Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/32**

Paper 3 Specialist Options: Theory **February/March 2023**

1 hour 30 minutes

1432687981

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** genetic explanation of schizophrenia and delusional disorder. [2]

(b) Describe the study by Freeman (2008) on symptom assessment of schizophrenia using virtual reality. [4]

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

2 **(a)** Describe the treatment and management of anxiety disorders (systematic desensitisation, applied tension, cognitive-behavioural therapy). [8]

(b) Evaluate the treatment and management of anxiety disorders (systematic desensitisation, applied tension, cognitive-behavioural therapy), including a discussion of determinism versus free-will. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Outline the black box (stimulus-response) model of buying a product. [2]

(b) Atalay et al. (2012) carried out three studies on attention and shelf position (Study 1A, Study 1B and Study 2).

Describe **one** of these studies. [4]

(c) Discuss the reliability of the study by Atalay et al. that you described in part **(b)**. [6]

4 **(a)** Describe what psychologists have discovered about types of advertising and advertising techniques (advertising media, marketing mix models, product placement in films). [8]

(b) Evaluate what psychologists have discovered about types of advertising and advertising techniques (advertising media, marketing mix models, product placement in films), including a discussion on practical applications. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Identify **two** of the stages in the model of delay in seeking treatment (Safer, 1979). [2]

(b) Aleem and Ajarim (1995) conducted a case study on a 22-year-old female university student who was diagnosed with Munchausen syndrome.

Outline **two** findings from this case study. [4]

(c) Discuss the validity of the case study by Aleem and Ajarim. [6]

6 **(a)** Describe what psychologists have discovered about types of non-adherence to medical advice, reasons why patients do not adhere, and the health belief model. [8]

(b) Evaluate what psychologists have discovered about types of non-adherence to medical advice, reasons why patients do not adhere, and the health belief model, including a discussion about individual and situational explanations. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Janis (1971) suggested strategies to avoid groupthink.

Outline **one** of these strategies. [2]

(b) Describe **two** strategies to manage group conflict in organisations (Thomas, 1976). [4]

(c) Explain **two** problems psychologists may have when investigating group conflict. [6]

8 **(a)** Describe theories of job satisfaction (two factor theory, job characteristics theory, techniques of job design). [8]

(b) Evaluate theories of job satisfaction (two factor theory, job characteristics theory, techniques of job design), including a discussion about 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

Psychology and abnormality

1(a) One genetic explanation is that schizophrenia and delusional disorder are inherited from biological parents. Gottesman and Shields found a much higher concordance rate for MZ twins (over 50%) than DZ twins (around 9%). As MZ twins share 100% of their genes, this suggests a strong genetic cause.

1(b) Freeman studied 200 people from the general (non-clinical) population. Before the study, participants completed questionnaires including a paranoia scale. They then experienced a 4-minute virtual reality journey on a London Underground train between two stations, with computer-generated avatar passengers programmed to behave neutrally, for example looking around, breathing and sometimes glancing at the participant.

Afterwards participants completed a state paranoia scale about the avatars and made comments about them, which ranged from positive to negative, and some were paranoid, for example that an avatar was trying to intimidate them. Paranoid thoughts about the neutral avatars were common, and those who scored highly on the paranoia scale beforehand showed higher levels of persecutory ideation in the virtual carriage, so paranoia can be assessed with VR.

1(c) One strength is that the study was reliable because it used a standardised procedure. Every participant took the same 4-minute virtual journey, with the same avatars behaving in the same neutral way, and completed the same questionnaires. This means the study could be replicated to check the findings, and any paranoid thoughts must come from the participant rather than from differences in what

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they experienced. This helps to establish a method of symptom assessment that is less subjective than a traditional clinical interview.

One weakness is low ecological validity. Participants knew the avatars were computer-generated and that they were not really on a train, so they may have responded differently from how they would in everyday life, for example feeling less threatened by strangers. The participants were also from a non-clinical population, so the findings may not generalise to patients with schizophrenia, who are the people the method is meant to assess.

2(a) Systematic desensitisation (Wolpe, 1958) is a behavioural therapy based on classical conditioning. The aim is to replace the fear response to the phobic stimulus with relaxation, as the two cannot exist together. First the patient is taught muscle relaxation and breathing exercises. Next, with the therapist, they build a fear hierarchy, from the least feared situation at the bottom to the most feared at the top. Finally they work up the hierarchy, using the relaxation techniques at each step, only moving on when calm, until they reach the most feared situation.

