

PEARSON EDEXCEL A-LEVEL PSYCHOLOGY • 9PS0

PSYCHOLOGY



EXAM QUESTION PACK

TOPIC 8: HEALTH PSYCHOLOGY

SCORE

/200

PERCENTAGE

%

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Q1.

Donald is addicted to nicotine. Both his parents and his friends smoke cigarettes. His friends started smoking because they thought it made them look more mature.

He finds that nicotine helps him relax, and relieves any stress he feels. Donald finds that there are certain times during the day when he craves a cigarette, such as just after he has eaten.

Evaluate one learning explanation for nicotine addiction that could account for Donald smoking cigarettes.

You must make reference to the context in your answer.

(16)

(Total for question = 16 marks)

Q2.

Helen works with people addicted to alcohol. This includes offering treatments for their addiction to alcohol.

(a) Describe how **one** treatment could be used by Helen with people addicted to alcohol.

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(b) Explain **one** strength and **one** weakness of **one** treatment that is used with people addicted to alcohol.

(4)

Strength

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Weakness

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(Total for question = 8 marks)

Q3.

Ian carries out animal laboratory experiments to study drugs. He gave drugs to 35 monkeys and kept the monkeys in isolation during the experiment. After the experiment, Ian reintroduced the monkeys to their social group, but they were rejected by the other monkeys.

To what extent are animal laboratory experiments appropriate to study drugs? You must make reference to the context in your answer.

(Total for question = 16 marks)

Q4.

You will have learnt about a key question from health psychology that is relevant to today's society.

Assess the key question from health psychology.

(Total for question = 16 marks)

Q5.

Jason carried out a study on attitudes towards drugs, comparing the attitudes of teenagers (Condition 1) and the attitudes of those aged over 50 (Condition 2).

Jason used a ranked scale to gather his data, where 0 showed a negative attitude towards drugs and 5 showed a positive attitude towards drugs.

Jason's results are in **Table 4**.

Condition 1 Attitudes of teenagers towards drugs	Condition 2 Attitudes of the over 50s towards drugs
5	0
4	1
4	1
3	2
2	4
5	3
1	0
2	0
3	1
4	1
4	2
2	1
Total = 39	Total = 16
Mean =	Mean =

Table 4

(a) Calculate the mean score for Condition 1 and the mean score for Condition 2 and complete **Table 4** with your answers to **two** decimal places.

(2)

(b) Describe how Jason could use the findings of his study to support a learning explanation of drug addiction.

(2)

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(Total for question = 4 marks)

Q6.

Describe aversion therapy as a treatment for alcohol misuse.

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(Total for question = 4 marks)

Q7.

Mrs Smythe works at a local doctor's surgery as a community nurse. One of her responsibilities is to reduce the number of people in the local area who are addicted to nicotine. In order to do this, she offers help and advice to those addicted to nicotine as well as treatments. She has also set up a support group for the nicotine addicts.

Mrs Smythe has recently hired a therapist who is qualified to administer aversion therapy. She has decided to offer this to a small group of people who are addicted to nicotine. To see if the aversion therapy is effective Mrs Smythe will monitor the nicotine use of the group over a six-month period.

Evaluate aversion therapy as it is used for the group of nicotine addicts.

You must make reference to the context in your answer.

(16)

(Total for question = 16 marks)

Q8.

Rachel suffers from alcohol addiction. She started drinking alcohol at a young age, and now drinks excessive amounts of alcohol every day. If Rachel cannot drink alcohol at the start of the day, then she feels too unwell to go into work. Rachel's parents were both treated for alcohol addiction.

Discuss **one** biological explanation for Rachel's alcohol addiction. You must make reference to the context in your answer.

(Total for question = 8 marks)

Q9.

Cassandra is addicted to nicotine, and smokes over 30 cigarettes a day. When she smokes a cigarette Cassandra feels the effects almost immediately. She sometimes feels more alert, and sometimes feels more relaxed. She also feels happier and finds her memory improves after smoking a cigarette.

When she started smoking cigarettes Cassandra only had around five cigarettes a day, but this quickly increased as she found that the cigarettes were not having as much effect.

To what extent can **one** biological explanation account for Cassandra's addiction to nicotine?

You must make reference to the context in your answer.

(16)

(Total for question = 16 marks)

Q10.

Ben is addicted to heroin. His parents want to find out about the causes of heroin addiction.

(a) Describe **one** biological explanation for heroin addiction.

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(b) Explain **one** weakness of **one** biological explanation for heroin addiction.

(2)

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(Total for question = 6 marks)

Q11.

There are several treatments for heroin addiction.

Evaluate **one** treatment for heroin addiction.

(Total for question = 8 marks)

Q12.

Jekaterina takes an illegal drug. At first, she only took the drug a couple of times a week, but she now takes the drug daily. She finds that she needs to take twice as much of the illegal drug compared to when she first took it in order to feel the same effects.

When she does not take the drug Jekaterina often gets severe headaches. She now thinks that she cannot cope with her stressful job if she does not take the illegal drug.

Discuss issues around drug taking with reference to Jekaterina's drug use.

You must make reference to the context in your answer.

(8)

(Total for question = 8 marks)

Q13.

Pat is addicted to alcohol and so is his father. When Pat was a child he saw his father drink alcohol. His father was often in a bad mood until he had his first alcoholic drink.

When Pat drinks alcohol he feels more relaxed and calm. He often has a drink after his evening meal, and now wants a drink every time he has his evening meal. He can now drink a lot of alcohol without feeling the effects.

Pat also drinks when he is out with his friends who praise the person that can drink the most alcohol. If Pat does not have a drink during the day he feels ill.

Discuss how far **one** learning explanation can account for Pat's addiction to alcohol.

You must make reference to the context in your answer.

(8)

(Total for question = 8 marks)

Q14.

Describe **one** learning explanation for heroin addiction.

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(Total for question = 3 marks)

Q15.

