



**General Certificate of Education (A-level) Applied
June 2011**

Health and Social Care

HC14

**(Specification
8621/8623/8626/8627/8629)**

Unit 14: Diagnosis and Treatment

Final

Mark Scheme

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Question 1

Question	Part	Sub Part	Marking Guidance	Mark	Comments
1	01		The G.P. would measure Angela's temperature using a digital – electronic – strip - infrared - thermometer/placed under the tongue – clipped to Angela's ear – underarm – in rectum/left for a short period to record the temperature.	3	Ignore reference to mercury/glass tubes. Needs type of thermometer for first mark.
1	02		The G.P. would measure Angela's blood pressure using a sphygmomanometer – digital - electronic device/a cuff-band/ placed around the upper arm – above the elbow/measuring systolic AW pressure as inflated/slowly deflated to record diastolic AW pressure. max 3	3	Don't allow inflated – deflated for systolic and diastolic.
1	03		The G.P. would look at Angela's records – computer or paper/ask her about her medical history - symptoms/previous illnesses/ and treatments – medication (ask or see records) max 3	3	
1	04		Ref to gaining more insight AW into what is wrong – helps make accurate (provisional) diagnosis by eliminating some possibilities by use of appropriate questions/ensures Angela gets suitable treatment/to avoid unnecessary side effects – problems - allergic reactions/takes into account current medication. max 3	3	
1	05		MRI scan uses a (powerful) electromagnet/when current flows/hydrogen atoms in the body tissues/align – become parallel to each other/a (strong) radio wave pulse/knocks the hydrogen atoms out of alignment/as they realign emit radio signals/receiver transmits to a computer/creates image of slice/compiled into 3D picture/allow ref to fat causes bright image/as has high hydrogen content of other materials – bone max 6	6	Not uses radiation
1	06		Advantage: very detailed image - clearer/3D/good contrast between abnormalities and normal tissue. max 1 Disadvantage: expensive/noisy/patient 'anxiety' being in the cylinder max 1	2	Allow can show structures within bone/skeleton Allow not moving image

Question 2

Question	Part	Sub Part	Marking Guidance	Mark	Comments
2	07		<p>Likely points may include:</p> <ul style="list-style-type: none"> • food poisoning most common infectious disease (all years except 2006) • Pertussis least common – all years • 2006 most cases of infectious disease reported • 2004 least cases of infectious disease reported • Mumps has the biggest range in numbers of cases • Pertussis has the least variation in numbers • more/less comparisons e.g. Mumps more than Meningitis each year • numerical manipulations e.g. food poisoning 3x more than Mumps in 2004 • similarities e.g. Pertussis 2004 – 05 – 06, Rubella and Meningitis 2005 • reasoned points include ideas such as: • low numbers due to immunisation programmes e.g. Rubella • Food poisoning numbers relatively high as many opportunities to contract it e.g. undercooked food, poor hygiene practices • Food poisoning of different types – sources collectively increase number of cases • <p>Mark Ranges</p> <p>0 marks No response worthy of credit e.g. simply restating the data.</p> <p>1-3 marks Answers covering 1-4 points, mainly more/less comparisons between diseases and/or years which may be vague and/or repetitive e.g. rising/falling numbers. There will be little if any numerical manipulation of data and/or reasoning.</p> <p>4-6 marks More detailed answers making 5 or more comparison points, including most/least points between diseases and/or years. Answers are organised but may lack precision. A reasoned point may be included</p> <p>7-9 marks Detailed answers making 7 or more points of comparison, numerical manipulation of data and two or more 'reasoned' points.</p>	9	Don't credit raw number comparisons eg Rubella rises by 21 individuals 2004 – 5.
2	08		<p>Likely suggestions may include – uptake of immunisation – immunisation availability may vary/different 'strains' AW of infectious disease may arise/population numbers change AW/not all cases may be reported/(food poisoning)poor hygiene practices vary – commercial outlet infections may cause large rises in numbers of cases max 3</p>	3	

2	09		Advantages of structured interviews include – uses same questions for consistency/relatively easy to collate - record/and compare answers/skilled interviewer not required max 2	2	
2	10		Reasons why the unstructured interviews may be better: being able to ask 'follow up' questions to clarify – develop answers/interview appears informal – relaxed – like normal conversation max 2	2	Allow – go into new – other areas
2	11		Ref to the three names being – a brand name (1) – a chemical name (1) – a generic/official medical name (1)	3	
2	12		Reasons include: fast delivery of drug to the body/directly into the blood/drug not broken down (if ingested) Allow – may be continuous if a 'drip' is used/patient unable to swallow	1	