Applied tension (Ost et al., 1989) was developed for people with a phobia of blood, injury or needles, who may faint because their blood pressure drops. The patient learns to tense the muscles of the arms, legs and body to raise blood pressure, then applies this while exposed to blood, such as slides of wounds. Ost et al. studied 30 patients with blood phobia, comparing applied tension (5 sessions), applied relaxation (9 sessions) and a combination (10 sessions), each lasting 45 to 60 minutes. Patients were assessed beforehand, including watching a video of surgery, and followed up 6 months later. 73% of patients improved, and applied tension worked as well as the other treatments in less time, so it was judged more effective.

Cognitive-behavioural therapy (Ost and Westling) involves the patient and

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therapist identifying faulty thinking about the feared situation and replacing it with alternative thoughts, such as "most dogs do not bite", while also practising relaxation between sessions. Ost and Westling compared 12 weeks of CBT with applied relaxation in 38 patients with panic disorder, many with agoraphobia. Patients identified when panic occurred and practised alternative explanations. Both groups improved and kept their gains at a one-year follow-up, showing CBT is effective.

2(b) All three treatments are partly deterministic. Systematic desensitisation assumes the phobia was learned through classical conditioning, so the patient's panic is determined by past experiences, and applied tension treats fainting as an automatic physiological response. However, the treatments also show free will. The patient chooses to take part and to allow themselves to be exposed to more and more frightening stimuli, and in applied tension they choose to tense their muscles to stop fainting. CBT allows the most free will, as it assumes patients can change their own thoughts. This is positive, as it gives patients control over their recovery.

The treatments are effective. Ost et al. found 73% of blood phobia patients improved, and Ost and Westling found CBT reduced panic, with gains kept at one year. Applied tension is also more cost-effective, as it needed only 5 sessions. However, each treatment is only appropriate for certain disorders: applied tension only works for blood and injury phobias, and systematic desensitisation suits specific phobias rather than panic disorder.

The research has some validity problems. Improvement was partly measured by self-report, which may be affected by demand characteristics, as patients may want to please the therapist. Samples were also small (30 and 38 patients) and from Sweden, so generalisability is limited.

Ethically, exposure to feared stimuli causes distress, although systematic desensitisation is gradual and the patient can stop at any time. Behavioural

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	treatments are also reductionist, treating only the symptoms, whereas CBT is more holistic as it addresses thoughts as well. Overall, the treatments are effective, and CBT is the most balanced as it recognises both determined fear responses and the patient's free will to change.
	Psychology and consumer behaviour
3(a)	Buyers respond to stimuli in the environment, such as marketing, price and the store environment. The "black box" is the consumer's mind, where these stimuli are processed depending on the buyer's personal characteristics, leading to the response: the decision to buy the product or not.
3(b)	Study 1A involved 67 undergraduate students in France with an average age of 20. Using eye-tracking equipment, participants viewed two product categories, vitamin supplements and meal replacement bars, each with brands given fictitious names, displayed in a 3 × 3 matrix on a computer screen. Participants then indicated which product they would like to buy. Brands in the centre of the matrix received more frequent eye fixations, were looked at for longer and were chosen for purchase more often than brands in other positions.
3(c)	Study 1A was reliable because it used a standardised procedure that could be replicated. Every participant saw the same products in the same 3 × 3 matrix on a screen, received the same instructions and was measured with the same eye-tracking equipment. Eye-tracking records fixations and gaze duration objectively, so it is not affected by the researcher's interpretation. Another researcher could repeat the study exactly to check whether central brands are again looked at for longer and chosen more often. The study was also carried out in a controlled laboratory setting, so extraneous

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	variables such as lighting or other shoppers were kept the same for all participants. All participants were students from the same university, of a similar age and background, so reliable comparisons could be made between them. However, reliability may be reduced because, although the brands were fictitious, some participants may regularly use vitamin supplements or meal replacement bars. These participants might respond differently to the products than those who do not use them, so the results may not be consistent if the study were repeated with a different group.
4(a)	Advertising media include television, radio, magazines and online advertising, each reaching different audiences. Persuasive techniques include the central route, where the message is personally relevant to the consumer, such as information on children's products for a parent, so they think carefully about the arguments. The peripheral route is used when the message is not personally relevant, so cues such as experts saying a product is effective or an attractive celebrity are used instead. Marketing mix models are tools for advertisers. McCarthy's 4 Ps are: Product, the physical product or service; Price, which must suit market forces such as what consumers will pay and competitors' prices; Place, where the product is sold and how it is distributed; and Promotion, such as media advertising, sales promotions or cold calling. Lauterborn's 4 Cs focus on the consumer: Consumer, what the consumer wants and needs; Cost, the price plus other costs such as travel and ethical concerns; Communication, where the company seeks information from consumers about their wants; and Convenience, offering a variety of ways to buy, online or in a shop. Auty and Lewis (2004) studied product placement in films. 105 UK children aged 6 to 7 and 11 to 12 were randomly assigned to watch a clip of Home Alone in which the family eat pizza and drink Pepsi, or a control clip of the family eating macaroni cheese with milk. Afterwards they were offered a choice of Pepsi or Coca

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Cola, then asked to describe the clip, with prompts if they did not mention Pepsi. In the experimental group 62% chose Pepsi, compared with 42% in the control group, although Coca Cola has a larger UK market share. Younger children needed more prompts to recall Pepsi, but there was no age difference in drink choice.

