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Rewarding Learning

General Certificate of Secondary Education
2015

Home Economics
(Child Development)

Unit 1

Parenthood, Pregnancy and Childbirth

[GHC11]

WEDNESDAY 27 MAY, MORNING

MARK SCHEME

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General Marking Instructions

Introduction

Mark schemes are published to assist teachers and students in their preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

The Purpose of Mark Schemes

Examination papers are set and revised by teams of examiners and revisers appointed by the Council. The teams of examiners and revisers include experienced teachers who are familiar with the level and standards expected of students in schools and colleges.

The job of the examiners is to set the questions and the mark schemes; and the job of the revisers is to review the questions and mark schemes commenting on a large range of issues about which they must be satisfied before the question papers and mark schemes are finalised.

The questions and the mark schemes are developed in association with each other so that the issues of differentiation and positive achievement can be addressed right from the start. Mark schemes, therefore, are regarded as part of an integral process which begins with the setting of questions and ends with the marking of the examination.

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all the markers are following exactly the same instructions and making the same judgements in so far as this is possible. Before marking begins a standardising meeting is held where all the markers are briefed using the mark scheme and samples of the students' work in the form of scripts. Consideration is also given at this stage to any comments on the operational papers received from teachers and their organisations. During this meeting, and up to and including the end of the marking, there is provision for amendments to be made to the mark scheme. What is published represents this final form of the mark scheme.

It is important to recognise that in some cases there may well be other correct responses which are equally acceptable to those published: the mark scheme can only cover those responses which emerged in the examination. There may also be instances where certain judgements may have to be left to the experience of the examiner, for example, where there is no absolute correct response – all teachers will be familiar with making such judgements.

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AVAILABLE MARKS

1 **(a)** Label the diagram of the male reproductive system using the correct words from the box.

(i) testes (iii) urethra
(ii) penis (iv) scrotum
All other valid answers will be credited AO1
(4 × [1]) [4]

(b) Write down **one function** of the:

(i) testes
- produces sperm/semen
- where sperm made
- produces testosterone

stored = [0]
(1 × [1]) [1]

(ii) scrotum
- protects/holds testes/keep testes outside body
- keeps sperm at correct/low/cooler temperature

make sperm = [0]
(1 × [1]) [1]

(iii) ovary
- produces eggs/stores eggs/releases eggs
- produces oestrogen/female sex hormone
- produces progesterone/pregnancy hormone
- ovulation takes place

(1 × [1]) [1]

(iv) fallopian tube
- conception takes place/where egg and sperm meet
- carries the egg from ovary
- links the ovary and uterus
- egg travels down fallopian tube
- fertilisation takes place here

All other valid answers will be credited AO1
(1 × [1]) [1]

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		AVAILABLE MARKS
(c) Write down **three** possible methods of family planning. • abstinence/saying no • pill/combined pill • progesterone only pill/mini pill • male condom } condom (on own) – max [1] • female condom } • IUS/intrauterine system • contraceptive implant (implant = [0]) • contraceptive injection (injection = [0]) • contraceptive patch (patch = [0]) • IUD/intrauterine device/coil • cap/diaphragm • natural /rhythm method • vaginal ring (ring = [0]) • female sterilisation } sterilisation (on own) – max [1] • male sterilisation/vasectomy } • withdrawal All other valid answers will be credited	AO1	
(3 × [1])	[3]	11

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AVAILABLE MARKS

2 **(a)** Complete the sentences below:

(i) uterus

(ii) paediatrician

(iii) placenta/umbilical cord

(iv) 28

(v) progesterone

AO1

(5 × [1]) [5]

(b) Explain why an ultrasound scan is carried out on a pregnant woman.

- check size of baby/check baby is growing at correct rate – not underweight
- find out number weeks pregnant, calculate due date based on measurements from ultrasound
- detect any abnormalities, see if baby is developing normally, has all limbs
- check if carrying more than one baby, if having twins or triplets etc
- show position of baby and placenta, e.g. low placenta in late pregnancy may mean caesarean section required
- check baby is growing normally especially if carrying twins or have had previous pregnancy problems, to check heart chambers developing normally – no defects
- to check sex of baby if family history/risk of hereditary problem, e.g. haemophilia
- to reassure mother/parents that baby is developing normally, e.g. size, weight, limbs
- position/presentation of the baby – not breech

All other valid answers will be credited AO1, AO2

Basic statement – one mark

Full explanation – two marks

(1 × [2]) [2]

(c) What is an ectopic pregnancy?

