the pain began and how it affects their life. Psychometric measures: the McGill Pain Questionnaire (MPQ) is a standardised questionnaire with four sections. Location: the patient marks where the pain is on a diagram of the body. What does your pain feel like?: the patient selects one word from each of 20 sub-categories, e.g. spreading, radiating, penetrating or piercing. How does your pain change with time?: words and open questions about what relieves or increases the pain. How strong is your pain?: rating scales to describe current pain and compare it with pain experienced before. Visual rating scales: on the visual analogue scale (VAS) the patient marks a point on a 10 cm line with descriptors at each end, e.g. no pain and worst pain imaginable. The point can be measured, giving a score.

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Behavioural measures: the UAB pain behaviour scale records only observable behaviour, not subjective report. The clinician rates behaviours such as body language, vocal complaints, grimacing and mobility, giving a score out of 10 each time it is used.

Measures for children: the Paediatric Pain Questionnaire (Varni and Thompson) is based on the MPQ and has separate forms for the child, parent and clinician, measuring pain intensity, location and affective factors; young children can use colours and adolescents descriptive words. The Wong-Baker FACES scale shows faces from a happy face at 0 (no hurt) to a crying face at 10 (hurts worst), and the child chooses the face that matches their pain.

6(b)

Psychometrics is a key issue. Nearly all the measures give a psychometric score: the VAS, UAB and Wong-Baker scale score out of 10 and the MPQ and Paediatric Pain Questionnaire give several scores. The clinical interview does not, unless the practitioner adds a rating. Scores are a strength, as they can be analysed and compared, e.g. a patient's pain before and after treatment, and standardised measures should be reliable and valid. However, a number on a scale lacks descriptive detail about what the pain is like, although the MPQ partly solves this with its descriptive words, and a score can lack validity because one patient's 6 may be another's 9.

Most measures are self-reports, which is appropriate because pain is a subjective experience only the patient can feel. But patients may exaggerate pain to get stronger medication or minimise it to avoid treatment, lowering validity. The UAB scale is more objective because a trained observer records behaviour, but it is reductionist, as some people in severe pain do not grimace or complain, and observers may disagree.

The measures differ in usefulness. The MPQ is detailed but takes time and needs a good vocabulary, so it is unsuitable for young children or people with language

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difficulties. The VAS and Wong-Baker scale are quick and easy to use and can be generalised to children, but they measure only intensity.

There are also issues of generalisability: the meaning of pain words differs between cultures, and children may choose the happy or crying face because they like the picture rather than to match their pain.

Overall, the best approach is holistic, combining an interview with a psychometric and a behavioural measure.

Psychology and organisations

7(a) 1. Model the way.

2. Inspire a shared vision.

7(b) Muczyk and Reimann describe leaders on two dimensions: the degree of participation the leader allows in decision making (low or high) and the amount of direction the leader gives in carrying out the decision (high or low). This gives four styles.

A directive autocrat makes decisions alone and closely supervises staff. A directive democrat encourages strong participation in decisions but monitors closely how they are carried out. A permissive autocrat makes decisions alone but lets staff choose how to implement them. A permissive democrat invites a high degree of participation in decisions and allows autonomy in how they are carried out, and is seen as the ideal leader in Western cultures.

7(c) One similarity is that both say there is no one best leadership style, and the style should depend on the situation, so the leader must be adaptive. Muczyk and Reimann say a leader should combine participation and direction to suit the situation, e.g. being a directive autocrat in a crisis or with new, inexperienced staff.

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Hersey and Blanchard also say leaders must adapt their style to the readiness (maturity) of their followers, e.g. telling a new employee exactly what to do but delegating to an experienced one.

One difference is the principles each is based on. Situational leadership has four styles, telling, selling, participating and delegating, based on how much task and relationship behaviour the leader gives according to the followers' ability and willingness. Muczyk and Reimann base their styles on the two dimensions of participation and direction, and make a distinction between making a decision and carrying it out, so a leader can, for example, let workers participate in the decision but still direct its implementation. Situational leadership does not separate making decisions from carrying them through.

8(a) Tuckman (1965) proposed that groups develop through stages: forming (orientation to the task, members get to know each other and are polite), storming (intra-group conflict as members compete for roles and disagree about the task), norming (development of group cohesion and agreed norms) and performing (functional role-relatedness, where the group tackles the task effectively). Tuckman and Jensen (1977) added a fifth stage, adjourning, when the task is completed and the group breaks up.

Belbin (1981) identified nine team roles in three categories. Thought-related (cerebral) roles: plant (creative problem solver), specialist (provides skill and knowledge) and monitor evaluator (strategic, judges options). Action-related roles: shaper (thrives on pressure and drives the team), implementer (turns ideas into practical action) and completer finisher (finds errors and finishes projects on time). People-related roles: coordinator (a good chairperson who delegates), teamworker (cooperative, avoids friction) and resource investigator (explores opportunities and contacts). An effective team needs a balance of roles.

Team roles are measured with the Belbin Team Inventory. The Belbin Individual

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	Report, based on the person's own questionnaire about how they behave in a team, identifies which combination of the nine roles they prefer and pinpoints their strengths and weaknesses. Observer Assessments, a quick five-minute online questionnaire completed by colleagues, give 360-degree feedback, so the person's view of their behaviour can be contrasted with how colleagues see it. People are scored on how strongly they show each role and often show strong tendencies towards several roles.
8(b)	Both theories have practical applications. Tuckman's theory makes organisations aware of the stages of group development, so new groups can be given time to go through forming and storming before being given important tasks to complete once they reach norming and performing. Managers can also see that conflict in storming is normal. However, it can be difficult to identify which stage a group is at, and an outside expert may be needed. The Belbin Team Inventory can identify the best role for each worker and could be used at interview to choose the candidate who fills a missing role. Belbin's theory may be less useful to small companies without enough staff for nine roles, but Belbin adjusted it, suggesting a minimum of one coordinator, one implementer and one plant. Tuckman's model may be too simple: groups do not always pass through the stages in order, and may return to storming when a new member joins, so it is reductionist. It is also deterministic in suggesting every group must go through each stage, ignoring free will and the influence of a skilled leader. The Belbin inventory is a self-report, so people may describe the role they would like to have rather than their real behaviour, lowering validity, although the observer assessments reduce this bias. It gives quantitative scores that allow comparisons between workers. There is also an individual versus situational debate. Belbin sees roles as stable individual preferences, but a person's role may depend on the situation, e.g. the

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task or the other members, while Tuckman focuses on the situation of the group as a whole.