4(b) The 4 Ps and 4 Cs have useful practical applications, as they tell companies what to focus on when marketing a product. However, the 4 Ps do not explain which factor matters most for different products. For an expensive item such as a mobile phone, price may be most important, whereas for a staple such as milk, place may matter more. The 4 Cs are arguably more useful today, as they focus on the consumer's needs rather than the seller, and Communication suits two-way online marketing. Auty and Lewis show that product placement works, so it may be worth the investment, although some countries regulate placement aimed at children.

The marketing mix models are reductionist, as they reduce buying to four factors and ignore individual differences such as personality and mood. They are also theories rather than research findings, so they lack empirical support.

Auty and Lewis used children, which raises ethical issues, as they cannot give informed consent and were exposed to a brand without knowing it, although parents consented and the clip was harmless. Children may also have responded to demand characteristics, and interviewing them by ex-students reduced this. A strength is that random allocation and a control group allow cause and effect to be inferred. However, the lab setting lowers ecological validity: real viewers watch whole films, and choosing a drink straight after the clip is not the same as later buying it in a shop. The sample was also only British children, so generalisability to adults or other cultures is limited.

Persuasion theory has determinism issues, suggesting consumers are controlled by advertisers, which ignores free will. Overall, this research has strong practical

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	applications, but advertisers should combine it with knowledge of their particular product and consumers.
	Psychology and health
5(a)	Appraisal delay Illness delay
5(b)	One finding was that when the patient saw a psychiatrist she became very defensive and rationalised her answers. She appeared to be under a great deal of stress because of conflicts she was experiencing in her life. Another finding was that nurses found a syringe containing faecal material, along with needles, in the patient's bed, suggesting she was injecting herself to cause her infections. When she found out about this she became very angry and hostile and left the hospital against medical advice.
5(c)	The case study had good ecological validity, because it was carried out in a real hospital where the patient was being treated for her actual illness. Her behaviour was not set up by a researcher, so it reflects how a person with Munchausen syndrome really behaves in a medical setting. The physiological measures, such as blood tests and X-rays, were objective and valid. They showed that her infections were real, so the doctors could be certain of her physical diagnosis, and finding the syringe with faecal material gave clear evidence that the illness was self-induced. However, the self-report data from her interview with the psychiatrist may be less valid. She was defensive and rationalised her answers, so she may have hidden her true motives, giving a biased picture of why she harmed herself. Validity is also lowered because no follow-up was possible, as she left the hospital

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against medical advice, so the diagnosis and the causes of her behaviour could not be confirmed. Population validity is poor too, as it was one patient, so the findings may not apply to others with Munchausen syndrome.

6(a) Non-adherence means not following medical advice. Types include not following a short-term treatment such as a course of pills, not making a lifestyle change such as changing diet, not using preventative measures such as condoms, and failing to attend appointments. Non-adherence causes problems: the patient's health does not improve, they may develop other health problems, missed appointments waste money and deny others the slot, money is wasted on unused drugs, and untaken drugs may be left within a child's reach.

One reason patients do not adhere is rational non-adherence, where the patient makes a reasoned decision after a cost-benefit analysis and adhering seems too costly. Bulpitt (1994) argued that people focus on risks but rarely consider benefits. He examined drug treatment for hypertension: risks such as increased diabetes, gout and dry mouth were not serious or occurred at a very low rate, while benefits included a 40% reduction in strokes and a 44% reduction in coronary events. Patients seem to decide rationally not to take the medication because of the risks while ignoring the benefits.

The health belief model (Becker and Rosenstock) predicts that people make health decisions rationally and will change their behaviour depending on several factors. Individual perceptions include perceived vulnerability to the health problem, perceived severity and self-efficacy. Modifying factors include culture and education. These combine with perceived threat and cues to action, such as pain or a media campaign, and the perceived benefits and barriers of the behaviour to predict how likely a person is to take the recommended health action.

6(b) Non-adherence can be explained by both individual and situational factors.

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Individual explanations include forgetfulness or a patient's own beliefs, and Bulpitt's cost-benefit analysis is individual, as each patient weighs the costs and benefits relevant to them. However, it is also situational, as the costs and benefits depend on the situation, such as how well the practitioner explains side effects, or the treatment simply being too expensive. The health belief model combines both: perceived vulnerability and self-efficacy are individual, while demographic factors such as education and cues to action such as a media campaign are situational. This interactionist approach is a strength, as it gives a fuller explanation.

