

- 1** (a) What is meant by *tolerance* in relation to substance abuse? (1)
- (b) What is meant by *psychological dependence* in relation to substance abuse? (1)
- (Total 2 marks)**

2 A psychologist was interested in the role of sensation-seeking in the development of addictive behaviour. She tested ten participants addicted to smoking (Group A) and ten participants who had no addictive behaviours (Group B). Each participant was given a questionnaire that measured sensation-seeking. Scores on the questionnaire are given in the table below:

Sensation seeking scores for those with addictive behaviours and for those with no addictions

Group A (Addicted to smoking)	Score on sensation-seeking questionnaire	Group B (No addictive behaviours)	Score on sensation-seeking questionnaire
1	65	1	16
2	32	2	25
3	25	3	27
4	29	4	24
5	28	5	59
6	30	6	26
7	18	7	33
8	30	8	21
9	35	9	18
10	28	10	23
Median		Median	

Complete the table by calculating the median and range for the two groups. Why did the psychologist use the median rather than the mode?

(Total 4 marks)

3 Outline and evaluate the biological approach to explaining smoking behaviour.

(Total 8 marks)

4

'Sally is a young woman who puts herself down all the time. She thinks that she is overweight and has started to diet. Like her parents and some of her friends, Sally smokes cigarettes. Her smoking habit has recently become excessive and she is now addicted to nicotine.'

Using your knowledge of the psychology of addictive behaviour, explain some of the likely reasons why Sally has become addicted to smoking.

(Total 6 marks)

5

'The more young people see smoking in cinema and TV films, the more likely they are to start smoking themselves.'

Use your knowledge of research into the role of media in addictive behaviour to explain why such films might encourage young people to start smoking.

(Total 4 marks)

6

Outline and evaluate the cognitive approach to explaining problem gambling.

(Total 16 marks)

7

Nadine says that she would like to give up smoking. She tells her friend that she will buy only one packet of cigarettes this week instead of her usual two packets.

Outline the Prochaska model of behaviour change. Refer to Nadine in your answer.

(Total 4 marks)

8

Discuss **one** type of intervention aimed at reducing addictive behaviour.

(Total 16 marks)

9

Briefly outline the theory of planned behaviour.

(2)

Explain **one** limitation of this theory.

(2)

(Total 4 marks)

Mark schemes

1

(a) [AO1 = 1]

One mark for a valid definition of tolerance eg where an increased amount of the substance is required in order to experience the same effect.

(b) [AO1 = 1]

One mark for a valid definition of psychological dependence eg mental and emotional compulsion to keep taking the substance / belief that the substance needs to be taken. For credit the answer must contain reference to a cognitive element ie belief or mental drive / compulsion.

2

[AO2 = 4]

Possible content:

- Median is 29.5 ($29 + 30/2$) for Group A and 24.5 ($24 + 25/2$) for Group B

1 mark for each accurately calculated median

2 further marks for explaining the median is the more appropriate measure because of the outlying extreme scores in each group which could have distorted the mean.

Accept answers based on unsafe level of measurement.

3

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

Although the essential content for this mark scheme remains the same, mark schemes for the new AQA Specification (Sept 2015 onwards) take a different format as follows:

- A single set of numbered levels (formerly bands) to cover all skills
- Content appears as a bulleted list
- No IDA expectation in A Level essays, however, credit for references to issues, debates and approaches where relevant.

AO1 = 4

AO1 credit is awarded for an outline of the biological approach to explaining smoking behaviour. It is possible for candidates to refer to all three stages of smoking addiction, but maintenance and relapse are more likely than initiation. The biological model may be presented generically or candidates may focus in more detail on a single biological explanation eg genetic or neurochemical. Examiners need to be aware of a breadth/ depth trade-off.

Possible content includes:

- The processes of physical dependency and tolerance
- Genetic factors
- Neurochemistry and the dopamine reward system
- The endogenous opioid system (encephalin and endorphins)
- Nicotine regulation model (Shachter 1977).

AO1 Mark bands
4 marks Sound Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks No creditworthy material.

AO2 / AO3 = 4

For AO2 / AO3 credit, candidates are required to evaluate the biological explanation of smoking. This is likely to consist of research evidence to support or contradict the claims of the model.

Possible content includes:

- Twin studies demonstrating genetic influences (Kendler 1999)
- Identification of specific genes (eg: SLC6A3-9) which regulate dopamine (Lerman 1999) and influence relapse (Sabol 1999)
- Animal research (eg Corigall and Coen 1991, Harrison 2002) which supports the dopamine reward model

Candidates may also discuss the relative weakness of the biological model in explaining initiation compared with behavioural and/or cognitive approaches. The diathesis stress model may also be used for evaluation.

AO2/AO3 Mark bands
4 marks Effective Commentary and/or evaluation demonstrate sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument.
3 marks Reasonable Commentary and/or evaluation demonstrate reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.
2 marks Basic Commentary and/or evaluation demonstrate basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration.
1 mark Rudimentary Commentary and/or evaluation are rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant.
0 marks No creditworthy material.

4

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AO2 = 6

The scenario contains references to a number of factors associated with smoking addiction ie low self-esteem, dieting in females, role models who smoke. Candidates could elaborate on how these factors would influence vulnerability to addiction; they could also suggest other appropriate factors eg external locus of control. Explanations of any appropriate factors are credit-worthy.

