GCE A LEVEL

1290U30-1

S18-1290U30-1

PSYCHOLOGY – A2 unit 3
Implications in the Real World

MONDAY, 4 JUNE 2018 – AFTERNOON

2 hours 30 minutes

ADDITIONAL MATERIALS

A WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Answer **three** questions in Section A.

Answer **one** question in Section B.

Write your answers in the separate answer booklet provided.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded that Section B of this paper is synoptic and so will test understanding of the connections between the different elements of the subject.

You are reminded of the necessity for good English and orderly, clear presentation in your answers. Assessment will take into account the quality of written communication used in your answers.

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SECTION A: The study of behaviours

Answer **three** *questions in full.*

1. Addictive behaviours

(a) Describe **two** social psychological explanations of addictive behaviours. [10]

(b) Briefly describe how biological explanations could be applied to modifying addictive behaviours. [5]

(c) Evaluate methods of modifying addictive behaviours. [10]

2. Autistic spectrum behaviours

(a) Describe **two** explanations of autistic spectrum behaviours. [10]

(b) Siân is a teaching assistant supporting children with autistic spectrum disorders. She supports two children. David struggles with social interaction and expressing his emotions and Clare struggles with communication skills.

With reference to the scenario, evaluate methods of modifying autistic spectrum behaviours that Siân could use to support David and Clare. [15]

3. Bullying behaviours

(a) (i) Briefly explain how social psychological explanations could be applied to modifying bullying behaviours. [5]

(ii) Discuss the strengths and weaknesses of biological explanations for bullying behaviours. [10]

(b) Describe **two** methods of modifying bullying behaviours. [10]

4. Criminal behaviours

(a) (i) Describe **one** biological explanation for criminal behaviours. [5]

(ii) Describe **one** individual differences explanation for criminal behaviours. [5]

(b) Rhys works in a young offenders' institution. His clients are young males whose criminal behaviours have included acts of violence and theft.

With reference to **either** anger management **or** restorative justice, discuss the strengths and weaknesses of Rhys using this method to modify the criminal behaviours of his clients. [15]

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5. Schizophrenia

(a) Identify and describe the characteristics of schizophrenia. [10]

(b) Some psychologists would suggest that individual differences explanations do not fully explain schizophrenia.

With reference to this statement, evaluate individual differences explanations of schizophrenia. [15]

6. Stress

(a) Describe **two** ways of modifying stress. [5+5]

(b) Stress can be explained from both biological and social psychological perspectives.

With reference to this statement, evaluate explanations of stress. [15]

SECTION B: Controversies

Answer **one** *of the questions.*

Either,

7. Cultural Bias

Cultural bias can be described as the interpretation and judgement of behaviours from the perspective of one's own culture.

With reference to psychological research, discuss whether it is ever possible for psychology to be free from cultural bias. [25]

Or,

8. Non-human animals

Non-human animals can successfully be used as a therapeutic device and research has demonstrated positive effects on stress, mental health and attachment. However, when animals are used, it is important to consider the ethical issues.

Using examples, critically discuss the use of non-human animals as a therapeutic device. [25]

END OF PAPER

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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.

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1 (a)

Peer pressure is a social psychological explanation which argues that people start and continue addictive behaviours, such as smoking, drinking or drug use, because of the influence of the groups they belong to. It draws on social learning theory (Bandura). Adolescents observe peers they identify with smoking or drinking and see them receive rewards such as popularity, status and fun. This is vicarious reinforcement, so they imitate the behaviour. When they join in, they are directly reinforced by social approval and acceptance into the group, so the behaviour is repeated.

Peer pressure also works through social norms. If a person believes that 'everyone' in their group drinks heavily, they conform through normative social influence, to fit in and avoid rejection, and through informational influence, believing that drinking is the correct or safe thing to do. Perkins and Berkowitz (1986) found that university students consistently overestimated how much their peers drank, and these false norms predicted their own heavier drinking. Kandel (1973) found that one of the strongest predictors of an adolescent's marijuana use was whether their best friend used marijuana. Peer groups can also maintain an addiction: social situations act as cues that trigger cravings, and leaving the addiction may mean losing friends, so relapse is likely.