- When fertilised egg/foetus/baby **develops in the fallopian tube or outside the uterus**, instead of in the uterus. Can be fatal to the baby and can be dangerous for the mother. The foetus has to be removed surgically.

All other valid answers will be credited AO1, AO2

(1 × [2]) [2]

9

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AVAILABLE MARKS

3 **(a)** Catherine is pregnant. **Explain** how she can avoid the following:

(i) gaining too much weight

- eat low fat foods/change her diet to lower her fat content as fat causes excess weight gain/obesity
- change foods she eats, e.g. low fat margarine in place of butter, grill meat instead of frying etc
- read labels to check fat content, choose low fat options when food shopping
- follow dietary guidelines/Eatwell Plate to ensure variety of healthy foods/do not eat too much of any one group
- eat low sugar foods, check labels for sugar content, excess sugar can be converted to body fat (if not used as energy source)
- exercise/keeping active [1] explain [2]
- eating for one/small portions
- starchy carbohydrates – feeling of fullness – less likely to snack

All other valid answers will be credited AO2

(1 × [2]) [2]

(ii) toxoplasmosis

- wear gloves when gardening or handling soil, wash hands thoroughly afterwards as faeces can be in soil
- avoid eating raw or undercooked meat. Cook all red meat until no trace of pinkness or blood, don't taste meat before it is fully cooked, wash hands after handling raw meat
- wash all equipment thoroughly after preparing raw meat/avoid cross contamination of raw and cooked meat
- wash fruit and vegetables before cooking and eating them, including ready made salads, to remove any traces of soil
- avoid cat litter trays as toxoplasmosis can be in cat faeces/wear gloves when handling cat litter
- avoid drinking unpasteurised milk or goats' milk
- cook food thoroughly

All other valid answers will be credited AO2

(1 × [2]) [2]

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AVAILABLE MARKS

(b) Explain how Catherine's partner can be involved during **pregnancy** not labour.

- support mother, go to ante natal appointments with her, practise breathing exercises for labour, massage her if she is suffering back pain or swollen feet etc.
- being familiar with birth plan
- show he is interested, change own diet to ensure mother has healthy diet for her pregnancy needs/read pregnancy information (books, internet) to share experience with mother and understand how she feels and what she needs at each stage/go shopping for equipment and clothes for baby so that he can feel part of the preparation and can help mother make decisions and take pressure off her
- financial help – buying equipment
- help with household jobs, share housework, make meals for Catherine – take pressure off Catherine, she will be tired and need to rest
- partner can give up smoking to support Catherine

All other valid answers will be credited AO1, AO2

(1 × [2]) [2]

(c) Catherine includes these foods in her pregnancy diet. Discuss her choices.

Wholemeal bread

- provides carbohydrates for energy she needs for carrying extra weight during pregnancy
- provides NSP/dietary fibre to prevent constipation which is common in pregnancy
- starchy carbohydrates – slow releasing energy/feeling of fullness
- vitamin B enables the body to obtain energy from food
- folic acid – spina bifida
- fortified with calcium – bones & teeth
- fortified with iron – vitamin D & function
- nuts on bread = allergy
- excess energy can be converted and stored as fat

All other valid answers will be credited AO1, AO2

(1 × [2]) [2]

Fresh orange juice

- provides one of 5-a-day/contributes to healthy, balanced diet
- contributes to NSP needs to prevent constipation which is common in pregnancy
- helps absorption of iron (iron required for prevention of anaemia, red blood cells)
- provides vitamin C – antioxidant, keeps immune system healthy
- provides vitamin C – keeps gums healthy and helps wounds heal
- provides some potassium which is needed for muscle function and helps reduce risk of high blood pressure and stroke
- high in sugar/read label/develop type 2 diabetes
- high in sugar – provides energy
- prevents dehydration & explanation

All other valid answers will be credited AO1, AO2

(1 × [2]) [2] 10

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AVAILABLE MARKS

4 **(a)** Describe the following stages of labour

(i) Stage 1

- waters break/(rupture of membranes)
- contractions begin
- a show/(mucus plug)
- strong regular contractions (last for 20–30 minutes) which widen cervix
- longest stage of labour, cervix is dilating (**opening**)

All other valid answers will be credited AO1, AO2

(1 × [3]) [3]

(ii) Stage 2

- cervix is fully dilated to 10 cm, birthing canal forms, baby is pushed down towards vagina for birth by very strong, quick, very painful contractions
- crowning occurs – baby's head emerges/shoulders are eased out/ baby may start to breathe or cry before rest of baby's body comes out
- **baby is eased out of the vagina, baby is born (must be included for full 3 marks)**
- episiotomy may be carried out to prevent skin from tearing

All other valid answers will be credited AO1, AO2

(1 × [3]) [3]

(b) Patrick and Helen have a daughter who uses a wheelchair.
Discuss the possible impact on their family, of having a daughter with special needs.