Overall, both are useful for managers, but they should be used flexibly rather than as fixed rules.

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PSYCHOLOGY **9990/32**

Paper 3 Specialist Options: Theory **October/November 2021**

1 hour 30 minutes

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You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

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Psychology and abnormality

Answer **all** questions.

1 **(a)** Outline the behavioural explanation of phobias. [2]

(b) Describe the Generalised Anxiety Disorder assessment (GAD-7). [4]

(c) Explain **one** strength and **one** weakness of the GAD-7. [6]

2 **(a)** Describe characteristics and assessment of schizophrenia spectrum and psychotic disorders. [8]

(b) Evaluate characteristics and assessment of schizophrenia spectrum and psychotic disorders, including a discussion of validity. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Outline the AIDA model of advertising. [2]

(b) Describe the study by Kohli et al. (2007) on effective slogans. [4]

(c) Explain **two** strengths of the study by Kohli et al. [6]

4 **(a)** Describe what psychologists have discovered about packaging, positioning and placement of the product (gift-wrapping, product colour and associative learning, attention and shelf position). [8]

(b) Evaluate what psychologists have discovered about packaging, positioning and placement of the product (gift-wrapping, product colour and associative learning, attention and shelf position), including a discussion of self-reports. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Outline **one** symptom of Munchausen syndrome. [2]

(b) Describe the findings of the study by McKinstry and Wang (1991) of non-verbal communications in the patient–practitioner relationship. [4]

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

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

(b) Evaluate what psychologists have discovered about improving adherence to medical advice, including a discussion of experiments. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Outline the two factor theory of job satisfaction (Herzberg, 1959). [2]

(b) Describe the job descriptive index (JDI) developed by Smith et al. (1969). [4]

(c) Explain **one** similarity and **one** difference between the JDI and the quality of working life (QWL) questionnaire (Walton, 1974). [6]

8 **(a)** Describe what psychologists have discovered about group conflict in organisations. [8]

(b) Evaluate what psychologists have discovered about group conflict in organisations, including a discussion of individual and situational explanations. [10]

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Answers for paper 9990/32

Psychology and abnormality

1(a) Phobias are learned through classical conditioning. A neutral stimulus, e.g. a dog, is paired with an unconditioned stimulus that produces fear, e.g. being bitten, so the dog becomes a conditioned stimulus that produces a conditioned fear response. After a trauma one pairing may be enough.

1(b) The GAD-7 is a screening tool for generalised anxiety disorder in the form of a self-report questionnaire. It has 7 items, and patients report how often over the last 2 weeks they have been bothered by each one, e.g. "feeling nervous, anxious or on edge", "not being able to stop or control worrying", "trouble relaxing" and "feeling afraid as if something awful might happen".

Each item is scored 0 to 3: 0 is not at all, 1 is several days, 2 is over half the days and 3 is nearly every day. The scores are added to give a total out of 21, and scores of 5, 10 and 15 are the cut-off points for mild, moderate and severe anxiety.

1(c) One strength is that it has high reliability and validity. When 965 patients had a telephone interview with a clinician, there was good agreement between the self-report and the interviewer-administered versions of the scale. Increasing scores were strongly associated with functional impairment, and factor analysis showed that anxiety and depression symptoms, although they often co-occur, were distinct. It is also quick and easy to use because the items are clear, so it can be used in GP surgeries and repeated to compare scores before and after treatment.

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One weakness is that it is only a screening tool. A high score suggests the person may have GAD, but for a diagnosis a clinician must carry out a further assessment, partly because symptoms such as restlessness or irritability overlap with other disorders such as depression. Also, as a self-report with only fixed choices, patients may exaggerate or misremember how often they felt anxious, and they cannot explain in their own words how anxiety affects them, so it may fail to capture the complexity of their experience.

2(a) DSM-5 defines schizophrenia spectrum and other psychotic disorders as sharing one or more of these features. Positive symptoms include delusions (beliefs not based in reality), hallucinations (sensory experiences of things that do not exist, e.g. hearing voices), disorganised thinking and speech, and grossly disorganised or catatonic behaviour. Negative symptoms include alogia (loss of speech), avolition (loss of motivation), diminished facial and emotional expression and social withdrawal. Examples of the spectrum include schizotypal personality disorder, schizoaffective disorder and substance or medication-induced psychotic disorder.

Schizophrenia is diagnosed when a person shows at least two symptoms, for at least one month, from delusions, hallucinations, disorganised speech, disorganised or catatonic behaviour and negative symptoms such as flattened affect, with at least one being delusions, hallucinations or disorganised speech. Social or occupational functioning must have declined, and the symptoms cannot be explained by another medical condition or substance.

Delusional disorder is characterised by persistent delusions for at least one month, while the person's other behaviour is fairly normal, without hallucinations, disorganised speech or negative symptoms. Types include grandiose (belief in an unrecognised high status or great skill), persecutory (being conspired against or pursued) and erotomanic (belief that someone, often famous, is in love with them).

