



General Certificate of Education

Health and Social Care

8621/8623

HC06

Mark Scheme

2009 examination – January 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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1ai)	Ref to Majid having a cough/fever AW/chest pain/breathing difficulty/ phlegm/excess mucous AW – green yellow – rust coloured	max 2	2 marks
aii)	Any one of: meningitis/gonorrhoea/food poisoning/sepsis/urinary tract infections/cholera/impetigo/tetanus/chlamydia/diphtheria/syphilis/T.B./ Whooping cough		1 mark
bi)	Any two of: via food and drink/breathed in AW/poor personal hygiene practice or example/through open wound/unprotected sex		2 marks
bii)	Ref to organisms: damaging cells – tissues AW/releasing toxins/taking nutrients from the body/stimulating the body's defences	max 3	3 marks
ci)	Ref to pollen as an allergen (1) 'misinforms' AW (1) B-lymphocytes (1) (large amounts of) antibodies AW produced (1) which attach to mast cells (1) and basophils (1) causes histamine release (1) and allergic symptoms – rashes/inflammation hives/asthma/sneezing/coughing/sore eyes (1)	max 5	5 marks
cii)	Any two of: animal dander AW – feathers/dust mites/spores from moulds		2 marks
2ai)	Re Adrian's hyperopia (hypermetropia): ref to eyeball being too short AW (1) lens – cornea <u>too flat</u> AW (1) light from near objects <u>focussed</u> behind retina (1) light from distant objects focussed on retina (1)	max 3	3 marks
ii)	Ref to Adrian being able to see clearly objects in distance/long sighted (1) but unable to see near objects/near objects appear blurred (1)		2 marks
b)	Ref cataracts – lens (1) becoming opaque/cloudy (1) blocking/reducing passage of light to retina (1) protein fibres in lens altered (1)		3 marks
ci)	Ref to glue ear being – accumulation of fluid (1) produced by mucus – secreting lining (1) of the middle ear (1) blocking Eustachian tube (1) preventing drainage (1) this causes pressure (1) impairs ossicle movement AW (1) Allow reference to consequential inner ear effect (1)	max 4	4 marks
cii)	Ref to tinnitus being – ringing/hissing/buzzing/whistling/roaring sound (1) not caused by external source AW (1) yet nerve signals sent to brain AW / caused by cell damage / blocked Eustachian tube (1)	max 3	3 marks
3a)	Ref to: very few under/over 21 have no fillings or extractions (1) Approx 2/2.5 x as many under 21 as over 21 with no fillings or extractions (1) Approx. 2x many under 21 as over 21 with 1/2 fillings but no extractions (1) 1/2 fillings and 1/2 extractions largest group under 21 (1) 5 or more fillings and/or extractions biggest group over 21 (1) max 4 marks for comparison Largest group overall over 21 – with 5 or more fillings and/or extractions (1) Allow any other valid numerical comparisons e.g. over 21 4x as many with 1/2 fillings and 1/2 extractions as 1/2 fillings but no extractions plus over 21 year olds teeth more treatments overall/as get older more likely to have fillings/extractions (1)	max 6	6 marks
b)	Ref: plaque formation (1) from bacterial AW action (1) on sugars/ carbohydrates (1) causes acid formation (1) demineralises AW enamel (1) and corrodes dentine (1) when affects nerves/pulp cavity (1) pain generated AW		

		max 6	6 marks
c)	Ref to flossing: removes food from between teeth (1) which reduces plaque formation (1) less acid/demineralisation/enamel erosion occurs (1)		3 marks
4ai)	Ref to blackheads form when sebum/oil secretion (1) produced by glands (1) in the hair follicles (1) block pores/hair follicles in skin (1) these darken (1) through excess melanin/skin pigment (1)	max 4	4 marks
ii)	Ref to blisters caused in Rowena’s case by friction/shoe rubbing skin (1) skin becomes raised AW (1) and filled with (watery) fluid (1) may contain some blood (1) and/or if infected some pus(1)	max 4	4 marks
bi)	Ref to generalised meaning covering the entire large area body AW (1) raised meaning lumps/bumps/papules/nodules on skin (1) 2 marks		
ii)	Either localised or macular (1)		1 mark
ci)	bacteria (1) viruses (1)		2 marks
cii)	inorganic chemical or e.g. fruit juice/acidic food stored in a zinc container / toxic food or e.g. toadstools/fungi (1)		2 marks

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	AO1	AO2	AO3	AO4
1ai		2		
aii	1			
bi	2			
bii		3		
ci		5		
cii	2			
2ai				3
aii		2		
b		3		
ci	2			2
cii	2			1
3a			2	2
b	2			
c				3
4ai	2		2	
aii	1		2	1
bi	2			
bii	2			
ci	2			
cii	1			
TOTAL	21	15	12	12
%	35	25	20	20

PAPER TOTAL = 60 100%