Question 3

Question	Part	Sub Part	Marking Guidance	Mark	Comments
3	13		General anaesthetic is a chemical – drug/which will put George to 'sleep'/won't be able to move/won't feel any pain/George's muscles will relax/makes it 'easier' for surgeons to operate on George max 4	4	
3	14		Microsurgery: surgery on very small structures in the body – allow blood vessels/using binocular microscope/to magnify area for the surgeon/who will use miniature instruments/to repair – remove – rejoin tissues	4	Not small operation. Allow small scale (first marking point)
3	15		Broad principles of transplant surgery include: removing George's damaged – diseased liver/replacing it with a healthy liver/from a donor /with a close (genetic) match to George/Allow ref. to the need for an immunosuppressant drug regime AW/to prevent rejection max 4	4	

3	16	<p>Likely points will include:</p> <ul style="list-style-type: none"> • home nursing provided by informal carers AW – family compared with specialist nursing staff in hospital • home nursing involves for example monitoring the patient’s temperature – observing how they are – but more sophisticated monitoring available through hospital nursing • home nursing may make sure medication is taken – but more complex treatments available through hospital nursing • basic hygiene nursing provided by both home and hospital nursing • possibly less risk of infection through home nursing • social contact AW generally more readily available through home nursing • less concern for privacy and confidentiality in home nursing situations compared to hospitals • home nursing will need the support of PCT staff – more specialist support for hospital nursing • nutrition less likely to be a problem for home nursing <p>Mark Ranges</p> <p>0 marks No response worthy of credit</p> <p>1-3 marks Answers covering 1-3 points, lacking explanation and which may be vague and/or repetitive. Candidates who deploy appropriate knowledge and understanding and display higher QWC skills should be rewarded at the top of the mark band. Conversely, those who display some confusion and weakness in QWC supporting knowledge and understanding should be placed at the bottom end of the mark band.</p> <p>4-6 marks More detailed answers covering at least 4 points with some explanation. Answers are organised but may lack precision. Candidates who deploy appropriate knowledge and understanding and display higher QWC skills should be rewarded at the top of the mark band. Conversely, those who display some confusion and weakness in QWC supporting knowledge and understanding should be placed at the bottom end of the mark band.</p> <p>7-8 marks Detailed answers making 7 or more points which are explained coherently. Candidates who deploy appropriate knowledge and understanding and display higher QWC skills should be rewarded at the top of the mark band. Conversely, those who display some confusion and weakness in QWC supporting knowledge and understanding should be placed at the bottom end of the mark band.</p>	8	
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Question 4

Question	Part	Sub Part	Marking Guidance	Mark	Comments
4	17		Radio therapy uses ionising radiation – x-rays/to destroy cancer cells/by damaging cell DNA/delivered externally or internally/externally by a converging beam of radiation/from a machine/focussed on the tumour AW/probably built up in repeated low level doses/to minimise damage to healthy cells/internally by implanting pellets of radioactive material/with a needle/pellets emit gamma rays/slowly reducing intensity max 7	7	
4	18		Leanne may experience nausea/vomiting/hair loss/fatigue/loss of tissue elasticity/allow – infertility max 3	3	

4	19	<p>Likely points will include: smoking tobacco is a lifestyle choice/leads to many serious diseases and dysfunctions/such as lung and other cancers, heart disease, circulatory problems/which cause a drain on limited NHS resources AW/in terms of staffing/equipment/drugs/transplant organs/smokers likely to be addicted/so reduce long term effectiveness of treatment AW reverse effects if continue to smoke/possible grounds to discriminate against these patients/become lower priority – lower down waiting lists/however: everyone has a right to treatment/NHS principle of clinical need/smokers should have chance to quit/if treatment delayed – then recovery chances greatly reduced AW/better to prioritise on basis of benefit of treatment/in terms of quality and quantity.</p> <p>Mark Ranges</p> <p>0 marks No response worthy of credit.</p> <p>1-3 marks Answers cover 1-4 points, mainly one-sided statements or personal opinion. Points made not developed and there will be errors in spelling, punctuation and grammar. Candidates who deploy appropriate knowledge and understanding and display higher QWC skills should be rewarded at the top of the mark band. Conversely, those who display some confusion and weakness in QWC supporting knowledge and understanding should be placed at the bottom end of the mark band.</p> <p>4-7 marks Answers are more detailed with some reasoning covering 5 or more points for and against treatment. Answers will be organised but lack precision. There may be errors in spelling, punctuation and grammar. Candidates who deploy appropriate knowledge and understanding and display higher QWC skills should be rewarded at the top of the mark band. Conversely, those who display some confusion and weakness in QWC supporting knowledge and understanding should be placed at the bottom end of the mark band.</p> <p>8-10 marks Answers are detailed and well reasoned, balancing both sides of the case. There will be good spelling, punctuation and grammar. Candidates who deploy appropriate knowledge and understanding and display higher QWC skills should be rewarded at the top of the mark band. Conversely, those who display some confusion and weakness in QWC supporting knowledge and understanding should be placed at the bottom end of the mark band.</p>	10	Do not credit other issues e.g. age related.
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