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Freeman et al. (2008) assessed paranoid symptoms using virtual reality. 200 non-clinical members of the public first completed measures of intellectual functioning, trait paranoia (Green et al. Paranoid Thoughts Scale) and factors in the cognitive model of paranoia, plus a simulator-sickness questionnaire before and after. They then took a 4-minute virtual journey on a London Underground train populated by neutral computer-generated avatars that breathed and looked around, with background tube noise and snippets of conversation. Afterwards they completed a State Social Paranoia Scale and described their experiences. Comments ranged from positive to neutral to paranoid, e.g. "Lady sitting down laughed at me when I walked past", an unambiguous demonstration of paranoid thinking in the general public.

2(b)

Validity of diagnosis is a key issue. Schizophrenia spectrum disorders include a variety of symptoms and no one symptom is needed, so two people with very different symptoms, e.g. one with hallucinations and one with only negative symptoms, could both be diagnosed with schizophrenia. DSM-5 and ICD-10 do not use the same criteria or length of symptoms. Diagnosis relies on self-report from someone who, by definition, may not be in touch with reality, and co-morbidity, e.g. overlap with depression, makes it harder to diagnose accurately.

Case studies have validity because they are detailed and often take place over a long time, but they may not generalise and the data may be subjective. Freeman's VR study has good validity because several measures, e.g. trait paranoia and cognitive factors, were taken to compare with responses in VR. The avatars were neutral, so any paranoid interpretation must come from the participant. Also, rather than relying on a patient describing symptoms since the last appointment, a practitioner could witness responses in a lifelike situation. However, ecological validity is limited, as a simulated train is not real life.

Reliability is also a problem: clinicians may disagree about whether a belief is

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delusional, especially across cultures, e.g. hearing the voice of a dead relative may be normal in some cultures, so there is cultural bias. However, Freeman's standardised VR environment is the same for everyone and could be repeated, giving reliable comparisons.

The DSM categories are useful, as a clear diagnosis allows appropriate treatment, but they are reductionist, reducing a person's experience to a checklist of symptoms. Freeman's sample was non-clinical, so findings may not generalise to people with schizophrenia.

Overall, the definitions and VR assessment are useful, but validity of diagnosis remains limited.

Psychology and consumer behaviour

3(a) The AIDA model describes how an advert affects a customer: it must first get Attention (awareness), then create Interest, then increase Desire for the product, and finally lead to Action, buying it. It is often shown as a funnel.

3(b) Kohli et al. (2007) is a review article on effective slogans. The researchers describe how slogans can change for a product (e.g. Pepsi has changed its slogan many times) while logos tend to stay the same. Slogans aim to enhance brand awareness and help create brand image. They make seven recommendations, including:

Keep your eye on the horizon: look at where the brand is going, as some slogans stand the test of time. Every slogan is a brand positioning tool, so it should position the brand clearly. Link the slogan to the brand, as surprisingly few slogans include the brand name. Please repeat that: the slogan should stay the same over many adverts. Jingle, jangle: jingles enhance memorability. Use slogans at the outset. It's okay to be creative: slogans with complexity trigger deeper

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	processing and may be recalled better.
3(c)	One strength is that it is a review article, so it pulls together a large body of previous research and examples into one comprehensive set of findings. It refers to a large number of slogans for a huge variety of products, from medicines to car brands, rather than testing one slogan in one experiment. This makes the conclusions more generalisable, as they are not based on one product or one sample, and they are likely to apply across many types of brand. A second strength is that it is useful. It gives clear, practical advice that companies can follow to create better slogans, e.g. include the brand name in the slogan so consumers link the two, keep the slogan the same across many adverts, and introduce it at the launch of a brand. Following this advice should improve brand awareness and recall, helping companies to sell more and avoid wasting money on slogans that are forgotten or not linked to the brand. It also refers to recent research, so it has good temporal validity.
4(a)	Porublev et al. (2009) investigated gift-wrapping using three methods: observations at a Christmas gift-wrapping stall, 20 in-depth interviews in which people reflected on gift-wrapping (e.g. "in what instances do you wrap gifts?"), and 6 workshops in which pairs of participants wrapped two gifts, one for someone close and one for an acquaintance, while talking to their partner. Participants, from Victoria, Australia, aged about 25 to 35, mostly preferred to receive a wrapped gift and had clear expectations of what a gift should look like, supported by detailed qualitative data. Grossman and Wisenblit (1999) reviewed the role of classical conditioning in colour choices. Consumers learn to associate certain colours with certain products, leading to more frequent purchasing. Car companies use colour consultants and plan 3 to 4 years ahead. In Cheer detergent, blue flakes among white suggested cleanliness.

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Dark blue is linked with passivity (the night sky) and yellow and red with arousal (sunlight). Associations differ by culture, e.g. grey suggests expensive products in the USA but cheap ones in Japan and China, and preferences depend on the product, e.g. a vitamin in a black container with white lettering was disliked because it looked like poison.

Atalay et al. (2012) used eye tracking to study the tendency to choose the option in the centre of an array. In study IA, 67 undergraduates in France viewed vitamin supplements and meal replacement bars with fictitious brand names in a 3 × 3 matrix on a screen: central brands received more eye fixations and were looked at for longer. Study IB (64 students in Paris) shifted the matrix away from the centre of the screen, and the central brand was still gazed at longer. In study 2, 84 students at Concordia University chose between fictitious energy drinks on a real shelf, positioned so the products were never in the centre of their visual field. The centrally located brand was still chosen more often, even though it was not always the most positively evaluated.

4(b)

Self-reports are a key issue. In Atalay's study IA, participants indicated their brand choice and then completed a survey on their inferences about the brands, memory, familiarity and demographics. The choice they reported in the lab may not be what they would choose in a real shop, so it may lack validity, and they might give socially desirable answers or respond to demand characteristics. However, the survey was standardised, so it is reliable, and gave quantitative data allowing statistical comparison. Porublev used interviews, where the way questions were asked could introduce bias and people may not tell the truth, but the qualitative data was detailed, probably giving more valid insight into why people wrap gifts. Grossman and Wisenblit's review gives little detail about the self-reports it is based on.