Drug misuse is considered by some psychologists to have a biological basis. However, other psychologists also argue that the environment in which the person lives provides an explanation for drug misuse.

Evaluate the nature and nurture explanations of drug misuse with reference to the two types of belief above. You must make reference to the context in your answer.

(Total for question = 16 marks)

Q16.

Evaluate the classic study by Olds and Milner (1954).

(8)

(Total for question = 8 marks)

Q17.

Brie carried out an experiment to see the effect of a new drug for treating heroin addiction. The new drug was developed to reduce the impact of withdrawal symptoms. She selected heroin addicts from those who were available at a local rehabilitation centre one Monday.

She compared two groups of heroin addicts.

- Condition A: the heroin addicts who were not given the new drug.
- Condition B: the heroin addicts who were given the new drug.

Brie then asked the heroin addicts to rate the intensity of their withdrawal symptoms. A score of 7 was 'high intensity of withdrawal symptoms' and a score of 0 was 'low intensity of withdrawal symptoms'.

(a) Identify the sampling technique used by Brie in her experiment.

(1)

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The results from the experiment carried out by Brie are shown in **Table 4**.

	Condition A: the heroin addicts who were not given the new drug	Condition B: the heroin addicts who were given the new drug
Mean score (out of 7) for the intensity of the withdrawal symptoms.	5	3

Table 4

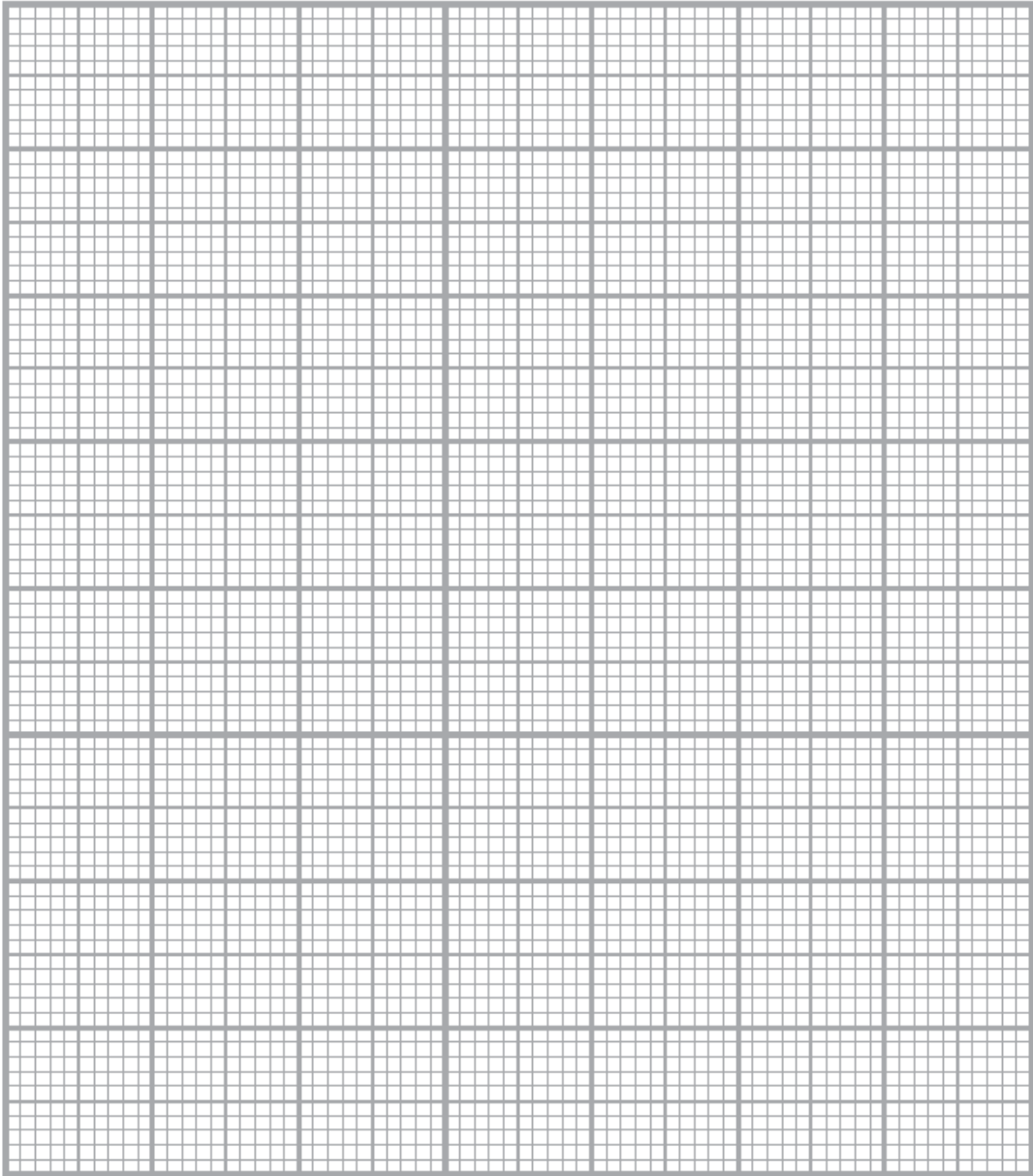
(b) Draw a suitable graph to represent the results shown in **Table 4**.

(3)

Title

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(c) Brie used an independent groups experimental/research design.

Compare independent groups and matched pairs experimental/research designs as used in health psychology.

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(Total for question = 7 marks)

Q18.

Peter is 17 years old and has just been diagnosed with alcohol addiction. His mother is also addicted to alcohol. She drinks alcohol from the moment she gets up in the morning and throughout the rest of the day.

Peter started to drink alcohol at the age of 13 in order to fit in with his group of friends, who also drink alcohol.

When at parties Peter finds that alcohol makes him feel more confident and he finds it easier to talk to other people. He now wants to drink alcohol every time he goes to a party.