AO2 mark bands 6 marks
<p>6 marks Effective Explanation demonstrates sound analysis and understanding. The answer is well focused and shows coherent elaboration. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.</p>
<p>5 – 4 marks Reasonable Explanation demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.</p>
<p>3 – 2 marks Basic Explanation demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.</p>
<p>1 mark Rudimentary Explanation is rudimentary demonstrating very limited understanding. The answer is weak, muddled and may be mainly irrelevant. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.</p>
<p>0 marks No creditworthy material is presented.</p>

5

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AO2 / 3 = 4

Candidates are likely to explain this in terms of social learning theory. For full marks, they need to explain why young people are likely to copy observed behaviour in films. For example, in terms of the attractiveness / likeability of the actors or the characters they play; positive outcomes etc.

Candidates might refer to research that has specifically focused on the influence of film eg Gunakesera et al (2005), Dalton et al (2003), Distefan et al (1999).

Answers which make no reference to psychological studies or theories cannot exceed 2 marks.

AO2 Mark bands
4 marks Answer demonstrates reasonable analysis and understanding.
3 – 2 marks Answer demonstrates basic analysis and understanding.
1 mark Answer is rudimentary demonstrating very limited understanding.
0 marks No creditworthy material

6**Marks for this question: AO1 = 6, AO3 = 10**

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Credit is awarded for the outline of the cognitive explanation of problem gambling. Candidates can refer to any or all of the stages of addiction. The cognitive model in general emphasises the importance of cognitive bias, coping, expectancy and self-efficacy in addiction.

Likely material includes:

- Cognitive bias - Expectancy plays an important role in the initiation of gambling. The benefits of winning money are seen as very high in gamblers who tend overestimate the likelihood of winning.
- Gamblers often place a higher priority on present excitement than on future consequences (cognitive myopia).
- Gamblers who find themselves in financial difficulties may gamble more often in an attempt to increase their negative mood creating a vicious cycle (Beck).
- Gambling may help people to cope by reducing negative mood states (such as boredom) and increasing positive moods (excitement).

AO3

Credit is awarded for an evaluation of the cognitive explanation of problem gambling. Candidates may use research studies which support the claims made by the cognitive explanation. For example:

- There is strong evidence that gambling is used to improve moods.
- Studies have shown that gamblers engage in irrational self-talk and cognitive bias when gambling (Sharpe 1995), Griffiths (1994).
- Delfabbro and Winefield 1999 found that 75% of thoughts / self-talk during gambling are irrational – effectively gamblers tell themselves they are going to win!

Candidates may also discuss the difficulties with gathering cognitive evidence and establishing cause and effect in studies of gambling. It is particularly difficult to separate the effects of learning / association from cognitive factors. Candidates who present alternative explanations (eg biological model) can receive credit provided the material is used effectively to comment on the limitations of cognitive explanations.

7**[AO1 = 2, AO2 =2]****AO1**

Up to two marks for an outline of the Prochaska model. 1 mark for a brief / vague outline. 2 marks for an outline with some detail. Relevant points include: six stage process, cyclical nature of the model and knowledge of specific stages. The most likely stages to be explained are: contemplation – person is aware of the problem and thinking about changing behaviour; preparation / decision – person is deciding that they will take steps to change; action / active – person is changing behaviour. Simply naming 2 or more stages – 1 mark. Comprehensive description is not required for full marks.

AO2

One mark for each relevant application to Nadine and smoking. Likely points: Nadine appears to understand she has a problem ie may be in the contemplation stage; but she may be entering the decision / preparation stage – she has a plan to buy fewer cigarettes, or action stage – she buys only one packet. Credit any other relevant links to the model.

8**Marks for this question: AO1 = 6, AO3 = 10**

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
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1	1 – 4	Knowledge is limited. Discussion / valuation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Types of intervention included on the specification are: drug therapy, behavioural interventions - aversion therapy and covert sensitization, and cognitive therapy. It is acceptable for candidates to describe one type of intervention in a general way or in the context of a particular type of addiction eg smoking.

If candidates offer more than one intervention, credit the best one.

AO3

The evaluation / commentary depends on the type of intervention chosen. Candidates are likely to focus on the effectiveness of each type of intervention since this is required on the specification, but any appropriate commentary is creditworthy. Candidates can gain credit by referring to other types of intervention provided that they do so as part of a sustained commentary on their chosen intervention. They might also gain credit by considering some of the ethical and / or practical implications.

9

(a) [AO1 = 2]

Possible content:

The theory of planned behaviour (TPB) has three interacting components;

- subjective norms, behavioural beliefs and attitude,
- perceived behavioural control.
- in combination these lead to behavioural intentions, and then to behaviour change

2 marks for outlining the three components of the TPB and their relationship to intentions and actions; a diagram would be an effective way to present this.

1 mark for reference to the three components

(b) [AO3 = 2]

Possible limitations:

There are several limitations to this theory;

- there is no room for less logical emotional factors that can affect behaviour;
- the three components have been criticised as being conceptually vague and difficult to measure reliably;
- although the TPB can predict behavioural intentions, it is poor at predicting actual behaviour change

1 mark for outlining one limitation of the TPB.

1 further mark for accurate elaboration; examples or research findings would be creditworthy as illustrations/elaboration of one limitation of the TPB