Atalay also used eye tracking, an objective measure that cannot be faked, which

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increases validity, and study 2 used a real shelf, improving ecological validity. However, the brands were fictitious and participants did not spend their own money, so behaviour may differ in a real supermarket.

The samples were mostly students in France and Canada or young adults in Australia, so findings may not generalise to other ages or cultures; Grossman and Wisenblit themselves show colour meanings differ between cultures, so there is a risk of cultural bias.

The research is useful: manufacturers can pay for central shelf positions, choose colours that create the right associations and use attractive gift-wrapping services. However, using these findings to influence consumers without their awareness raises ethical concerns.

Overall, the research is useful, but its reliance on self-report and student samples limits its validity.

Psychology and health

5(a) One symptom is self-infliction of injury: the person deliberately harms themselves, e.g. cutting or burning themselves or injecting themselves with contaminated substances, in order to appear to have an illness and receive medical attention.

5(b) Overall, patients favoured a more formal approach to dress. The male doctor in a formal suit and tie and the female doctor in a white coat scored most highly, particularly among patients from higher social classes. The male doctor in a tweed jacket was the least disliked of the outfits. 64% of patients thought the way their doctor dressed was very important or quite important. There was marked variation between the preferences of patients registered with different practices.

5(c) One weakness is the limited conditions of the independent variable. The

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researchers did not include a picture of a female doctor in a suit, and several patients commented on this. This means we cannot tell whether patients preferred the white coat or simply formal dress for women, so the researchers had to be cautious about recommending that female doctors wear a white coat. This reduces the validity and usefulness of the conclusions about how female doctors should dress.

A second weakness is low generalisability. The sample was taken from one specific area, Lothian in Scotland, and was skewed towards elderly patients, who may hold more traditional views about how doctors should look. Also, because preferences varied between practices, patients may simply have chosen the style of dress they were used to from their own doctor. So the findings may not apply to younger patients, other parts of the UK or other cultures.

6(a) Ley (1988) reviewed studies of GP and hospital patients and found 28% of UK patients had low satisfaction with the treatment received and 41% with treatment and interaction with the doctor. Ley saw patients as information seekers and suggested improving practitioner style to increase adherence: increasing satisfaction by listening to the patient and finding out their worries; improving understanding and memory by avoiding jargon, using simple language, stating key information first, repeating and summarising key points, having the patient repeat instructions back, and using written information or diagrams; and selecting content carefully, being aware of the effect of what is said, e.g. whether it will cause fear.

Yokley and Glenwick (1984) evaluated behavioural techniques to motivate parents to get children aged 5 or under immunised (e.g. diphtheria, tetanus, polio) in a mid-west US city of about 300 000. Families were put into conditions: general prompt (195), specific prompt with child-specific information and free inoculations (190), specific prompt plus increased access with extra clinic hours and free childcare (185), specific prompt plus monetary incentive through a cash lottery

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(183), a contact control (189) and a no-contact control (191). Over 12 weeks, the monetary incentive had the biggest effect on attendance, followed by increased access, the specific prompt and the general prompt.

Watt et al. (2003) studied 32 Australian children aged 1.5 to 6 with asthma. Parents completed questionnaires after the child used the standard Breath-a-Tech spacer and then the Funhaler, each over two weeks. The Funhaler rewards correct use with a spinning disc and a whistle. There was no significant difference in the amount of medication delivered, but 38% more parents had medicated their child the previous day with the Funhaler, and 60% more children adhered to the recommended 4 or more breathing cycles.

6(b) Experiments are a key issue. Yokley and Glenwick used an independent measures design, while Watt et al. used repeated measures, with each child using both devices, which removes participant variables. Both could be classed as field experiments, as they took place in people's real lives, so some variables were hard to control, e.g. how busy families were or how ill each child was. However, standard procedures and a clear manipulation of the IV mean the studies can be seen as valid and replicable. Yokley's study measured actual immunisation records, so it was free from parents lying, and Watt et al. objectively measured how much medication each device delivered. However, adherence in Watt's study was partly reported by parents, who could say they medicated more than they did. Watt's study also had a fixed order, the Funhaler always second, so order effects such as novelty may explain some of the improvement.

Ethically, Yokley's monetary incentive could be seen as bribery, and the no-contact group may have missed immunisations, although no one was prevented from attending. The research is useful: health services can send specific reminders, increase access and make devices fun for children, and Ley's advice is cheap and easy for doctors to apply.

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Generalisability is limited: Watt's sample was only 32 children over a short period, and Yokley's was one US city, so long-term adherence and other cultures were not tested. Ley's review relied on self-reports of satisfaction, which may be affected by social desirability.

Behavioural techniques are reductionist and deterministic, assuming patients respond to reward, and ignore cognitive reasons for non-adherence such as beliefs about side effects.

Overall, experiments show these techniques improve adherence, but more long-term research is needed.

Psychology and organisations

7(a) Herzberg proposed that job satisfaction and dissatisfaction are independent, not a continuum. Motivators, e.g. recognition, responsibility, growth and advancement, must be present for satisfaction, while hygiene factors, e.g. salary, working conditions, company policy and supervision, cause dissatisfaction when absent or poor.

7(b) The JDI is a self-report questionnaire that measures job satisfaction on five dimensions: the work itself (job), supervision, pay, promotions and co-workers. For each dimension the person is given a list of words or short phrases, e.g. "Think of the pay you get. How well does each of the following words describe your present pay?" with items such as "income adequate for normal expenses", "insecure" and "less than I deserve", or for the job in general "undesirable", "better than most", "rotten".