Discuss how Peter's development may have affected his addiction.

You must make reference to the context in your answer.

(8)

(Total for question = 8 marks)

Q19.

Mr Leeming works at a local doctor's surgery. One of his responsibilities is to reduce the number

of people in the local area who are addicted to nicotine. In order to do this, he offers help and advice to those addicted to nicotine as well as treatments.

Mr Leeming has recently hired a therapist who is qualified to administer aversion therapy, and he has decided to offer this to a small group of people who are addicted to nicotine to see if it is effective.

Evaluate aversion therapy in relation to the small group of nicotine addicts.

You must make reference to the context in your answer.

(Total for question = 16 marks)

Q20.

Sarah is addicted to nicotine and has decided that she wants to stop smoking. She is considering aversion therapy but other treatments exist.

Discuss the use of other treatments for Sarah for her nicotine addiction. You must make reference to the context in your answer.

(Total for question = 8 marks)

Mark Scheme

Q1.

Question Number	Indicative Content	Mark
	AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) AO1 • According to social learning theory we need to observe the process of smoking a cigarette, such as how to inhale. • We are more likely to pay attention to a role model smoking if they are of relevance to us. • Smokers may be vicariously reinforced for smoking, such as appearing more relaxed, so this will increase the possibility of the behaviour being imitated. • People must be able to carry out the behaviour, so they must be able to physically light a cigarette. • The behaviours have to be retained in our memory, so in order to imitate smoking we have to remember how a cigarette is lit. • Once smoking has been tried for the first time people may be motivated to carry on with the behaviour as they are extrinsically motivated by the reaction of other people. AO2 • Donald would have observed his friends inhaling cigarettes and then blowing the smoke out. • Donald will pay attention to his father smoking as he is of the same sex as Donald. • Donald may see other friends being praised for smoking and so is motivated to smoke in order to receive praise. • Donald may then be extrinsically motivated to carry on with smoking as his friends see him as cool and part of the gang.	(16)

	AO3 • Bandura, Ross and Ross (1961) found that children will copy the aggressive behaviour of adult role models, so this may also explain why people start smoking. • Bandura, Ross and Ross (1961) used children aged three to five years old so it may not explain why people become addicted to nicotine as they tend to be older when they start smoking. • Ennett et al. (1994) found that having friends who did or did not smoke led to individuals having the same behaviour, so suggesting social learning theory can explain addiction to nicotine. • Social learning theory ignores biological factors such as the mode of action of nicotine so cannot be considered a full explanation of addiction to nicotine. • Social learning theory can be seen as a better explanation for addiction to nicotine than operant conditioning, as it explains why people carry on smoking even though they often find their first experience unpleasant.	
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	• One reason groups of friends all smoke could be that people choose to be friends with other smokers rather than because they are vicariously reinforced by their friends. Look for other reasonable marking points.	
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Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer. Application to the context is capped at maximum 4 marks.		
	0	No rewardable material.
Level 1	1-4 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5-8 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	9-12 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13-16 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q2.

Question Number	Indicative Content	Mark
a	AO2 (4 marks) Up to four marks for description of a treatment Helen could use on those addicted to alcohol. For example; aversion therapy. Helen would give the addicts an emetic drug/disulfiram which stops the breakdown of acetaldehyde in their bodies (1). Helen would give her patient an alcoholic drink, such as wine, and the patient would be sick/feels sick due to the emetic drug (1). The patient eventually associates being sick with alcohol so avoids drinking alcohol (1). Helen gives the addict non-alcoholic drinks when the addict does not feel sick to stop generalisation of the response (1). Answers must relate to the scenario. Generic answers score 0 marks. Look for other reasonable marking points.	(4)

Question Number	Indicative Content	Mark
b	AO1 (2 marks), AO3 (2 marks) One mark for identification of each strength/weakness up to a maximum of two marks (AO1) One mark for justification of each strength/weakness up to a maximum of two marks (AO3) For example; aversion therapy - There are studies that show that aversion therapy is an effective treatment for alcohol addiction (1). E.g. Howard (2001) found that after aversion therapy patients were more confident that they could resist alcohol (1). - Aversion therapy does not look at the underlying reasons why someone abuses alcohol (1), so they may start drinking alcohol again if these issues are not addressed (1). Look for other reasonable marking points.	(4)

Q3.

Question Number	Indicative Content
	AO1 (6 marks), AO2 (4 marks) AO3 (6 marks) AO1 • Laboratory experiments have a clear hypothesis which states what the experimenter hope to find out. • A laboratory experiment using animals is carried out in controlled conditions. • An IV is manipulated to see the effect on the DV. • Laboratory experiments can look at the effects of the drugs on the brain/long term effects of the drugs/effects of treatment programmes. • An independent measures design can be used where different participants are used in each condition. • They could use a repeated measures design where the same animals are used in both conditions. AO2 • Ian can control what other drugs the monkeys have previously taken so he will know the effects of the specific drug he has given them. • Because the monkeys were kept in isolation Ian can be sure any effects were caused by the drug so it is a useful method for him to use. • Monkeys are not genetically identical to humans so Ian's results may not be useful as they may not be the same for humans. • Ian used 35 monkeys which may be seen as a small number so the results may not be useful when Ian tries to generalise them. AO3 • The use of controlled conditions means a clear cause and effect can be established so they are appropriate. • Humans take drugs in social conditions not controlled conditions so the use of animals may not be appropriate. • As animals such as mice have a short life span it is possible to look at the long term effects of drugs making it more appropriate to study animals compared to humans. • Social animals, such as monkeys should not be kept in isolation unless absolutely necessary therefore Ian's use of the monkeys was not appropriate. • The minimum number of animals should be used to keep experiments into drug research ethical so Ian's use of only 35 monkeys is appropriate. • If the animals cannot join their social groups after the study then the experimenters need to ensure they are kept in as reasonable conditions as possible, such as putting all the rejected animals in their own social group so it may be more appropriate to study non-social animals. Look for other reasonable marking points.

Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs judgement/conclusion in their answer. Application to the scenario is capped at maximum 4 marks.		
	0	No rewardable material.
Level 1	1–4 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) A judgement/decision may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material leading to a judgement/decision being presented. Candidates will demonstrate a grasp of competing arguments but response may be imbalanced. (AO3)
Level 3	9–12 Marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Displays a mostly developed and logical argument, containing mostly coherent chains of reasoning. Demonstrates an awareness of competing arguments, presenting a judgement/decision which may be imbalanced. (AO3)
Level 4	13–16 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical argument, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments and presents a balanced response, leading to a balanced judgement/decision. (AO3)

Q4.

Question Number	Indicative Content
	A01 (6 marks), A02 (4 marks) A03 (6 marks) For example can we encourage the cessation of smoking? A01 • Before health psychologists can help someone stop smoking they have to know the reasons why someone started smoking. • It could be because they saw family members or friends smoke so therefore started. • Health psychologists also need to look at how to reinforce the dangers of smoking rather than the smokers focus on the pleasure of smoking. • Smokers know the health dangers of smoking but ignore those and carry on smoking. • There are also the issues of addiction and habit that need to be addressed if the cycle is to be broken. A02 • Campaigns should highlight the positives and negatives of smoking, and come to a conclusion rather than just highlight the negatives. • Smokers must be motivated to stop, according to the elaboration likelihood model, so health psychologists should offer some motivation such as entry to a prize draw for every day/week without a cigarette. • Using fear arousal graphic pictures have been put on the back of cigarette packs in the hope smokers will notice them and it will motivate them to stop smoking. • However, smokers may ignore the picture, or not take much notice of it as they are familiar with the pictures, so reducing its effectiveness.

	A03 • The Hovland-Yale model of persuasion states that if both sides of the argument are presented and a solid opinion given then this is more effective than just presenting one side of the argument (Maguire 1964). • Pengpid et al (2013) found that if people were aware of the risks of a substance they were as likely to stop using that substance compared to if they had undergone brief intervention treatments, supporting the Hovland-Yale model. • The elaboration likelihood model does not cause a quick change in attitudes, therefore does not cause a quick change in behaviour so money may be a factor in its effectiveness when used in stop smoking campaigns. • Hammond et al (2003) found graphic pictures of cigarette packs were more likely to change smokers' behaviour than written warnings. • If treatment is to be effective it is important that the smoker wants to change their behaviour, and are ready to stop smoking otherwise they are more likely to start again when they experience difficulties such as cravings. • Health psychology can be used to help people stop smoking but it needs to be a holistic approach which deals with the causes of starting smoking, the physical addiction and the psychological addiction otherwise it is not as likely to be effective. Look for other reasonable marking points.
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Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer. Application to the context is capped at maximum 4 marks.		
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–4 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	5–8 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	9–12 Marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning, leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	13–16 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Q5.

Question Number	Indicative Content	Mark																																													
a	AO2 (2 marks) <table border="1"> <thead> <tr> <th>Attitudes of teenagers towards drugs.</th><th>Attitudes of the over 50s towards drugs.</th><th></th></tr> </thead> <tbody> <tr><td>5</td><td>0</td><td></td></tr> <tr><td>4</td><td>1</td><td></td></tr> <tr><td>4</td><td>1</td><td></td></tr> <tr><td>3</td><td>2</td><td></td></tr> <tr><td>2</td><td>4</td><td></td></tr> <tr><td>5</td><td>3</td><td></td></tr> <tr><td>1</td><td>0</td><td></td></tr> <tr><td>2</td><td>0</td><td></td></tr> <tr><td>3</td><td>1</td><td></td></tr> <tr><td>4</td><td>1</td><td></td></tr> <tr><td>4</td><td>2</td><td></td></tr> <tr><td>2</td><td>1</td><td></td></tr> <tr><td colspan="2">Total = 39</td><td>Total = 16</td></tr> <tr><td colspan="2">Mean = 3.25</td><td>Mean = 1.33</td></tr> </tbody> </table> One mark for each correct mean up to 2 decimal places (see table above).	Attitudes of teenagers towards drugs.	Attitudes of the over 50s towards drugs.		5	0		4	1		4	1		3	2		2	4		5	3		1	0		2	0		3	1		4	1		4	2		2	1		Total = 39		Total = 16	Mean = 3.25		Mean = 1.33	(2)
Attitudes of teenagers towards drugs.	Attitudes of the over 50s towards drugs.																																														
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Total = 39		Total = 16																																													
Mean = 3.25		Mean = 1.33																																													

Question Number	Indicative Content	Mark
(b)	AO2 (2 marks) Up to two marks for description of how results could support a learning explanation of drug addiction. For example Jason's results could support the operant conditioning explanation of drug addiction as teenagers may get more positive reinforcement for taking drugs through acceptance from their peers (1), and Jason's results showed that teenagers have a more positive attitude to drugs than the over 50s (1). Answer must refer to the scenario. Generic answers score 0 marks. Look for other reasonable marking points.	(2)

Q6.

Question Number	Answer	Mark
	AO1 (4 marks) One mark for each point, which in combination provides a logical description up to 4 marks. - Any four of the following points: Aversion therapy works on the principles of classical conditioning and associates an undesirable behaviour with an undesirable response (1). - Alcoholics are given an emetic drug at the same time as being given an alcoholic drink (1). - The emetic drug stops the oxidation of the alcohol, so the toxins build up in the body (1). - This then leads to the alcoholic feeling sick as they drink the alcohol (1). - As they will associate drinking alcohol with feeling sick, they will avoid drinking alcohol (1). - At the same time, the patients must be given non-alcoholic drinks at times they do not feel sick so that the response is not generalised to all drinks (1). Look for other reasonable marking points.	(4)

Q7.