- house will need modifications, e.g. ramps instead of steps for wheelchair, easy access shower, doors widened to allow wheelchair access, stair lift to get child upstairs or a downstairs bedroom may be needed if no lift/may be expensive and mean family need to cut back on other things, e.g. holidays together or parent working more hours and having less time at home as family
- will need a larger car to put wheelchair in or need special wheelchair access car to allow them to easily wheel chair in, safer for child and easy for parents to go on outings together/may be costly as above
- family will need to adapt and plan around wheelchair access, e.g. check before going on outings that wheelchair access and child will be able to take part in activities, e.g. at W5, in parks/holidays will need to be researched to find suitable rooms with wide doors and lift access
- parents may feel stressed and be tired from providing the constant care needed, may be difficult to get babysitter/childminder so parents have less time together as couple – may impact their decision to have more children
- one parent may need to give up work to look after child – less income but parent will have more time with child, help relationship. May be difficult to get trained childminder or nursery to look after child – more stress on couple
- family will have better understanding of needs of the disabled child, they will all be more understanding, it may bring them closer together
- stress of extra work needed and time required to look after child may

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	AVAILABLE MARKS
affect parents relationship – less time as a couple, feel worried about child's future, education etc and not spend enough time on themselves • other children in the family may become jealous of attention and extra time given to wheelchair bound child/they may find it difficult to understand that other child needs more of their parents' time • other children in family may become more tolerant of disabilities as they will understand it better, they will learn to help others, become less selfish, understand that not everyone is the same • equipment = max. 2 explained points All other valid answers will be credited AO2, AO3 (3 × [2]) [6]	12

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AVAILABLE MARKS

5 It is Asha's second pregnancy and she is considering either a hospital or a home birth. **Evaluate both of these options.**

- HOSP: trained medical staff available throughout labour and birth, midwives, obstetrician if needed, anaesthetist if needed, paediatrician available if baby needs attention after birth and mother reassured that she will have professional help quickly available, feel safe
- restricted number of birthing partners
  HOME: only midwife available, need to call/wait for ambulance if mother or baby become distressed, if caesarean needed – time delay could be dangerous – obstetrician is not available at home

- HOSP: wide range of pain relief available, anaesthetist available for epidural which can ease pain, mother will feel she has a range of choices to help her cope
  HOME: limited range pain relief as only midwife there, e.g. no epidural as no anaesthetist available

- HOSP: range of equipment in hospital to cope with emergencies, e.g. can perform caesarean immediately, incubator available at once if needed, if birth difficult ventouse extraction available and extra staff there to advise midwife and help if complications at birth
  HOME: if equipment needed mum (and baby) need to wait for ambulance to bring them to hospital, more dangerous for both mum and baby and stressful for mum

- HOSP: mum has other mothers to get advice from and talk to, can be reassured by staff that she is coping and will feel cared for, staff available for advice on coping with labour and then on care of baby
  HOME: midwife leaves after birth and mum has to cope on own, may feel overwhelmed and find it stressful without people in same situation around her

- HOSP: mum can rest after birth and have help with baby, time to look after baby without other family, e.g. other children around, gets time to bond with baby without pressure of housework etc, visiting time means mum protected from too many visitors
  HOME: less time to relax, will still have housework, looking after other children, less focus on mum resting, more stressful for mum, no control over visitors, can be tiring for mum and give her little time to rest and regain her strength

- HOSP: need babysitter for other child, may unsettle child and mum may worry, can be costly, child will not be involved in birth and may feel left out and could make child feel more jealous of new baby
  HOME: other child will not need to be looked after, other child can be involved in birth and this may help child feel less jealous, mum will be relaxed knowing child in house with her/family can be involved with birth, good bonding experience for family