The role of the media is a second social psychological explanation. Films, television, music videos, advertising and social media often show drinking, smoking, drug use and gambling as glamorous, exciting and normal. Through social learning, viewers, especially young people, observe attractive role models such as celebrities who are rewarded for these behaviours, and they imitate them because of vicarious reinforcement. Gunasekera et al. (2005) analysed 87 popular films and found that drug use was mostly portrayed positively, with

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negative consequences rarely shown. Repeated exposure also shapes social norms, making the behaviour seem common and acceptable. Sargent et al. (2005) studied 6,522 US adolescents aged 10 to 14 and found that greater exposure to smoking in films was associated with a greater likelihood of starting to smoke. Advertising for alcohol and gambling, now common on social media and at sporting events, links these behaviours with success, friendship and attractiveness, which increases positive expectancies. Media can also maintain addiction, as adverts and images act as cues that trigger cravings in people who are trying to abstain.

1 (b)

Biological explanations argue that addiction is caused by physical factors, such as genes and the brain's dopamine reward pathway. For example, drugs such as heroin and nicotine cause a large release of dopamine in the nucleus accumbens, which is pleasurable and reinforcing, and Blum et al. (1990) linked the A1 variant of the DRD2 dopamine receptor gene to alcoholism. If addiction is biological, it follows that it should be modified by changing the biology, mainly through drugs.

Agonist substitution applies this by giving a safer drug that acts on the same receptors, for example methadone for heroin or nicotine patches for smoking. It produces enough dopamine activity to reduce cravings and withdrawal symptoms without the intense high, and the dose can be reduced gradually. Antagonist substitution blocks the receptors, for example naltrexone blocks opioid receptors so heroin no longer releases dopamine and produces no pleasure, so the behaviour is no longer reinforced. Biology is also used in aversion therapy with Antabuse (disulfiram), which stops the liver breaking down alcohol, so drinking causes nausea and vomiting and alcohol becomes associated with sickness rather than pleasure.

1 (c)

Agonist and antagonist substitution is based on the biological approach. A major strength is its effectiveness. Mattick et al.'s Cochrane review found that

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methadone maintenance was significantly more effective than non-drug treatments in keeping heroin users in treatment and reducing their heroin use, and Cochrane reviews of nicotine replacement therapy (NRT) found that it increases the chance of quitting smoking by around 50 to 60% compared with placebo. Methadone also has wider social benefits, reducing crime and the spread of HIV through shared needles. It is valid because it targets the reward pathway that biological explanations identify as the cause of craving.

However, methadone is itself addictive, so critics argue it swaps one dependence for another and treatment can last for years. Antagonists are less effective in practice, because addicts can simply stop taking them: Cochrane reviews found oral naltrexone was no better than placebo for heroin dependence, mainly because of poor compliance. Drug treatments are also reductionist: they treat the symptoms of craving but not the psychological and social causes, such as stress, peer pressure or co-morbid anxiety and depression, so relapse is common when treatment ends.

Aversion therapy is based on the behaviourist approach and aims to replace the pleasant association with the drug with an unpleasant one through classical conditioning, for example using Antabuse for alcoholism or rapid smoking for nicotine. It can produce short-term abstinence, but the evidence for long-term success is weak. Fuller et al. (1986) carried out a large controlled trial of disulfiram with 605 male alcoholics and found no significant difference in total abstinence between those given disulfiram and the control groups, largely because many patients stopped taking the tablets. Hajek and Stead's Cochrane review concluded there was insufficient evidence that rapid smoking works long term. The conditioned response tends to extinguish once outside the clinic, where the drug is no longer paired with sickness. There are also ethical issues, as the therapy deliberately causes distress and nausea, which leads to high drop-out rates, and rapid smoking may be dangerous for people with heart problems.