Question Number	Indicative content	Mark
	AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) AO1 • Aversion therapy is based on classical conditioning and aims to pair nicotine with an unpleasant response. • Those addicted to nicotine are asked to rapid smoke, inhaling the smoke from a cigarette every few seconds for a period of time. • Smoking rapidly, causes a person to feel sick. • The addict associates the feeling sick to the inhaling of the cigarette. • After several pairings the addict will feel sick when they see a cigarette and so avoid smoking. • The addicts may be given silver acetate which leaves an unpleasant taste when a cigarette is smoked. AO2 • The therapist will give the small group of addicts a packet of cigarettes and ask them to rapidly smoke the cigarettes. • The small groups of nicotine addicts will carry on smoking even if they feel sick. • After a few sessions with the therapist the small group of nicotine addicts will feel sick when they see a cigarette. • When Mrs Smythe's patients associate cigarettes with feeling sick they will avoid smoking so that they will not feel sick.	(16)

	AO3 • Danaher (1977) studied rapid smoking and found that it was effective for some smokers, such as non-married couples, but it was not effective for everyone. • Russell et al. (1976) found that using electric shocks as an aversive stimulus led to 61% of the smokers stopping smoking. • Aversion therapy does not address the psychological reasons why nicotine addiction occurred so it may not work long term so may not be effective. • Aversion therapy stops the person craving nicotine, so they can then access other therapies to gain insight into the reasons for their addiction. • Nicotine addiction may return after aversion therapy if the patient tries a cigarette and	
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	realises they do not feel sick, so it may not be effective long term. • Aversion therapy can be a quicker and cheaper treatment than other therapies so nicotine addicts may prefer it. Look for other reasonable marking points.	
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Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer. Application to the context is capped at maximum 4 marks.		
	0	No rewardable material.
Level 1	1-4 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5-8 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	9-12 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning, leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13-16 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Question Number	Indicative Content
	AO1 (4 marks), AO2 (4 marks) AO1 - Alcohol is a depressant drug. - Alcohol inhibits serotonin in the brain. - Alcohol also increases the amount of GABA which is an inhibitory neurotransmitter. - The changes to the neurotransmitters can cause down regulation as the brain adjusts to the levels of serotonin and dopamine from the alcohol. AO2 - Alcohol decreases serotonin in Rachel's brain and so causes her to be depressed meaning she does not feel like she can go to work. - Alcohol also increases the amount of GABA in Rachel's brain, increasing the depressant effect on Rachel and meaning she needs an alcoholic drink in the morning. - Because Rachel's parents were also treated for addiction it could be due to genetics that Rachel is addicted to alcohol. - Due to down regulation Rachel will experience withdrawal symptoms if she does not have a drink leading to her drinking excessive amounts of alcohol to feel normal. Look for other reasonable marking points.

Level	Mark	Descriptor
Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.		
	0	No rewardable material
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures) (AO2)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Question Number	Indicative Content	Mark
	AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) AO1 - Nicotine acts on neurotransmitters within a few seconds, as it goes from the lungs into the blood stream and then into the brain. - Nicotine molecules are a similar shape to acetylcholine (ACh) molecules and binds to ACh receptors in the brain. - After nicotine has attached to the ACh receptors it makes that neuron fire more frequently leading to feelings of alertness. - Nicotine also increases dopamine levels in the reward pathway leading to increases feelings of happiness. - The smoke from cigarettes may also decrease the level of monoamine oxidase, (MAO), which means that the dopamine is not broken down as quickly so it has more of an effect on the reward system. - Norepinephrine levels are also increased due to the excess ACh, leading to better memory functioning.	(16)

	AO2 - As Cassandra smokes cigarettes the nicotine will get to her brain in a few seconds, explaining why she feels the effects almost immediately. - The nicotine has bound to her ACh receptors which leads to Cassandra feeling more alert after smoking a cigarette. - Cassandra feels happier after smoking because the nicotine has increased the levels of dopamine in the reward pathway in her brain. - Because Cassandra's brain has got used to the levels of neurotransmitters due to nicotine it has adjusted the natural production of these neurotransmitters, which explains why she now smokes over 30 a day. AO3 - Kenny and Markou (2006) found that rats that self-administered nicotine had an increased the sensitivity of brain reward systems, suggesting that dopamine does increase and lead to nicotine addiction. - Animal experiments to look at the effects of nicotine on the brain may not explain how nicotine affects the human brain as there are biological differences, so may not explain nicotine addiction in humans. - Burnzell et al. (2010) found that rats who had specific nicotine sensitive ACh receptors self-administered nicotine more than the rats who did not have the same receptors, showing that neurotransmitters do affect whether people become addicted to nicotine or not. - The neurotransmitter explanation cannot explain why people smoke their first cigarette, therefore it is not effective in explaining the starting process towards addiction. - Markou et al. (1998) found that there was a significant decrease in the activity of the brain reward pathway in rats when the rats were	
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	withdrawn from nicotine, so neurotransmitters can effectively explain withdrawal symptoms experienced by smokers. There are alternative explanations to nicotine addiction, such as the positive reinforcement due to the activation of the dopamine reward pathway, so the biological explanation may not be a complete explanation on its own. Look for other reasonable marking points.	
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Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs judgement/conclusion in their answer. Application to the scenario is capped at maximum 4 marks.		
	0	No rewardable material.
Level 1	1–4 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) A judgement/decision may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material leading to a judgement/decision being presented. Candidates will demonstrate a grasp of competing arguments but response may be imbalanced. (AO3)
Level 3	9–12 Marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Displays a mostly developed and logical argument, containing mostly coherent chains of reasoning. Demonstrates an awareness of competing arguments, presenting a judgement/decision which may be imbalanced. (AO3)
Level 4	13–16 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical argument, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments and presents a balanced response, leading to a balanced judgement/decision. (AO3)

Q10.