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AVAILABLE MARKS

- HOSP: no privacy in hospital, lots of staff and patients around, strict routine for mum, e.g. meals, visiting times, may feel under pressure. Hospital have their own procedures for labour and birth, stricter than at home – mum may feel less in control and under pressure to do as hospital say
  HOME: mum can have own routine and do things at her own pace, she has more control over her choices, no visiting time and only own family and friends around, more relaxing for mum

- HOSP: midwife may not be one she knows from during her pregnancy, could have several midwives she doesn't know, may be unsettling for mum
  HOME: she will have familiar midwife who knows her birth choices, mum will feel relaxed and in good hands

- if mother has had previous complications in her first pregnancy and/or birth, a home birth may not be an option, may need to seek advice
- distance from hospital may be a factor, mother could feel anxious. At home mother can be well prepared and feel very organised
- space at home & explanation

All other valid answers will be credited

LOR: Level of response:

Level 1 ([0]–[3])
Overall impression: basic
- list of points, no or little explanation
- shows basic understanding of hospital and home birth
- quality of written communication is basic.

Level 2 ([4]–[6])
Overall impression: competent
- at least 3 points explained, not all may be fully explained, should include some advantages and disadvantages of hospital and home birth
- competent explanations included which show clear understanding
- quality of written communication is competent.

Level 3 ([7]–[9])
Overall impression: highly competent
- 4-5 points fully explained, must include range of advantages and disadvantages of hospital and home birth
- highly competent evaluation included which show excellent understanding
- quality of written communication is highly competent.

- only 1 option discussed & no evaluation = [3] marks max
- only 1 option & evaluation = [4] marks max
- 2 options & no evaluation for 1 = [5] marks max [9] 9

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AVAILABLE MARKS

6 Discuss the possible effects of alcohol, smoking and drugs on the unborn baby.

Alcohol
- crosses placenta to baby by bloodstream
- heavy drinking can cause miscarriage, premature birth, increased risk of stillbirth
- risk of facial defects, small birth weight baby (small for date baby)
- damage baby's cells, affecting baby's organs, brain and baby's nervous system
- foetal alcohol syndrome (FAS) – long term effects – learning difficulties, poor muscle tone and co-ordination, behavioural problems
- baby may be injured if mother falls over
- baby could suffer from lack of nutrients if mother has a poor diet, could affect development of foetus
- baby could be addicted to alcohol/unsettled

Smoking
- smoke contains drugs which harm unborn baby/reduces oxygen/replacing
- nicotine in cigarettes makes baby's heart beat faster
- baby may be deprived of oxygen putting strain on baby's organs
- higher risk of miscarriage
- higher risk complications in pregnancy and labour including bleeding, detachment of placenta, premature rupture of membranes
- linked with ectopic pregnancy (less chance becoming pregnant again)
- more liable to birth defects, e.g. facial defects, cleft palate
- smaller, lighter baby (approx 200g lighter) – higher risk death and disease in infancy and early childhood
- baby more likely to be stillborn or die within first week
- smoking trebles risk of cot death (SIDS)
- risk of respiratory problems, asthma, bronchitis for baby, affect long term health
- higher risk ADHD and behavioural problems
- addicted to nicotine

Drugs
- any drugs mother takes crosses the placenta and passes to the developing foetus
- baby can become addicted to drugs if mum has a serious addiction, after birth baby will have withdrawal symptoms and may be very ill
- can cause miscarriage, stillbirth
- baby may be smaller, lighter, have developmental problems due to poor nutrition/diet of mum, if she is a regular drug user
- baby can be born prematurely with low birth weight
- can cause premature onset of labour
- baby will have higher risk of being born with HIV if mother shares needles
- baby's diet could suffer from lack of nutrients if mother has a poor diet, could affect development of foetus
- impacting child's intelligence & brain development
- high pitched cry
- can lead to mental health problems

All other valid answers will be credited

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	AVAILABLE MARKS
LOR: Level of response: **Level 1 ([0]–[3])** Overall impression: basic • list of points, no or little explanation • shows some understanding of possible effects , may not include all three substances • quality of written communication is basic. **Level 2 ([4]–[6])** Overall impression: competent • explained points, not all may be fully explained • competent explanations which show clear understanding of possible effects of at least two substances • quality of written communication is competent. **Level 3 ([7]–[9])** Overall impression: highly competent • all points are fully explained • highly competent explanations which show excellent understanding of possible effects of all three substances • quality of written communication is highly competent. [9]	9
Total	**60**