Compared with these methods, cognitive approaches such as cognitive behavioural

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therapy, used by Griffiths for gambling addiction, address the irrational thoughts that maintain addiction and give the person coping skills, so they may produce longer-lasting change. In terms of debates, both methods are deterministic: they treat the addict as passively controlled by biology or conditioning and ignore free will and motivation, which matters because motivated clients are far more likely to comply.

In conclusion, agonist substitution has the strongest evidence and is useful for harm reduction, but neither it nor aversion therapy deals with the psychological and social causes of addiction. The most effective approach is likely to be a combination of drug treatment with psychological therapy and social support.

2 (a)

Genetic predisposition is a biological explanation which states that autistic spectrum disorder (ASD) is largely inherited, with many genes each increasing the risk. Evidence comes from twin studies. Folstein and Rutter (1977) studied 21 same-sex twin pairs where at least one twin had autism. Concordance for autism was 36% for monozygotic (MZ) twins, who share 100% of their genes, compared with 0% for dizygotic (DZ) twins, who share about 50%. When a broader range of cognitive and language difficulties was included, concordance rose to 92% for MZ and 10% for DZ twins. Bailey et al. (1995) found a concordance of 60% for MZ twins and 0% for DZ twins, which suggests a strong genetic component. Siblings of autistic children are also more likely to be autistic than people in the general population. No single 'autism gene' has been found; instead many genes, as well as spontaneous mutations and copy number variations, appear to be involved, which may explain why autism is a spectrum. Genes may affect how the brain develops, for example the connectivity between brain regions or the growth of the amygdala. The higher rate of ASD in males, about four boys to every girl, may also partly reflect genetic factors.

Theory of mind is an individual differences explanation. Theory of mind (ToM) is the ability to understand that other people have their own beliefs, desires, intentions and knowledge, which may be different from our own, and to use this

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to predict their behaviour. It normally develops by about age four. Baron-Cohen proposed that people with autism have a cognitive deficit in ToM, called 'mindblindness'. This explains the social and communication difficulties of ASD, such as problems with conversation, empathy, pretend play and understanding jokes or deception. Baron-Cohen, Leslie and Frith (1985) tested this with the Sally-Anne test. Children watched Sally put a marble in her basket and leave, then Anne move it to her box, and were asked where Sally would look for the marble. To pass, the child must understand Sally's false belief. 80% of the 20 autistic children failed, saying the box, while 85% of the typically developing children and 86% of the children with Down's syndrome passed, even though the autistic children had a higher mental age. Later, in the 'Reading the Mind in the Eyes' test, adults with autism or Asperger syndrome were less accurate than controls at identifying mental states from photographs of eyes, suggesting the deficit continues into adulthood.

2 (b)

Siân could use the Picture Exchange Communication System (PECS) to help Clare with her communication skills. PECS, developed by Bondy and Frost, teaches children to communicate by handing a picture card to a communication partner in exchange for the item they want, working through six phases from single exchanges to building sentence strips and commenting. It is based on operant conditioning, as each exchange is immediately reinforced by receiving the item.

PECS is well suited to Clare. Charlop-Christy et al. (2002) found that after PECS training three autistic children showed increases in spontaneous speech and social-communicative behaviours and reductions in problem behaviours. Howlin et al. (2007) carried out a randomised controlled trial with 84 children in 17 schools and found that PECS significantly increased the rate of children's communicative initiations and use of PECS in the classroom. This research has good validity because it was carried out in real school settings like the one Siân works in, and the method is cheap and easy for a teaching assistant to learn

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and use throughout the day. However, Howlin et al. found the gains were not maintained at follow-up once training stopped, and there was no significant improvement in spoken language, so Siân would need to use PECS consistently and liaise with Clare's parents so it is used at home too. A common concern is that PECS might stop Clare developing speech, but reviews such as Millar et al. (2006) found that alternative communication systems do not inhibit speech and may increase it. A limitation is that PECS mainly teaches requesting, so on its own it would not help Clare with conversation or social use of language.