Question Number	Indicative Content	Mark
a	AO1 (4 marks) Up to four marks for description. For example; Drugs affect the neurotransmitters in the brain, e.g. heroin mimics endorphins (1). This can lead to the brain readjusting the levels of neurotransmitters is naturally produces (1). When the brain does not receive any of the drug it may have reduce levels of a specific neurotransmitter leading to withdrawal symptoms (1). It also leads to tolerance so a person has to take more of the drug in order to get the initial effects (1). Look for other reasonable marking points.	(4)

Question Number	Indicative Content	Mark
b	AO1 (1 mark) AO3 (1 mark) Up to one mark for identification of weakness. (AO1) Up to one mark for justification/exemplification of weakness. (AO2) For example neurotransmitters; The neurotransmitter explanation does not explain why someone starts to take drugs in the first place (1) as it looks at the effects on neurotransmitters once the drug has been taken (1) Look for other reasonable marking points.	(2)

Q11.

Question Number	Indicative Content
	AO1 (4 marks), AO3 (4 marks) AO1 - Methadone is a synthetic opiate that is used to treat heroin addiction. - Heroin addicts take it once a day, and it stops the withdrawal symptoms of heroin. - It is usually taken at the pharmacy to start with in a liquid form. - Once the addict has stabilised on methadone they may be trusted to take the methadone home with them AO3 - Hedrich (2012) found that prisoners who started a methadone programme in prison and had community support when released were more likely to remain drug free once released. - Methadone is taken orally so avoids the health hazards, such as hepatitis, that come from using dirty needles. - However, addicts may become dependent on the methadone, so they could just replace one addiction with another. - In conclusion, methadone has many advantages when treating heroin addicts, but must be carefully monitored, otherwise addicts will stay on it which will cost the NHS a lot of money. Look for other reasonable marking points.

Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.		
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	3-4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	5-6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	7-8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q12.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO2 (4 marks) AO1 • A person is said to be physically dependent on a drug when they have developed tolerance and experience withdrawal symptoms. • Tolerance is when the body has adapted to the drug and more needs to be taken to feel the same effect as the first time it was taken. • When a person who is addicted stops taking the drug they experience physical symptoms as the drug levels in their body decrease. • Psychological dependency occurs when the addict believes they cannot manage their daily life without taking the drug. AO2 • Jekaterina is physically dependent on the illegal drug as she has withdrawal symptoms and has become tolerant to the drug. • Jekaterina needs to take twice as much of the drug, daily, in order to feel the same effects as when she first took it. • When she does not take the illegal drug Jekaterina has physical symptoms such as severe headaches. • Jekaterina has developed psychological dependency as she feels she cannot manage her stressful job without taking the drug. Look for other reasonable marking points.	(8)

Level	Mark	Descriptor
A01 (4 marks), A02 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.		
	0	No rewardable material
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (A01) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (A02)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (A01) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (A02)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (A01) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures) (A02)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (A01) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (A02)

Q13.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO2 (4 marks) AO1 E.g. Classical conditioning • Originally the neutral stimulus is alcohol as it has no conditioned effect on the body so the person is not addicted to it. • If a person drinks alcohol often enough then they will associate the alcohol with pleasurable feelings. • When alcohol is drunk at a specific time or place then the time/place will become associated with the alcohol and crave it. • Opening a bottle of alcohol can lead to the body automatically expecting the alcohol and the body will release antagonists to counter act the alcohol. E.g. Operant conditioning. • Operant conditioning works through the process of reinforcement, if a person is reinforced for a behaviour then they are more likely to repeat the behaviour. • Alcohol acts as a positive reinforcement because it makes people feel more relaxed, and lowers their inhibitions. • Withdrawal symptoms from alcohol are unpleasant, such as a headache, so act as a punishment for not drinking alcohol. • Drinking alcohol gets rid of the unpleasant withdrawal symptoms, so it acts as a negative reinforcement so leading to addiction.	(8)

	E.g. Social learning theory. • People addicted to alcohol will have observed a role model drinking alcohol. • If the role model who drinks alcohol has relevance, then the person is more likely to pay attention to that behaviour and remember it. • Vicarious reinforcement, such as seeing the role model enjoy the alcohol, will make it more likely that the behaviour will be repeated. • When imitating the drinking of alcohol, if the person is further reinforced they will then repeat the behaviour again and again AO2 E.g. Classical conditioning. • When Pat first started to drink alcohol it would not lead to addiction as he has not associated it with feeling relaxed or calm. • Because he drinks alcohol every day it now causes a conditioned response of relaxation so he needs alcohol to feel relaxed. • As Pat drinks alcohol after the evening meal he has associated the evening meal with alcohol and he craves it with the evening meal.	
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	- Pat is addicted to alcohol and has become more tolerant to it because his body automatically responds as though he has already drunk the alcohol when he opens a bottle. E.g. Operant conditioning. - Pat is reinforced for drinking alcohol as his friends praise him if he drinks the most alcohol, so he will repeat the behaviour. - The feelings of relaxation and calm that he gets after drinking alcohol acts as a positive reinforcement. - When he does not drink alcohol during the day Pat suffers from withdrawal symptoms, which may include hallucinations as he is addicted, so he is punished for not drinking alcohol. - To get rid of the withdrawal symptoms Pat drinks more alcohol, so is negatively reinforced and so becomes addicted. E.g. Social learning theory. - When Pat was a child he saw his father drink alcohol, so he has been exposed to the actions involved. - His father is a relevant role model to Pat, as he is the same sex and in a position of power, so Pat is more likely to remember the actions associated with drinking alcohol. - His father was reinforced for drinking alcohol, as the first drink improved his mood, so Pat is vicariously reinforced. - Pat's friends praise him if he drinks the most alcohol so this further motivates Pat to repeat the behaviour. Look for other reasonable marking points.	
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Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.		
	0	No rewardable material
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures) (AO2)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Q14.