Next to each word the person writes Y for yes, N for no or ? if they cannot decide. Each answer has a score, so a numerical total can be calculated for satisfaction on each of the five dimensions, which can be compared with

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	standardised norms based on job type, age, gender, education and community prosperity.
7(c)	One similarity is that both measure job satisfaction on a number of different dimensions and give a numerical score for each dimension and for overall satisfaction. Both specifically measure satisfaction with pay, opportunities and colleagues: the JDI has pay, promotions and co-workers, and the QWL has salary, opportunities at work and social integration at work. Because both collect quantitative data, an employer can compare scores between departments or over time, so both are useful in application. One difference is the response format. The JDI uses fixed choices, Y, N or ?, so the employee can only say whether a word describes their job or not. The QWL questionnaire uses a 5-point Likert scale from very dissatisfied to very satisfied, so the employee can show the degree of their satisfaction, giving more sensitive and detailed data. The QWL also covers more dimensions, eight rather than five, including use of capacities at work, respecting laws and rules at work, the space work occupies in life and the social relevance of work, so it gives a broader picture of working life than the JDI.
8(a)	Conflict can occur at different levels: intra-group conflict between people in the same group, inter-group conflict between two groups in an organisation, and inter-individual conflict between two or more individuals. Organisational causes include status differences leading to friction, differences of opinion about the best way to achieve an outcome, lack of resources such as money, space, supplies or staff, and groups forming a chain for completing a task, where many things can go wrong. Interpersonal causes include clashes between the personal characteristics of employees, leading to lack of cooperation; if two heads of department clash, this can escalate into conflict between their departments.

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Negative effects of conflict include reduced group cohesion, inhibited communication, lack of trust and constant bickering that reduces productivity. It can harm the physical and psychological health of those involved, increasing absenteeism and turnover and reducing satisfaction. Positive effects include members rethinking what they do, improving creativity and innovation; storming is a necessary part of group formation; groupthink is less likely; workers become less complacent; and consulting the workforce to resolve conflict makes workers feel listened to. Healthy competition can increase productivity.

Thomas (1976) suggests five strategies for managing conflict: competition (one side wins and one loses, so the conflict ends), accommodation (one side makes a sacrifice), compromise (each side gives up something, and both must agree), collaboration (the sides work together to find a solution that satisfies both) and avoidance (a cooling-off period that suppresses the conflict but is not a permanent solution). Thomas also suggests setting a superordinate goal that both sides must work on together, which reduces conflict by focusing them elsewhere.

8(b)

The individual versus situational debate is central. Some causes of conflict are situational: organisational causes such as lack of resources and status differences come from the work environment. Others are individual, such as clashing personalities. The effects of conflict also depend on the situation, e.g. the type, hierarchy and size of the organisation and head office rules. Identifying individual factors lets managers put compatible personalities together or identify people needing conflict resolution, while identifying situational factors can lead to changes in the work environment, practices or management style. However, changing the situation may not prevent clashes caused by dispositional factors, so both must be considered, and the explanations are best seen as interacting.

The research has practical applications: managers can recognise early signs of conflict and choose a strategy, e.g. compromise or a superordinate goal, and can

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encourage healthy conflict to avoid groupthink. However, most of Thomas's strategies can only be implemented by managers, not by the individuals in conflict, and Thomas does not say which strategy works best in which situation.

Much of this area is descriptive rather than based on controlled research, so there is little evidence to show cause and effect, and conclusions may be based on Western organisations, giving cultural bias: in collectivist cultures, avoidance or accommodation may be preferred to protect group harmony.

Explanations can be reductionist, e.g. blaming conflict only on personality, and deterministic, suggesting conflict is inevitable when resources are scarce, ignoring the free will of workers to cooperate.

Overall, conflict is best understood as an interaction of individual and situational factors.

Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/33**

Paper 3 Specialist Options: Theory **October/November 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)** Outline **one** cognitive explanation of schizophrenia and delusional disorder. [2]

(b) Describe the procedure in the study by Sensky et al. (2000) of cognitive-behavioural therapy (CBT) for schizophrenia. [4]

(c) Explain **one** similarity and **one** difference between CBT and biochemical treatments for schizophrenia/delusional disorder. [6]

2 **(a)** Describe characteristics and measures of bipolar and related disorders. [8]

(b) Evaluate characteristics and measures of bipolar and related disorders, including a discussion of validity. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** One stage in the consumer decision model when buying a product is 'recognition of need'.

Identify **two** other stages from this model. [2]

(b) Describe **two** ways to close a sale. [4]

(c) For **one** of the ways you described in **(b)**:

Explain **one** advantage and **one** disadvantage of this way to close a sale. [6]

4 **(a)** Describe what psychologists have discovered about lighting, colour and smell in the physical environment. [8]

(b) Evaluate what psychologists have discovered about lighting, colour and smell in the physical environment, including a discussion about control of variables. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Outline the Yale model of communication in relation to health promotion. [2]

(b) Describe the study by Lau et al. (1990) on health change in adolescents. [4]

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

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

(b) Evaluate what psychologists have discovered about measuring pain, including a discussion of psychometrics. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Kouzes and Posner (1987) produced the Leadership Practices Inventory (LPI) which measures five practices of exemplary leadership.

Identify **two** of these practices. [2]

(b) Describe the styles of leader behaviour proposed by Muczyk and Reimann (1987). [4]

(c) Explain **one** similarity and **one** difference between styles of leader behaviour (Muczyk and Reimann, 1987) and situational leadership (Hersey and Blanchard, 1988). [6]

8 **(a)** Describe what psychologists have discovered about group development and roles in organisations. [8]

(b) Evaluate what psychologists have discovered about group development and roles in organisations, including a discussion of 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) Frith describes schizophrenia as an abnormality of self-monitoring. The person fails to recognise that their own inner speech is self-generated, so they believe the voices they hear belong to someone else, which explains auditory hallucinations and delusions such as being controlled by an outside force.