For David, who struggles with social interaction and expressing his emotions, Relationship Development Intervention (RDI) is more appropriate. RDI, developed by Gutstein, aims to develop 'dynamic intelligence', the flexible thinking and emotional sharing needed for relationships. Adults act as guides in slow-paced, everyday activities that encourage experience sharing, emotional referencing (checking another person's face to see how they feel) and coping with change. This directly targets David's difficulties, and fits the theory of mind explanation, which argues that autistic people struggle to understand others' mental states. Gutstein et al. (2007) followed 16 children who completed RDI and reported that many showed improved ADOS scores, more flexible behaviour and more attended mainstream school. However, this evidence is weak: the sample was small, there was no control group, so improvements may be due to maturation or other therapies, and the study was carried out by RDI's developer, so researcher bias is possible. RDI is mainly delivered by parents trained by a certified consultant over several years, so it is expensive and demanding. Siân could not deliver the full programme on her own, but she could use RDI principles in school, for example sharing activities with David, modelling and naming emotions, and pausing to encourage him to look at her face. Ethically, RDI is positive: it is child-centred, does not use punishment and works at the child's pace.

Siân could also compare these with Applied Behaviour Analysis (ABA), which uses reinforcement to teach specific skills. Lovaas (1987) found that 47% of children receiving intensive ABA reached normal intellectual and educational

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functioning compared with 2% of a control group, so it has stronger evidence than RDI. However, it needs around 40 hours a week of one-to-one work, which is not practical for a teaching assistant supporting two children, and the skills learned may not generalise. Some critics also argue that ABA tries to make autistic children appear neurotypical rather than respecting neurodiversity, an ethical issue that applies to all these methods.

In conclusion, Siân should match the method to each child's needs. PECS is the best choice for Clare, as it is well supported, practical in a classroom and directly targets communication, while RDI principles are more suitable for David, as they target the emotional sharing and social interaction he finds difficult, even though the evidence for RDI is weaker. Both are most effective when used consistently at home and at school.

6 (a)

Beta blockers are drugs, such as propranolol, which modify the physiological symptoms of stress. When we are stressed the sympathetic nervous system activates the adrenal medulla to release adrenaline and noradrenaline (the SAM pathway), which bind to beta-adrenergic receptors in the heart, blood vessels and muscles. This increases heart rate and blood pressure and produces shaking, sweating and palpitations. Beta blockers bind to these beta receptors and block them, so adrenaline and noradrenaline cannot have their effect. As a result heart rate slows, blood pressure falls and outward signs of stress such as trembling are reduced, so the person feels calmer. They act mainly on the body rather than the brain, so they do not cause drowsiness or affect thinking, which is why they are used by performers such as musicians and public speakers, and they were originally developed to treat high blood pressure. They are taken as tablets, usually for short periods or before a stressful event.

Stress inoculation training (SIT) is a cognitive behavioural therapy developed by Meichenbaum (1985). Like a vaccine, it aims to 'inoculate' people against future stress by exposing them to small amounts of stress so they develop coping

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skills and confidence. It has three overlapping phases. In the conceptualisation phase, the therapist and client build a relationship and the client learns to understand the nature of stress, to identify their stressors and to reframe them as problems that can be solved. In the skills acquisition and rehearsal phase, the client learns and practises coping skills, such as relaxation, breathing, positive self-talk, time management and problem solving, first in the clinic. In the application and follow-through phase, the client uses these skills in increasingly stressful real-life situations, with modelling, role play and booster sessions. Saunders et al. (1996) carried out a meta-analysis of 37 studies and found that SIT reduced performance anxiety and state anxiety and improved performance under stress.