Question Number	Answer	Mark
	AO1 (3 marks) Up to three marks for a description of one learning explanation For example: • People who take heroin would receive a positive reinforcement in the form of the euphoria they feel after taking heroin (1). Heroin also gives a negative reinforcement as it can take away physical pain so rewards the user (1). Addicts suffer withdrawal symptoms, such as feeling hot and cold, so take the heroin to remove these withdrawal symptoms which is negative reinforcement (1). Look for other reasonable marking points.	(3)

Q15.

Question Number	Indicative content	Mark
	AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) AO1 • Drug misuse refers to taking recreational (or other) drugs when they are not prescribed, and usually it refers to when they are not legal. • There are legal highs, but they are also frowned upon so that can come within drug misuse. • Nature refers to what people are born with and relates to genes and biology. It is what is innate in the person. • Nurture refers to upbringing and the environment and influences on our 'natural' core. • Nurture can come from parents and schooling as well as from the wider society. • We are also influenced by environmental factors such as media, our actual physical environment and anything outside our selves that affects us. • Nurture can include the womb as an environment. AO2 • Psychologists have a belief in biological causes for behaviour. • They will emphasise the role of genes in affecting behaviour such as addictive behaviour. • The belief is that chemical imbalances in body bring can about drug misuse. • Psychologists also emphasis the environment as a cause for addiction. • They will explore the client's family history, for example. • Learning from the environment (such as peers) can lead to drug misuse, such as getting rewards from misusing drugs and being 'accepted' or 'praised'.	(16)

Question Number	Indicative content	Mark
cont.	A03 • Both explanations can explain why drugs misuse can occur in generations of the same family. • Nature because family members have inherited genes that make them more susceptible to addiction. • Nurture because people see parents as role models and copy their behaviour. • Alcohol is more likely to be nurture because the addict is more likely to have experienced contact with alcohol due to role models, legal, socially acceptable, readily available, reasonably cheap, many varieties. • Any addictions could be the result of a genetic predisposition. • However, types of addicts could have been influenced by their situational interactions. • The nature explanation does not look at social factors such as friends whereas social learning theory says we may imitate our peers. • The nurture explanation would support an individual being able to change their drug use, whereas a biological explanation might suggest that an individual's biology might have an effect on their ability to fight addiction. • It is possible to see the influence of the environment on the psychological treatment of substances by influencing through a ban on tobacco advertising and positive role models. This is not evident with the nature explanation. • For both explanations it is important to consider that there could be additional factors affecting the individual's likelihood to use drugs. Look for other reasonable marking points.	

Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer. Application to the context is capped at maximum 4 marks.		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning. Leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

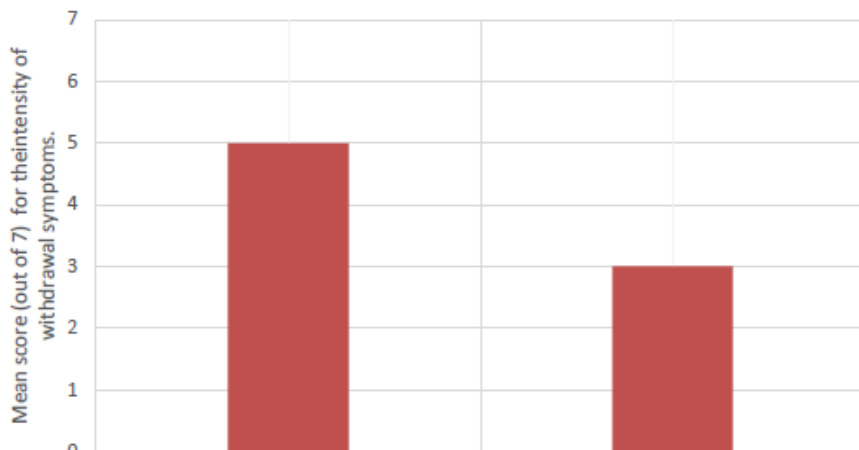
Q16.

Question Number	Indicative Content	Mark
	AO1 (4 marks), AO3 (4 marks) AO1 • The aim of the study was to see if electrical stimulation of rats' brains had a reinforcing effect. • Fifteen male hooded rats were used in the study, and they had to press a lever to deliver an electrical current to their brain. • The rats had six to twelve hours where they received an electrical stimulation every time they pressed the lever and one to two hours where pressing the lever did not lead to electrical stimulation. • When the electric stimulation went to the septal area of the brain the rats pushed the lever in increasing amounts, up to 7500 times in one rat. AO3 • The results have validity as the rats had free access to food and water apart from when they were in the Skinner box, so the electrical stimulation did not reduce any other drive, and was reinforcing in its own right. • As rats brains are not exactly the same as human brains the results of the study may not apply to humans. • The study can be seen as unethical as the rats had to go up to twelve hours without food and water, and can be seen as inappropriate caging when the time spent in without food or water could be shorter. • The data are objective as the number of times the rats pressed the lever was used, therefore increasing the reliability of the results as it was not due to subjective interpretation of the rats behaviour. Look for other reasonable marking points.	(8)

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.		
	0	No rewardable material.
Level 1	1-2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	3-4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	5-6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning, leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	7-8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q17.

Question Number	Answer	Mark
(a)	AO2 (1 mark) One mark for identification in relation to the scenario. For example: Brie used an opportunity sample as she used heroin addicts who were available at the rehabilitation centre on that Monday (1). Answers must relate to the scenario. Look for other reasonable marking points.	(1)

Question Number	Answer	Mark						
(b)	AO2 (3 marks) One mark for correct/appropriate title. One mark for correct/appropriate labelling of axes. One mark for correct plotting of both mean scores. A bar chart to show the mean score (out of 7) for the intensity of withdrawal symptoms when given the new drug or not. <table><thead><tr><th>Condition</th><th>Mean score (out of 7)</th></tr></thead><tbody><tr><td>Condition A: the heroin addicts were not given the new drug</td><td>5</td></tr><tr><td>Condition B: the heroin addicts were given the new drug</td><td>3</td></tr></tbody></table>	Condition	Mean score (out of 7)	Condition A: the heroin addicts were not given the new drug	5	Condition B: the heroin addicts were given the new drug	3	(3)
Condition	Mean score (out of 7)							
Condition A: the heroin addicts were not given the new drug	5							
Condition B: the heroin addicts were given the new drug	3							
Look for other reasonable marking points.								