1(b) Sensky et al. used a randomised controlled design. 90 patients aged 16 to 60 whose schizophrenia had not responded to medication were referred by clinicians from five centres (West London, Durham, Cleveland and Newcastle), with eligibility confirmed by the researchers using a clinical interview. Patients were randomly allocated to CBT (46) or a befriending control (44), which gave the same amount of therapist contact but was empathic and non-directive and focused on neutral topics such as hobbies.

Both interventions were given individually by two experienced psychiatric nurses, at least 45 minutes a week, with sessions able to be reduced after about 2 months and therapy completed within 9 months. Antipsychotic medication and routine care continued. Sessions were audiotaped. Raters who were blind to the patient's group assessed patients at baseline, after treatment and at a 9-month follow-up, using the Comprehensive Psychiatric Rating Scale, the Scale for Assessment of Negative Symptoms and the Montgomery-Asberg Depression Rating Scale, and patients completed a 10-item satisfaction questionnaire.

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1(c)	One similarity is that both treatments have good evidence that they work. Antipsychotic drugs such as chlorpromazine, which block dopamine receptors, have been shown in drug trials (e.g. Lindstrom et al., 1999) to reduce positive symptoms such as hallucinations. Sensky et al. found that CBT reduced positive and negative symptoms and depression, and that at the 9-month follow-up the CBT group had kept improving while the befriending group had lost some benefits. So both can be justified as effective ways of managing schizophrenia, and both need a professional (a psychiatrist to prescribe, a therapist to deliver CBT). One difference is the approach and the role of the patient. Biochemical treatment comes from the biological approach and assumes the cause is excess dopamine, so the patient is passive and only has to take the drug, although drugs can have side effects such as tardive dyskinesia and symptoms often return if medication stops. CBT comes from the cognitive approach and is active: the patient must work with the therapist to challenge the meaning of their voices and delusional beliefs. This means CBT is not suited to patients who lack motivation or insight or who are acutely psychotic, whereas drugs can be given to almost anyone.
2(a)	Bipolar and related disorders are disorders of abnormal affect, classified as mood disorders in DSM-5. Unlike the normal ups and downs everyone feels, the emotions are amplified and persistent, e.g. despair, emptiness, anger or euphoria, and they significantly impair the person's ability to function normally. Unipolar depression (major depressive disorder) involves a depressed mood for an extended period (at least two weeks in DSM-5), with loss of pleasure in most activities (anhedonia), weight change, changes in sleep (insomnia or hypersomnia), psychomotor agitation, fatigue, feelings of worthlessness and reduced ability to concentrate. Bipolar disorder, previously called manic depression, is characterised by episodes of mania that cannot be explained physically. Mania may include euphoria, rage or

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	irritability, with racing thoughts, being easily distracted, over-confidence, speaking quickly and risky behaviour such as gambling or promiscuity. Mania is one pole, and depression is the other pole, although depression is not essential for diagnosis. There must be some change in polarity for a diagnosis of bipolar disorder. Depression is measured with the Beck Depression Inventory (BDI), a 21-item psychometric questionnaire. Each item has four statements scored 0 to 3, and the person chooses the one that best fits how they have felt in the past week or two weeks, e.g. for unhappiness: 0 "I do not feel unhappy" to 3 "I am so unhappy that I can't stand it". The total score indicates severity: about 10 and above suggests mild depression, 19 to 29 moderate depression and 30 or more severe depression. The BDI has been revised twice since it was introduced.
2(b)	Validity is a key issue. There is no single key symptom for diagnosis, so two people with very different symptoms could both be diagnosed with major depressive disorder, and DSM-5 and ICD-10 do not use exactly the same criteria or length of symptoms. This questions whether the categories measure one real disorder. Co-morbidity also lowers validity, as symptoms overlap with anxiety or schizophrenia, e.g. a manic patient with grandiose beliefs may look psychotic. However, the BDI has been used in some form for over 50 years and appears to capture the essence of depression, so it is thought to have good validity. The BDI is a self-report, so people may exaggerate or minimise symptoms because of social desirability, and a depressed person may not judge their own mood accurately. On the other hand, it is standardised and gives quantitative scores, so it is reliable: a patient's score can be compared over time, e.g. before and after treatment, and between clinicians. Reliability of diagnosis of bipolar disorder is lower, because the clinician must decide whether mood swings are extreme enough to be abnormal. The descriptions are useful, as clear characteristics help clinicians diagnose and

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	treat people quickly, and the BDI is quick to use. However, they are reductionist, as reducing depression to a score out of 63 ignores the person's experience and social situation, which a clinical interview might capture. There may also be gender bias, as women are diagnosed with depression about twice as often as men, which may partly reflect men being less willing to report symptoms rather than a real difference, and cultural bias, as symptoms may be expressed physically in some cultures. Overall, the characteristics and the BDI are useful and reliable but their validity is limited, so they are best used alongside an interview rather than alone.
	Psychology and consumer behaviour
3(a)	1. Information search. 2. Evaluation of alternatives.
3(b)	Reciprocity (Cialdini, 1984): people feel obliged to give something back when they are given something, so the seller gives the customer something first, e.g. a free sample, a free trial or a small discount. The customer then feels they owe the seller and is more likely to say yes to the purchase. Scarcity: people value things more when they seem to be in short supply, so the seller says the product is limited, e.g. "only two left", "last few days of the sale" or Black Friday offers. The fear of missing out pushes the customer to buy now rather than wait or shop elsewhere.
3(c)	For reciprocity, one advantage is that the customer can be better informed and feel valued. A free sample or free trial lets them try the product before paying, so if they then buy, it is more likely to be a product that really meets their need. Because they feel the salesperson was generous rather than pushy, they are more

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likely to trust the salesperson and the store, return in future and recommend it, which builds customer loyalty as well as closing this sale.

