



General Certificate of Education

**Health and Social Care
8626/8629**

HC14

Mark Scheme

2009 examination – June series

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Quality of written communication

The quality of written communication is assessed in all assessment units where candidates are required to produce extended written material. Candidates will be assessed according to their ability to:

- Select and use a form and style of writing appropriate to purpose and complex subject matter
- Organise relevant information clearly and coherently, using specialist vocabulary when appropriate
- Ensure that text is legible, and that spelling, grammar and punctuation are accurate, so that meaning is clear.

1(a)(i) Ref to medical practitioner – talk/asking patient/relative questions (1) looking at records on computer (1)
2 marks

(a)(ii) Ref to stethoscope – channelling sound (1) from metal dish/along tubes to practitioner’s ears (1) not amplified sound (1) listening to sounds related to arteries/heart/lungs/digestive system (which are different from normal) AW (1) examples include heart beat sounds/breathing obstructions/ in sphygmomanometry (1) max 3 without example max 4 4 marks

(a)(iii) Any three of: visual examination/palpation/percussion/reflex testing/
taking body temperature/measuring blood pressure. 3 marks

(b)(i) Strength of using questions-anonymous-larger batch can be reached, quicker than other methods/can compare data from asking the same questions/easy to record answers/does not require skilled interviewer 1 mark
Limitation of using questionnaires – may have low response, no follow up questions for clarity – depth/can be invalid. 1 mark

(b)(ii) (Structured) Interviews/Instructed/(Semi-structured) interviews 1 mark

(c) Ref to: radioactive forms/isotopes (1) of common elements/example carbon/ iodine/nitrogen/oxygen/fluorine (1) parts of other compounds(1) which emit gamma rays (1) small amount of substance (1) injected/breathed in/swallowed (1) taken up by most active areas of body (1) cause ‘hot spots’ (1) detected by gamma camera (1) converted to electrical signal (1) sent to computer (creates image) (1) max 8
8 marks

- 2(a) Ref to: No drug treatment
 More 21-40 year old males had no drug treatment of females 21-40 years old (1)
 More 41+ year old males had no drug treatment of females 41+ years old (1)
 No drug treatment more common in 21-40 year olds AW (1) more common
 21-40 year olds (More F) to have no treatment than to have only treatment (1)
- Ref to: Used non prescription drugs only
 More females than males 21-40 year old used non-prescription drugs (1)
 More females than males 41+ year old used non-prescription drugs (1)
 Males 21-40 and 41+(1)/females 21-40/and 41+ similar numbers 1 mark (1)
- Ref to: Prescribed drugs on one occasion
 21-41 years old females and males numbers similar (1)
 41+ years old females and males numbers similar (1)
 Little different females and males overall (1)
- Ref to: Prescribed drugs on two or more occasions
 Least common category M or F/either age (1)
 Similar numbers females and males 21-40 years old (1)
 Similar numbers/slightly more females of males 41+ years (1)
 No drug treatment and non prescribed drug treatments more common than
 prescribed drug treatment (1) suggests minor problems more common
 than more serious ones (1)
 Number 'pattern' 21-40 year old M/F and 41+ year old M similar (1)
 Females 41+ year olds 'unusual' with more use non prescription drugs
 c.f. no drug treatment (1) max 9 9 marks
 Max 5 for numerical comparison – more/less – most/least.
 Higher level responses for numerical manipulation, e.g. 2x/3x/similar etc. up to 7 marks
 + 2 reasoning marks.

***Additional commentary**

This question contained an error. In the first column on the paper referring to males 21-40 years old, the numbers added up to 110, not 100, as stated in the question. This has now been rectified so that the first two values in this column now read 50 and 23 respectively. This error did not have any influence on accessibility to or achievement in this part-question, as reference to the above mark scheme demonstrates.

