Q1.		Many	people use recreational drugs.		
	(a)	Give one example of:			
		(i)	a legal recreational drug		
				(1)	
		(ii)	an illegal recreational drug.		
				(1)	
	(b)	Some recreational drugs are addictive.			
		(i)	Give one example of a recreational drug that is very addictive.		
				(1)	
		(ii)	Explain how the action of a drug makes a person become addicted to it.		
				(1)	

(c) Some doctors think that smoking cannabis causes depression.

Doctors investigated the cannabis smoking habits of 1500 young adults.

The table shows the percentage of cannabis smokers in the investigation who became depressed.

How many times the men or women had smoked cannabis in the last 12 months	Percentage of men who became depressed	Percentage of women who became depressed
Less than 5 times	9	16
More than 5 times, but less than once per week	10	17
1 – 4 times per week	12	31
Every day	15	68

From the data, give **two** conclusions that can be drawn about the relationship between cannabis and depression.

1	
•••	
2	

(2) (Total 6 marks)

Q2. It is legal in the UK to use certain recreational drugs but illegal to use others.

(a) Tobacco is a legal drug. Pregnant women are strongly advised not to smoke.
 Explain how a fetus may be affected if the mother smokes tobacco.

(2)

- (b) Illegal drugs are classified as Class A, B or C. Class A drugs are the most dangerous. The use of Class A drugs attracts the most serious punishments and fines.
 - Cannabis is a Class **C** drug.
 - These are some facts about cannabis.
 - It is less addictive than amphetamines, tobacco or alcohol.
 - It may cause mental illness.
 - It does not seem to cause major social problems.
 - It may be a 'gateway' drug to more harmful substances.
 - It has a higher tar content than tobacco.
 - It has an effect on the heart, similar to the effects of exercise.
 - It can upset the control of blood pressure.
 - Use the above information to answer these questions.
 - (i) Give **two** reasons why many people think that cannabis should be classified as a Class **A** or Class **B** drug.

1
2

(2)

(ii) Give **two** reasons why many people think that cannabis should not be classified as an illegal drug.

 1.

 2.

(2) (Total 6 marks) **Q3.** Read the description of an investigation into the link between smoking cannabis and heroin addiction.

Six 'teenage' rats were given a small dose of THC – the active chemical in cannabis – every three days between the ages of 28 and 49 days. This is the equivalent of human ages 12 to 18.

The amount of THC given was roughly equivalent to a human smoking one cannabis 'joint' every three days.

A control group of six 'teenage' rats did not receive THC.

After 56 days catheters (narrow tubes) were inserted in all twelve of the now adult rats and they were able to self-administer heroin by pushing a lever.

All the rats began to self-administer heroin frequently. After a while, they stabilised their daily intake at a certain level.

The ones that had been on THC as 'teenagers' stabilised their heroin intake at a much higher level than the others. They appeared to be less sensitive to the effects of heroin. This pattern continued throughout their lives.

Reduced sensitivity to the heroin means that the rats take larger doses. This has been shown to increase the risk of addiction.

Evaluate this investigation with respect to establishing a link between cannabis smoking and heroin addiction in humans.

Remember to include a conclusion to your evaluation.

 (Total 5 marks)

Q4. Name **two** drugs which may harm the human body.

1	
2	

(Total 2 marks)

##

Read the following passage.

	One of the deadliest diseases seems to be making a comeback in Britain. Doctors are alarmed at the rising number of cases of tuberculosis (TB). TB is caused by microbes called bacteria. When people carrying the TB bacteria cough or sneeze, the TB bacteria get into the air. Other people may then breathe them in.	
(2	a) Which organs will be infected first when someone breathes in the TB bacteria?	
		(1)
(t	b) Explain how the TB bacteria inside the body may cause disease.	
		(2)
(0) Name one other group of microbes that often causes disease.	
		(1)
(0	d) Suggest why people who live in overcrowded areas are more likely to catch TB than people who live in less crowded areas.	
		(4)
		(1)

(e) People infected with a small number of TB bacteria often do **not** develop the disease.

Explain, as fully as you can, how the body defends itself against the TB bacteria.

(3) (Total 8 marks)

M1.		(a)	(i)	tobacco / nicotine / alcohol accept solvent / glue / caffeine ignore cigarettes / coffee	1	
		(ii)	car	nnabis / heroin / cocaine allow eg crack / weed / ecstasy / LSD / amphetamine / speed / steroids / GHB	1	
	(b)	(i)	her	roin / cocaine / tobacco / nicotine ignore alcohol / cigarettes / cannabis / caffeine / coffee	1	
		(ii)	alte	ers body chemistry ignore withdrawal symptoms / craving ignore non-chemical effects on nervous system	1	
	(c)	 (c) any two from: increase in cannabis smoking increases (%) depression 				
		•	gre	eater effect in women allow women become more depressed		
		•	dep	pression linked with / not directly caused by cannabis ignore cannabis causes depression		
		•	not	t all cannabis smokers get depression	2	[6]
M2.		(a)	any f	two from:		
		•	birt	th mass / growth reduced		

- smoke contains carbon monoxide
 ignore references to poison
- blood carries less oxygen / fetus receives less oxygen do **not** accept harder for fetus to breathe

2

(b) (i) it may cause mental illness

it may be a 'gateway' drug to more harmful substances three answers max 1 three answers max 0 (ii) it is less addictive than amphetamines, tobacco or alcohol 1 it is not associated with major sociological problems three answers max 1 four answers max 0 1

M3. any five from:

maximum 4 marks if no conclusion

pros eg

maximum three pros

- used 'teenage rats' as equivalent to human teenagers
- THC dose typical of human cannabis smoking habits
- used control group
- rats allowed to choose amount of heroin

cons eg

- sample size small / only used 12 rats
 ignore cruelty
- heroin administration very different from human situation

conclusions

- rats given THC / cannabis took more heroin
- (this) is evidence for a link between THC / cannabis and heroin
- (but) rat behaviour / physiology not necessarily same as human behaviour / physiology
- does not prove link in humans
 allow results not reliable for humans

[5]

1

[6]

M5.		(a)	lungs		
				for 1 mark	1
	(b)	mic	crobes r	eproduce rapidly produce poisons for 1 mark each	
	(c)	viru	uses/fun	igi/protozoa	2
				for 1 mark	1
	(d)	mo	ore likely	to come into contact with infected people/more TB bacteria in air for 1 mark	1
	()		•		1
	(e)	pro	duce ar	ingest bacteria ntibodies which destroy bacteria ntitoxins which counteract poisons produced by bacteria	
				for 1 mark each	3

[8]

[2]

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