One disadvantage is that it can be manipulative. The customer may buy because of social pressure from the norm of reciprocity, feeling they owe the seller, rather than because the product is suitable, so they may spend more than they can afford and regret it afterwards. If they realise they were pressured, they may feel uncomfortable, see the seller as pushy and avoid the store in future, so the sale is lost long term. It is also costly for the business to give away samples to people who never buy.

4(a) Two models explain the effects of ambience. In the pleasure-arousal model (Mehrabian and Russell), mood is a mediating factor between environmental cues and behaviour: cues such as music, smell, lighting and colour affect pleasure and arousal, and we react with approach or avoidance. A positive response increases the time a consumer spends in a shop and so the amount spent. The cognition-emotion model says emotion is not only produced by cognition: Zajonc and Markus (1984) propose emotion can be generated by biological, sensory and cognitive events, while Lazarus (1966) argues cognitions are a necessary but not sufficient precursor of emotion.

Kutlu et al. (2013) studied lighting and colour in retail stores. 121 participants aged 15 to 60 (85% female) answered an 8-question questionnaire evaluating the image of four retail stores in Istanbul, Turkey. 75% thought lighting affected brand image and 31% found the lighting relaxing. It was concluded that the perceived image and identity of the store are influenced by both lighting and colour scheme, with a light-coloured, highly reflective scheme contributing to an exclusive brand image.

Chebat and Michon (2003) carried out a field experiment in a shopping mall in Canada over two weeks. In week 1 (control) no scent was used; in week 2 a

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	pleasant citrus scent was diffused into the main corridor. 145 shoppers took part in the scent week and 447 in the control week. Graduate marketing students who wore no perfume gave out a self-administered questionnaire on product quality, the shopping environment and the pleasure and arousal felt. With the scent, shoppers had a more favourable perception of product quality and of the shopping environment, suggesting that smell works through cognition (perception of the mall) rather than only through mood.
4(b)	Control of variables is an important issue. Both studies were carried out in real environments, actual stores and a mall, so it was difficult to control variables such as crowding, weather or the reason for the shopping trip. Kutlu et al. did not manipulate any variables, so there was even less control, and the conclusions about lighting are correlational. Chebat and Michon did control some factors: the mall director cancelled special promotions during the two weeks, there was a no-scent control week, and the scent was released for 3 seconds every 6 minutes to keep its intensity constant. This control makes us more confident the scent caused the more positive perceptions. However, the two weeks may have differed in other ways, e.g. different shoppers, and tight control can create a situation that does not reflect real life. Both studies have high ecological validity, as they measured real shoppers in real stores, so the findings are likely to apply to everyday shopping and are useful to retailers, who can use light colours to create an exclusive image or a pleasant scent to improve perceptions of quality. Both relied on self-report questionnaires, which give quantitative data that is easy to compare but may lack validity, as shoppers may give socially desirable answers or not be aware of the effect of a subtle scent or light. Kutlu et al.'s sample was 85% female in Istanbul and Chebat and Michon's was in one Canadian mall, so findings may not generalise to other cultures, where colours have different

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	meanings. The models are reductionist, as they reduce shopping behaviour to mood or cognition and ignore factors such as price and budget. Ethically, shoppers in the scent week did not consent to being exposed to the scent, although it was harmless. Overall, the research suggests ambience does affect consumers, but because control was limited, cause and effect cannot be fully established.
	Psychology and health
5(a)	The Yale model says that for health promotion to work, the message must pass through stages: attention (it must grab attention so the person notices the advice), comprehension (it must be understood) and acceptance (the person must accept it and change their health behaviour). Its success depends on the source, the message, the medium and the audience.
5(b)	Lau et al. carried out a longitudinal study to investigate the influence of parents and peers on changes in young people's preventive health beliefs and behaviours about drinking, diet, exercise and wearing seatbelts. Participants were over 1000 students at Carnegie Mellon University in the USA. Data was gathered by questionnaires from the students and their parents at the start (baseline views) and again in the spring of the students' second and third years at university. Parents had the greatest influence on young people's health beliefs and practices, with modelling of the parents' own behaviour being the most powerful influence. However, views changed significantly during the study as the influence of peers increased, so once the young person leaves home, peers have a stronger influence on their health behaviour.

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5(c)	One strength is that it was a longitudinal study, following the same students over three years. This means changes in health beliefs and behaviours, such as drinking, could be seen in the same specific participants as they moved from home to university and peer influence increased. Because the same people were compared with themselves, individual differences between participants could not explain the change, which increases validity. It also collected data from the parents themselves rather than asking students what they thought their parents believed. One weakness is the high attrition rate: 1029 students took part at the start, but only 635 in year 2 and 532 in year 3. The students who dropped out may have been different from those who stayed, e.g. heavier drinkers who were less willing to report their behaviour, so the remaining sample may be biased. This, together with the sample being mostly well-educated, affluent and male students at one university, means the findings may not generalise to all adolescents.
6(a)	Self-report: the clinical interview is a dialogue between practitioner and patient to help with diagnosis. It can be semi-structured or unstructured, so the patient can elaborate on their symptoms in their own words, e.g. how the pain began and how it affects their life. Psychometric measures: the McGill Pain Questionnaire (MPQ) is a standardised questionnaire with four sections. Location: the patient marks where the pain is on a diagram of the body. What does your pain feel like?: the patient selects one word from each of 20 sub-categories, e.g. spreading, radiating, penetrating or piercing. How does your pain change with time?: words and open questions about what relieves or increases the pain. How strong is your pain?: rating scales to describe current pain and compare it with pain experienced before. Visual rating scales: on the visual analogue scale (VAS) the patient marks a point on a 10 cm line with descriptors at each end, e.g. no pain and worst pain imaginable. The point can be measured, giving a score.

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Behavioural measures: the UAB pain behaviour scale records only observable behaviour, not subjective report. The clinician rates behaviours such as body language, vocal complaints, grimacing and mobility, giving a score out of 10 each time it is used.