6 (b)

Biological explanations of stress focus on the body's physiological response. The adrenaline explanation states that when a stressor is perceived, the hypothalamus activates the sympathetic nervous system and the adrenal medulla releases adrenaline, producing the fight or flight response: raised heart rate, blood pressure and glucose levels. A strength is that this is supported by objective physiological measures, which are more scientific and reliable than self-report. It is also useful, as it has led to effective treatments such as beta blockers, which reduce stress symptoms by blocking adrenaline, supporting its role. The evolutionary explanation adds that fight or flight was highly adaptive for our ancestors facing immediate physical threats. However, modern stressors such as work deadlines are long-lasting and cannot be fought or fled, so the body stays in a state of arousal, which can damage health. This explains the link between chronic stress and illness, such as Kiecolt-Glaser et al.'s (1984) finding that medical students' immune functioning was lower during exams. However, evolutionary explanations are hard to test and can be accused of being 'just so' stories.

Stress genes may explain why some people are more vulnerable than others. Caspi et al. (2003) found that people with the short version of the serotonin

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transporter gene (5-HTTLPR) were more likely to become depressed after stressful life events. However, this shows that genes alone do not cause stress, since the effect only appeared when life events were present, and later studies have not always replicated it. A major weakness of biological explanations is that they are reductionist. They ignore cognitive appraisal: Lazarus argued that stress only occurs when a person appraises the demands of a situation as greater than their ability to cope, which explains why the same event, such as an exam, stresses one person but not another. Early research was also mainly on males and animals, and Taylor et al. (2000) proposed that females may show a 'tend and befriend' response, so the explanation may be gender biased.

Social psychological explanations focus on the person's environment. Holmes and Rahe's life events approach argues that events requiring major adjustment, such as divorce, bereavement or moving house, cause stress, measured in life change units on the Social Readjustment Rating Scale. Rahe et al. (1970) studied about 2,500 US Navy sailors and found a positive correlation of +0.118 between life change scores and illness. This supports the explanation, but the correlation is very weak, and correlation does not prove causation. The sample was all male and American, which limits generalisability, and the scale ignores whether events are positive or negative and how the person perceives them. The daily hassles explanation argues that minor, everyday irritations are more important. Kanner et al. (1981) found that hassles were a better predictor of psychological symptoms than life events, and DeLongis et al. (1982) found hassles were more strongly linked to health than life events, which supports the statement that social factors matter. However, these studies rely on retrospective self-report, which may be affected by recall bias, and people who are already stressed may report more hassles. Locus of control (Rotter) suggests that people with an external locus feel less in control and experience more stress, which links social and individual factors.

Overall, the statement is supported, as each perspective explains part of stress: social explanations identify the causes of stress in the environment, while

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biological explanations explain how the body responds and why stress leads to illness. Neither alone is complete. Caspi et al.'s gene and environment interaction suggests that a diathesis-stress or biopsychosocial approach, together with Lazarus's transactional model of appraisal, is the most valid way to explain stress. This also has practical value, as it suggests combining biological treatments such as beta blockers with psychological methods such as SIT.

7

Cultural bias occurs when behaviour is interpreted and judged using the standards of one culture, usually that of the researcher. It is closely linked to ethnocentrism, the tendency to see one's own culture as normal or superior, and to the imposed etic, where a theory or method developed in one culture is assumed to be universal and applied to others. Whether psychology can ever be free from this bias is debated.

There is strong evidence that psychology has been culturally biased. Henrich et al. (2010) found that 96% of participants in leading psychology journals came from Western industrialised countries, which contain only about 12% of the world's population. They described these samples as WEIRD (Western, Educated, Industrialised, Rich and Democratic) and showed that WEIRD people are often unusual compared with the rest of the world, for example in visual perception and fairness. Arnett (2008) found that 68% of samples in APA journals were American, many of them psychology undergraduates. Theories built on such narrow samples are then presented in textbooks as universal truths about human behaviour, which is a Western bias.

