

Exam Style question - Drug classification

Introduction

This question is similar in style to the longer question in Section B at the end of the Unit 3 exam paper.

Mark scheme

Award marks according to the level descriptors

Some examples of points that might be included:

Use of examples to show the mismatch between harm and classification:

Examples of striking anomalies:

- alcohol, ketamine, tobacco harm but no classification
- ecstasy, LSD high classification but low harm, particularly to society

Suggested reasons:

Alcohol and tobacco:

- public opinion would resist control, special interest groups, commercial pressure, vested interests, tax revenues prevent reclassification
- despite much evidence of harm
- despite costs to NHS and society

Ecstasy, LSD:

- media influence on public opinion, the recent reclassification of cannabis might also be used as an example of media pressure.
- less familiar risks of illegal drugs may cause over-estimation of risks
- may take precautionary approach to new drugs
- risks to individual

Ketamine

- legally available for animal treatment, not widely used, no media pressure to classify

Opinion

A wide range of ideas are possible here. Two sides might range from suggestions of greater restrictions on alcohol and tobacco on grounds that cost to NHS should get higher priority, to a critique of the whole classification system and recommendations of legalisation under controlled distribution.

How Science Works

Fa The interests and concerns of society influence the directions of scientific research and technological development, and the extent of funding for work in different areas.

Fb The popular media play a part in providing information, setting the agenda and influencing opinion on issues involving science and technology.

Fc Media reports of scientific developments are always simplified, and sometimes inaccurate. A newspaper report of a new development has not been through the stringent peer review process that articles in scientific journals must undergo (though it may be reporting on work that has).

Gd The perceived risk of an activity is often quite different from the actual measured risk. We tend to over-estimate the risk of: unfamiliar activities (relative to more everyday ones); imposed activities (relative to freely chosen ones); invisible or unseen hazards whose effects are not immediately apparent (such as ionizing radiation, or environmental pollutants).

Gi Regulators and individuals sometimes take a precautionary approach to a new device or process – and pressure groups often advocate doing so.

Hb Decision makers aim to make evidence based decisions, taking into account factors that include: technical feasibility, benefits expected, economic cost, risks to human health and wellbeing

Hc Society exercises controls on the development and application of science and technology. Regulatory bodies are set up to implement these controls.

Hf Decision makers are influenced by the mass media, by special interest groups and by public opinion as well as by expert evidence. Decisions about science and technology may be influenced by decision makers' prior beliefs or vested interests, which can affect their interpretation and evaluation of the evidence.

A2 Science in Society - Level descriptors for 12 mark questions

The marking scheme for this section includes an overall assessment for the quality of written communication. There are no discrete marks for the assessment of written communication but quality of written communication will be one of the criteria used to assign the answer to one of four levels. Marks are assigned according to level descriptors.

Candidates would be expected to achieve at least 3 of the 6 descriptors to be awarded marks at that level. Not all descriptors are relevant to each answer.

The marks awarded within the range depend on the extent to which candidates have met the criteria for that range and also on guidance relevant to the specific question

level of response	descriptors:	mark range
good level 4	<ul style="list-style-type: none"> clear exposition of science explanations relevant to the issue; appropriate and effective use of the relevant ideas about how science works; good overall grasp of the range and nature of the issue(s); interprets arguments presented, recognising evidence, claim and counterclaim; writes well structured argument using a range of evidence to reach a reliable conclusion, includes counter-argument; fluency and accuracy of expression, with only minor errors of grammar, punctuation or spelling. 	10-12
competent level 3	<ul style="list-style-type: none"> good attempt at exposition of science explanations; use of some relevant ideas about how science works; general grasp of the range and nature of issue(s); interprets arguments presented, recognising some of the main components writes structured argument using some evidence to reach a conclusion; accuracy of expression, with some errors of grammar punctuation or spelling 	7-9
limited level 2	<ul style="list-style-type: none"> exposition of science explanation minimal or inaccurate minimal use of ideas about how science works; grasp of some features of the issue(s); interprets only part of arguments presented arguments presented but with weak structure and/or minimal evidence accuracy of expression, but with serious errors of grammar punctuation or spelling 	4-6
inadequate level 1	<ul style="list-style-type: none"> exposition of science explanation confused use of ideas about how science works absent or wrong appears not to understand the issue; cannot interpret the argument presented argument presented as just a claim with no structure or evidence <p>expression unclear with serious errors of grammar punctuation or spelling</p>	1-3
0	incorrect or no response	0
	Total	12

June 2009

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This question is similar in style to the longer question in Section B at the end of the Unit 3 exam paper. Quality of written communication will be taken into account in awarding marks for this question.

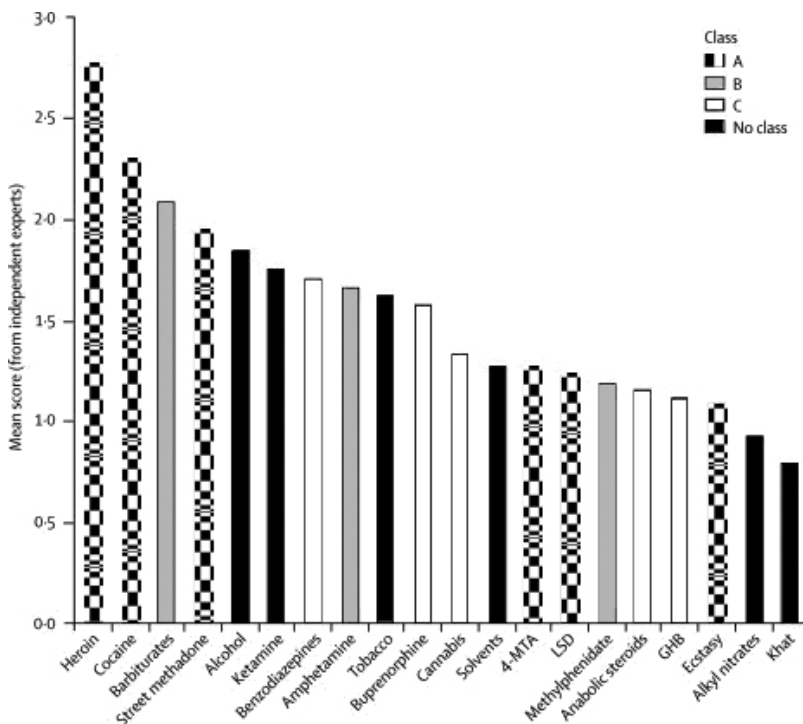
Section B

In 2007 a team of respected experts estimated the relative harm caused by a range of legal and illegal drugs. The team's conclusions are shown in Figure 1. The estimates were obtained by considering three main categories of harm:

- physical harm to the individual,
- tendency to cause dependence
- the effect on communities, families and society.

The UK drug classification system rates drugs as A, B, C or no class according to their assumed harm. Possession or dealing of class A drugs carries the strictest penalties and C the least.

Figure 1 Mean harm scores for 20 substances and the UK drug classification system



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[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(07\)60464-4/fulltext?_eventId=login](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(07)60464-4/fulltext?_eventId=login)

*Note that cannabis has been reclassified to Class B since publication of this graph.

The government has a duty to manage many of the risks in our society, making use of the best available scientific knowledge to achieve this. The data in Figure 3 suggest that scientific knowledge of harm is only one of the factors taken into account when decisions are made on drug classification.

Discuss the classification of drugs and the factors other than knowledge of harm that might influence government decision-making on the classification. Give your opinion on the importance of these other factors relative to those used by the expert team.

(12 marks)