Question Number	Answer	Mark
(c)	AO3 (3 marks) 1 mark per explicit comparison. The answer must include at least one similarity and one difference otherwise max 2 marks. For example: Both independent groups and matched pairs would have different addicts in the conditions of a study into drugs (1). In matched pairs the researcher matches the addicts in each group on desired characteristics (such as length of addiction) whilst in independent groups the participants in each group could have different characteristics (1). Both independent groups and matched pairs are less likely to have demand characteristics than repeated measures, as the addicts only take part in one condition in a study into drugs (1). Look for other reasonable marking points.	(3)

Q18.

Question Number	Indicative content	Mark
	AO1 (4 marks), AO2 (4 marks) AO1 • Children will observe and imitate behaviours from role models such as their parents. • Social identity theory says that when we identify with a group we take on their norms and values. • Behaviours that are reinforced are more likely to be repeated in order to receive the reinforcement again. • According to classical conditioning anything associated with drugs can lead to a reflexive response so more drugs are needed to achieve the same effect. AO2 • As Peter saw his mother drinking throughout his childhood he will imitate this behaviour and become addicted to alcohol. • In order to identify with his group of friends Peter has taken on the norm of drinking alcohol. • Peter was positively reinforced by feeling more confident when at parties so this has led to his alcohol addiction. • Peter has associated going to parties with alcohol so he now feels he needs to drink more alcohol at parties to have the same effect.	(8)

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.		
	0	No rewardable material
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures (AO2)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Q19.

Question Number	Indicative content	Mark
	AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) AO1 • Aversion therapy is based on classical conditioning and aims to pair nicotine with an unpleasant response. • Those addicted to nicotine are asked to rapid smoke, inhaling a cigarette every few seconds for a period of time. • Smoking rapidly causes a person to feel sick. • The addict associates the feeling sick with the inhaling of the cigarette. • After several pairings the addict will feel sick when they see a cigarette and so avoid smoking. • The addicts may be given silver acetate which leaves an unpleasant taste when a cigarette is smoked. AO2 • The therapist will give the small group of patients a packet of cigarettes and ask them to rapidly smoke the cigarettes. • The small group of nicotine addicts will be made to carry on smoking even if they feel sick. • After a few sessions with the therapist the small group of nicotine addicts will feel sick when they see a cigarette. • When the Mr Leeming's patients associate cigarettes with feeling sick they will avoid smoking so that they will not feel sick.	(16)

	AO3 • Danaher (1977) used rapid smoking to treat smokers and found that it was effective for some smokers such as non-married couples but it wasn't effective for everyone. • Russell et al. (1976) found that using electric shocks as an aversive stimulus led to 65% of the smokers stopping smoking. • Aversion therapy does not address the psychological reasons why nicotine addiction occurred so it may not work long term. • Aversion therapy stops the person craving nicotine so they can then access other therapies to gain insight into the reasons for their addiction. • Nicotine addiction may return after aversion therapy if the patients tries a cigarette and realises they do not feel sick, so it may not be effective long term. • Aversion therapy can be a quicker and cheaper treatment than other therapies so nicotine addicts may prefer it.	
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Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer. Application to the context is capped at maximum 4 marks.		
	0	No rewardable material.
Level 1	1-4 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5-8 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)

Level 3	9-12 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning, leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13-16 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Q20.

Question Number	Indicative content	
	AO1 (4 marks), AO2 (4 marks), AO1 Example – e-cigarettes • E-cigarettes/patches help people to stop smoking by giving them nicotine to avoid the withdrawal but without the other toxins in cigarettes. • The amount of nicotine can be controlled and reduced gradually to achieve zero eventually. Example – CBT • Therapy can help with stopping smoking, including using cognitive behavioural therapy. • CBT works by looking at behaviour and seeing what the thoughts and feelings are related to that behaviour. • Then either the behaviour, the thought or the feelings can be considered and changed, to change the consequences (in this case smoking). • People use techniques to uncover their core beliefs and how such beliefs link to behaviour that might be unwanted but is sustaining a cycle.	(8)

	AO2 Before treatment begins, an assessment of the reason why Sarah started smoking in the first place will need be carried out, since even if she addresses the addiction, there remains the possibility that she will restart smoking if the original reason has not been addressed. Example – e-cigarettes /patches • E-cigarettes /patches will allow Sarah to reduce her nicotine input in a controlled fashion, avoiding withdrawal symptoms and removing the negative side effects of smoking traditional cigarettes. • Sarah can be reassured that there is at least some evidence that e-cigarettes work and that evidence is building. For example Brown et al. (2014) found that e-cigarettes were effective, and smokers who wanted to stop and were given e-cigarettes had the best outcomes (compared with those not given them). 19.9% stopped compared with 15.1% with no aid. • She might not have a successful outcome if she had started smoking because she had observed her peers smoking. This may be a reason for her to carry on.	
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Question Number	Indicative content	Mark
cont.	Example – CBT • In using CBT Sarah will be asked to do homework, and she will receive encouragement from the counsellor to motivate her to make changes, as it is down to her. • To help Sarah to achieve success in CBT, other therapies tend to be involved in counselling, such as using the core conditions of the person-centred approach and using genuineness, empathy and unconditional positive regard to form a therapeutic relationship with the client. • Sarah can be provided with the evidence that CBT is effective, and that it is the therapy of choice in the NHS. Look for other reasonable marking points.	

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.		
Level 0	0	No rewardable material
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)