Ainsworth's Strange Situation is an example of the imposed etic. It was developed in the USA, where independence is valued, so securely attached infants were expected to show only moderate distress when separated. Van IJzendoorn and Kroonenberg (1988) carried out a meta-analysis of 32 studies in 8 countries and found variation: insecure-avoidant attachment was more common in Germany, while insecure-resistant attachment was more common in Israel and Japan. Takahashi (1990) found that Japanese infants were extremely distressed

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when left alone, because they are rarely separated from their mothers, so many were classified as insecure-resistant. Judging them as insecure reflects American norms, not a problem with Japanese childcare. Similarly, Bond and Smith (1996) reviewed 133 Asch-type studies from 17 countries and found that conformity was higher in collectivist cultures, so conformity seen as 'weakness' in the USA may be valued as social harmony elsewhere.

Cultural bias has had serious consequences. Gould (1981) described how the IQ tests given to over a million US Army recruits in the First World War assumed knowledge of American culture, yet the results were used to claim that recent immigrants were less intelligent and to support restrictions on immigration. In clinical psychology, African-Caribbean people in the UK have been diagnosed with schizophrenia at far higher rates than white people, which may partly reflect clinicians misinterpreting culturally normal beliefs and behaviour, such as religious experiences, as symptoms. Cultural bias also overlaps with alpha bias, which exaggerates differences between groups, and beta bias, which ignores them by assuming findings from one group apply to all.

On the other hand, it could be argued that psychology is becoming less culturally biased, and could eventually be free of it. Cross-cultural research helps psychologists recognise their own ethnocentrism: the Strange Situation and Asch findings above only became clear because the studies were repeated in other cultures. The more research that is done in different cultures, the less likely psychologists are to mistake their own culture's norms for universal ones.

Psychology can use an emic approach (Berry, 1969), studying behaviour from within a culture using its own concepts, and then derive a genuine etic by comparing findings across cultures. Indigenous psychologies, developed in countries such as India and China, are also widening the range of theories. Bias can be reduced by using samples from different cultures rather than relying on undergraduates, by involving local researchers in designing studies and analysing data, and by using back-translation of materials. Clinical practice has also changed: DSM-5 includes 'cultural concepts of distress' and a Cultural

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Formulation Interview to help clinicians understand symptoms in their cultural context.

Some research suggests that certain behaviours are genuinely universal, so they can be studied without cultural bias. Ekman and Friesen (1971) found that the Fore people of Papua New Guinea, who had little contact with Western media, recognised the same basic facial expressions of emotion, such as happiness, anger and fear, as Westerners. Biological processes, such as the stress response, are also likely to be similar in all humans. This suggests that at least some areas of psychology can be free from cultural bias.

However, there are strong reasons to argue that psychology can never be completely free from cultural bias. Ethnocentrism appears to be a natural tendency, and researchers are themselves products of a culture, so their choice of research questions, methods and interpretations are shaped by it, even in cross-cultural research. A Western researcher visiting another culture is an outsider, which may cause demand characteristics or misunderstandings, and tests developed in the West may not be meaningful elsewhere. Even the tools used to study culture can be biased: the individualism-collectivism distinction is a Western idea, and Takano and Osaka (1999) reviewed 15 studies comparing Japan and the USA and found that 14 did not support the common view that Japan is more collectivist. Treating whole countries as single cultures also ignores variation within them. Even Ekman's universality findings have been questioned, as the forced-choice method may have inflated agreement. Finally, the structure of psychology itself makes change slow: most journals are published in English, most editors and reviewers are Western, and most research funding comes from Western institutions, so research from other cultures is less likely to be funded or published, and widening participation is unlikely.

In conclusion, psychology is unlikely ever to be completely free from cultural bias, because all research is carried out by people within a culture, and the funding and publishing systems remain dominated by the West. However, freedom from bias may be the wrong goal. Psychology can greatly reduce

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cultural bias through cross-cultural and emic research, diverse samples, local researchers and cultural relativism, recognising that behaviour must be understood in its cultural context. Being aware of its own ethnocentrism, rather than claiming universal truths, is the most realistic way for psychology to minimise cultural bias.