Measures for children: the Paediatric Pain Questionnaire (Varni and Thompson) is based on the MPQ and has separate forms for the child, parent and clinician, measuring pain intensity, location and affective factors; young children can use colours and adolescents descriptive words. The Wong-Baker FACES scale shows faces from a happy face at 0 (no hurt) to a crying face at 10 (hurts worst), and the child chooses the face that matches their pain.

6(b)

Psychometrics is a key issue. Nearly all the measures give a psychometric score: the VAS, UAB and Wong-Baker scale score out of 10 and the MPQ and Paediatric Pain Questionnaire give several scores. The clinical interview does not, unless the practitioner adds a rating. Scores are a strength, as they can be analysed and compared, e.g. a patient's pain before and after treatment, and standardised measures should be reliable and valid. However, a number on a scale lacks descriptive detail about what the pain is like, although the MPQ partly solves this with its descriptive words, and a score can lack validity because one patient's 6 may be another's 9.

Most measures are self-reports, which is appropriate because pain is a subjective experience only the patient can feel. But patients may exaggerate pain to get stronger medication or minimise it to avoid treatment, lowering validity. The UAB scale is more objective because a trained observer records behaviour, but it is reductionist, as some people in severe pain do not grimace or complain, and observers may disagree.

The measures differ in usefulness. The MPQ is detailed but takes time and needs a good vocabulary, so it is unsuitable for young children or people with language

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difficulties. The VAS and Wong-Baker scale are quick and easy to use and can be generalised to children, but they measure only intensity.

There are also issues of generalisability: the meaning of pain words differs between cultures, and children may choose the happy or crying face because they like the picture rather than to match their pain.

Overall, the best approach is holistic, combining an interview with a psychometric and a behavioural measure.

Psychology and organisations

7(a) 1. Model the way.

2. Inspire a shared vision.

7(b) Muczyk and Reimann describe leaders on two dimensions: the degree of participation the leader allows in decision making (low or high) and the amount of direction the leader gives in carrying out the decision (high or low). This gives four styles.

A directive autocrat makes decisions alone and closely supervises staff. A directive democrat encourages strong participation in decisions but monitors closely how they are carried out. A permissive autocrat makes decisions alone but lets staff choose how to implement them. A permissive democrat invites a high degree of participation in decisions and allows autonomy in how they are carried out, and is seen as the ideal leader in Western cultures.

7(c) One similarity is that both say there is no one best leadership style, and the style should depend on the situation, so the leader must be adaptive. Muczyk and Reimann say a leader should combine participation and direction to suit the situation, e.g. being a directive autocrat in a crisis or with new, inexperienced staff.

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Hersey and Blanchard also say leaders must adapt their style to the readiness (maturity) of their followers, e.g. telling a new employee exactly what to do but delegating to an experienced one.

One difference is the principles each is based on. Situational leadership has four styles, telling, selling, participating and delegating, based on how much task and relationship behaviour the leader gives according to the followers' ability and willingness. Muczyk and Reimann base their styles on the two dimensions of participation and direction, and make a distinction between making a decision and carrying it out, so a leader can, for example, let workers participate in the decision but still direct its implementation. Situational leadership does not separate making decisions from carrying them through.

8(a) Tuckman (1965) proposed that groups develop through stages: forming (orientation to the task, members get to know each other and are polite), storming (intra-group conflict as members compete for roles and disagree about the task), norming (development of group cohesion and agreed norms) and performing (functional role-relatedness, where the group tackles the task effectively). Tuckman and Jensen (1977) added a fifth stage, adjourning, when the task is completed and the group breaks up.

Belbin (1981) identified nine team roles in three categories. Thought-related (cerebral) roles: plant (creative problem solver), specialist (provides skill and knowledge) and monitor evaluator (strategic, judges options). Action-related roles: shaper (thrives on pressure and drives the team), implementer (turns ideas into practical action) and completer finisher (finds errors and finishes projects on time). People-related roles: coordinator (a good chairperson who delegates), teamworker (cooperative, avoids friction) and resource investigator (explores opportunities and contacts). An effective team needs a balance of roles.

Team roles are measured with the Belbin Team Inventory. The Belbin Individual

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	Report, based on the person's own questionnaire about how they behave in a team, identifies which combination of the nine roles they prefer and pinpoints their strengths and weaknesses. Observer Assessments, a quick five-minute online questionnaire completed by colleagues, give 360-degree feedback, so the person's view of their behaviour can be contrasted with how colleagues see it. People are scored on how strongly they show each role and often show strong tendencies towards several roles.
8(b)	Both theories have practical applications. Tuckman's theory makes organisations aware of the stages of group development, so new groups can be given time to go through forming and storming before being given important tasks to complete once they reach norming and performing. Managers can also see that conflict in storming is normal. However, it can be difficult to identify which stage a group is at, and an outside expert may be needed. The Belbin Team Inventory can identify the best role for each worker and could be used at interview to choose the candidate who fills a missing role. Belbin's theory may be less useful to small companies without enough staff for nine roles, but Belbin adjusted it, suggesting a minimum of one coordinator, one implementer and one plant. Tuckman's model may be too simple: groups do not always pass through the stages in order, and may return to storming when a new member joins, so it is reductionist. It is also deterministic in suggesting every group must go through each stage, ignoring free will and the influence of a skilled leader. The Belbin inventory is a self-report, so people may describe the role they would like to have rather than their real behaviour, lowering validity, although the observer assessments reduce this bias. It gives quantitative scores that allow comparisons between workers. There is also an individual versus situational debate. Belbin sees roles as stable individual preferences, but a person's role may depend on the situation, e.g. the

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task or the other members, while Tuckman focuses on the situation of the group as a whole.

Overall, both are useful for managers, but they should be used flexibly rather than as fixed rules.