A weakness of the health belief model and rational non-adherence is that they assume people make rational decisions. In reality, non-adherence may be unintentional, for example forgetting, or emotional, such as fear of side effects. The research is useful, as it helps practitioners improve adherence, for example by explaining the benefits of medication clearly, as Bulpitt suggests, or using cues to action such as reminders. This is cost-effective, as non-adherence wastes money on drugs and missed appointments.

Measuring non-adherence also causes problems. Self-reports are cheap but affected by social desirability, as patients may claim to take their pills, lowering validity. Pill counts are more objective, but patients may throw pills away, and physiological tests such as blood or urine samples are valid but expensive and invasive. Generalisability may be limited, as Bulpitt focused on hypertension, so the risks and benefits may differ for other illnesses. Overall, the research is useful, but non-adherence is best explained by combining individual and situational factors.

Psychology and organisations

7(a) One strategy is that one person in the group should be assigned the role of devil's advocate. This person deliberately challenges the views of those who support the majority decision, so alternatives are considered.

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7(b)	One strategy is compromise. Each individual or group in the conflict must give up something in order to reduce the conflict, and both sides need to agree on what is given up, so neither side fully wins or loses. Another strategy is avoidance. The conflict is suppressed, for example by one side withdrawing from the situation, giving a "cooling off" period. This is not a permanent solution, as the cause of the conflict has not been resolved.
7(c)	One problem is that it is difficult to measure conflict objectively, because the definition of "conflict" is open to interpretation by both the participant and the researcher. There are also different interpretations of what counts as managing conflict well: one employee may feel a conflict was managed well while another feels it was managed badly. As a result, the researcher may not be measuring the same thing for everyone, which lowers the validity of the findings. A second problem is that it is difficult to get workers and employers to discuss conflict openly. Workers may fear being punished if they criticise colleagues or managers, and companies may not want their problems known, so they may give socially desirable answers or refuse access. This means the findings may underestimate conflict and lack validity, and researchers may only get access to a narrow range of companies, lowering generalisability.
8(a)	Herzberg's two factor theory (1959) says job satisfaction and dissatisfaction are independent of each other. Herzberg surveyed about 200 engineers and accountants in Pittsburgh, USA, collecting qualitative data about what they found good and bad about their jobs. He found two sets of factors. Motivators relate to the content of the job, such as recognition, achievement, responsibility, advancement and the work itself, and these cause satisfaction. Hygiene factors relate to the context, such as salary, supervision, job security, working conditions

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and company policies; if these are poor they cause dissatisfaction. To improve the job, hygiene factors must first be met, such as paying a good wage, then motivators provided, such as promotion opportunities.

Hackman and Oldham's job characteristics theory (1976) identifies five core job characteristics that improve satisfaction: skill variety, task identity, task significance, autonomy and feedback. These produce three critical psychological states: experienced meaningfulness of the work, experienced responsibility for outcomes, and knowledge of the results, which lead to higher satisfaction and motivation.

Techniques of job design can also increase satisfaction. Job enrichment redesigns the job to make it more challenging, with more skills and responsibility, so the worker feels more in control. Job rotation regularly changes the tasks a worker does, within the same area or across departments, giving variety and building skills the company can use. Job enlargement increases the scope of the job: horizontal enlargement adds more tasks at the same level, while vertical enlargement adds higher-level tasks or responsibility.

8(b)

Herzberg's theory is somewhat reductionist, as it reduces job satisfaction to just two factors. However, it is less reductionist than the earlier view that pay was the main source of satisfaction. Job characteristics theory is less reductionist, as it considers five characteristics and three psychological states. The job design techniques are more holistic still, as a company can use one, some or all of them depending on the work, and change to another if one does not suit an employee. However, all the theories ignore factors outside work, such as personality or home life, so a fully holistic explanation is not given.

Herzberg's research has limited generalisability, as it studied only engineers and accountants in one American city, whose motivators may differ from those of manual workers or other cultures. It also relied on interviews, so workers may have

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given socially desirable answers, crediting themselves for good experiences and blaming the company for bad ones.

The theories are useful, as they suggest practical ways to improve satisfaction, such as enrichment to increase autonomy and responsibility. However, the techniques are not always appropriate: rotation may simply move a worker between equally boring tasks, and enlargement may be seen as more work for the same pay, lowering satisfaction.

The theories are also deterministic, suggesting that changing job characteristics will automatically increase satisfaction, ignoring individual differences, as not every worker wants more responsibility. This links to the individual versus situational debate, since the theories focus on situational job features. Overall, the theories are useful, but the more holistic job design techniques are most effective when matched to the individual worker.