- (b) Ref to prescription drugs licensed AW/non prescribed drugs are not (1)
 non prescribed drugs can be bought 'over the counter'/prescribed drugs
 cannot (1) prescribed drugs may be unsafe without medical supervision/
 non prescribed drugs safe enough (1) 3 marks
- (c)(i) Drugs are named by brand (1) generic name/family –drug (1)
 chemical name/chemical composition (1) 3 marks
- (ii) Drugs are classified by chemical make up (1) and by specific effects
 on the body (1) 2 marks
- (d)(i) Ref to ease of use (1) allows slow release of drug (1)
 allows continuous release of drug (1) allow pain free (1) max 2 2 marks
- (d)(ii) Any one of injection/cream/spray/suppository 1 mark

- 3(a) Ref to Zena’s bloods/haemodialysis (1) waste removed AW (1) plus excess fluid (1) in kidney machine (1) by filtration (1) using different membranes (1) allow ref to peritoneal filtering (1) in abdomen (1) using dialysate salts (1)/ where fluid drains into abdomen (1) drained out after a few hours (1) containing waste/toxins/excess water (1) max 5 5 marks
- (b) Ref to Zena’s treatment at home being convenient AW/not having to travel /time to suit her (1) but lacks specialist help AW/slower/needs repeating more often AW (1) 2 marks
- (c) Any 2 of: body fluid/blood sampling – (blood) haemoglobin content/ - red cell counts (1) to diagnose anaemia (1) 2 marks
 - biochemical testing/e.g. urine (1) for glucose/diabetes/microbes - infectious (1) 2 marks
 - mucus testing/cells cultured (1) for microbes AW (1) 2 marks
 - Amniocentesis (1) for genetic abnormalities or e.g. Down’s syndrome or others (1) 2 marks
 max 2 x 2 4 marks
- (d)(i) Ref to ultrasound – high frequency sound (1) short wavelength (1) transmitted into body AW (1) from transducer (1) through a gel (1) used to ensure good contact (1) sound reflected (1) picked up by receiver (1) sent to computer (to form image) (1) real time/moving image (1) max 6 6 marks
- example of use in pregnancy/looking at the liver/for kidney stones/ gall stones max 1 1 mark
- (d)(ii) One advantage – painless/not using radioactivity/small equipment/ inexpensive/moving images max 1 1 mark
- One disadvantage – poor quality images/two dimensional/cannot penetrate bone max 1 1 mark
- 4(a)(i) Endoscopic surgery – surgery either using a natural body opening AW or small incision (1) via a long tube AW (1) using a light (1) fibre optics (1) to transmit an image to camera (1) miniature surgical instruments at end of tube AW - allow keyhole surgery (1) max 4 4 marks
- (a)(ii) Laser surgery – surgery using beam of light (1) of high intensity (1) focussed on small spot/precise (1) to kill/cut tissues/heat to burnt cells/burn (1) allow example – retinal/corneal/skin surgery eg wart removal (1) max 4 4 marks
- (a)(iii) Micro surgery – surgery on very small points AW (1) using microscope/binocular (1) very small instruments/or example – scalpel/ needles (1) allow example – eye/severed finger – toe surgery – antenatal surgery (1) max 3 3 marks
- 4(b)(i) Radiotherapy – can destroy cancer cells (1) when surgery removing tumours (1) may leave some cancerous cells behind/prior to surgery to shrink tumours (1) reduces risk of cancer reappearing (1) max 3 3 marks
- (b)(ii) Any 3 of: tiredness/sickness/nausea AW/vomiting/hair loss/healthy cell death/

loss of cell elasticity/affecting fertility

max 3
3 marks

- (c) Ref to any 3 of: condition may worsen (1) may cause other (secondary) illnesses or disorders (1) treatment may not be effective (1) more treatment may be required/less harsh if treated earlier (1) treatment costs may rise (1)

max 3
3 marks

	AO1	AO2	AO3	AO4
1(a)(i)		2		
(a)(ii)	1	2		1
(a)(iii)		3		
(b)(i)				2
(b)(ii)				2
(c)	2		2	4
2(a)			9	
(b)	2			1
(c)(i)	3			
(c)(ii)	2			
(d)(i)				2
(d)(ii)		1		
3(a)	2			3
(b)		2		
(c)			2	
(d)(i)	2	2		3
(d)(ii)			2	
4(a)(i)	3	1		
(a)(ii)	3	1		
(a)(iii)	2	1		
(b)(i)			2	1
(b)(ii)		3		
(c)			3	
TOTAL	22	18	20	20
%	27.5	22.5	25	25

Paper Total 80 = 100%