



**General Certificate of Secondary Education
2013**

**Home Economics
(Child Development)**

Unit 1

assessing

Parenthood, Pregnancy and Childbirth

[GHC11]

WEDNESDAY 5 JUNE, MORNING

**MARK
SCHEME**

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.

1 (a) Circle the correct number to answer the following questions:

(i) Day 14

(ii) Day 10

(iii) Week 6

(3 × [1])

[3]

(b) Write down **three** possible symptoms of pregnancy.

- nausea/morning sickness (sickness = [0])
- constipation
- dark nipples/sensitive/tender nipples (max [1])
- metallic taste in mouth
- tired, dizzy, fainting
- missed period
- vaginal discharge
- craving new foods
- losing interest in foods previously enjoyed, e.g. tea, coffee, fatty foods
- more sensitive sense of smell/dislike of cooking smells
- passing urine more frequently
- slight thickening of waistline (weight gain = [0])
- enlarged breasts.

All other valid answers will be credited

(3 × [1])

[3]

(c) Write down **three** possible causes of infertility.

- blocked fallopian tube
- low sperm count
- sperm tube blocked
- testicular cancer
- ovarian cancer (cancer = [0])
- female sterilisation/vasectomy (max [1])
- hysterectomy
- cancer treatment/chemotherapy
- PCOS Polycystic ovary syndrome
- thyroid problem
- cervical mucus defect
- fibroids
- endometriosis
- STI (award once)
- alcohol OR smoking OR drugs
- stress
- being overweight/underweight
- ejaculation failure
- hormone imbalance/not producing eggs
- age/menopause
- failure to ovulate/eggs not released.

(infection = [0])

All other valid answers will be credited

(3 × [1])

[3]

9

2 (a) Complete the following sentences:

(i) cervix

(ii) two/2

(iii) APGAR (spelt correctly)

(iv) scrotum

(v) C

(vi) post natal depression/baby blues (depression = [0])

(6 × [1])

[6]

(b) State **three** features of the foetus in the womb at 28 weeks.

- limbs all developed/organs developed/development almost complete
- foetus moving around vigorously/strongly (moves/kicks = [0])
- foetus weighs 1.1 kg/2 $\frac{1}{2}$ lb – length 37 cm/substantial weight gain (900g–1.3kg acceptable)
- if a boy testes are descending
- skin still wrinkled, fat developing under skin
- lungs developed – can breath air
- eyes can open – has eyelashes – may be able to see light (max [1])
- responds to touch and sound – will jump if loud noise/able to hear
- swallowing small amounts of amniotic fluid and passing small amounts of urine
- can hiccup
- sleeps and wakes in a pattern
- heartbeat heard through stethoscope/heartbeat heard/strong heartbeat
- baby covered in vernix to protect skin
- lanugo (downy hair) covers the skin (hair = [0])
- foetus viable if born now, has good chance of surviving
- has fingerprints
- has fingernails
- layer of fat continues to be laid under skin
- weight increased x 3
- length increased x 2.

(facial features/see/baby bigger/sucks thumb/sex organs/clench fist/nerves, muscles developing = [0])

All other valid answers will be credited

(3 × [1])

[3]

9

- 3 (a) Write down **two** points about non-identical twins in the womb.
- can be same or different sex/can be different sex
 - have separate/own amniotic sac or fluid (bag = [0])
 - have own placenta
 - do not look the same/may look similar but not identical in looks or features/different DNA
 - formed from two separate eggs
 - two eggs fertilised by two different sperm cells.
- (own umbilical cord = [0])
All other valid answers will be credited
(2 × [1]) [2]

- (b) Explain **two** ways the father can be involved during labour (NOT pregnancy).
- help mother change positions to get comfortable, reassure her she is doing well
 - provide drinks and snacks for mum, give her sips of liquid to help keep her cool
 - do breathing exercises with mum, help her focus on/cope with labour, remember advice from antenatal clinic, e.g. pain relief
 - massage her back and legs, comfort her, focus her mind away from the pain
 - listen to instructions from midwife, relay information to the mum and help her carry out instructions, e.g. breathing exercises
 - time contractions, keep mum informed on her progress, keep her mind on when contractions are building
 - help mum express her views/birth plan to midwives and doctors, she may be too tired or distressed to understand
 - reassure her she is doing well, keep talking to her, she will want to hear a familiar voice
 - father bonds with baby during stage three, mum being cared for by health professionals
 - father cuts cord [1] in stage 3, helps with bonding [1]
 - provides support, go for walk, play board games during stage 1 of labour.
- (looks after other children/read book = [0])
(max [1] for relax/calm/support)
All other valid answers will be credited
(2 × [2]) [4]

- (c) Describe the role of the obstetrician.
- specialises in pregnancy [1] and child birth [1]
 - attends ante-natal clinic to check health of pregnant women
 - attends birth when complications are likely
 - performs caesarean operation, difficult position birth, e.g. breech, transverse, oblique.
- (reference to new born = [0])
All other valid answers will be credited
(1 × [2]) [2]

- (d) Emma is considering a home birth for her third baby. Explain **two** disadvantages of this option.
- no medical equipment if birth has complications, e.g. mum needs caesarean, will have to wait for ambulance, delay could be fatal for baby
 - no incubator available if baby distressed after birth, delay waiting for ambulance could endanger baby and distress mum
 - full range of pain relief not available at home, e.g. no access to epidural, mum may get distressed if pain intense, make birth more stressful
 - only one midwife at birth, no obstetrician available if complications occur at birth and no paediatrician if baby in distress and requires doctor after birth
 - Emma will need to organise babysitter for her other children, may be difficult at short notice if labour starts quickly
 - Emma may need to have children taken out of house if birth would be upsetting for them, e.g. hearing mum distressed, this will need to be organised in advance and children may be upset to leave their mum if they see her in pain at onset of labour
 - preparations required, a room needs to be cleaned and organised for the birth, may be stressful for Emma before birth and time consuming as she has two other children to look after
 - something goes wrong, need medical attention [1]
 - Emma may become tired, no restrictions on visitors, not getting rest
 - no social contact with other mothers, no support/encouragement, can't get advice
 - less rest at home, household responsibilities/decisions to make, more stressful.

All other valid answers will be credited

(2 × [2])

[4]

12

- 4 (a) Explain **one** reason why a child may be adopted.
- mum may be too young, she may decide she cannot cope with baby or her parents may not be supportive of her looking after baby
 - child has been physically or sexually abused by parents, child would be at risk and needs to be removed from home situation
 - parents abusing alcohol or drugs and unfit to look after child, home situation would be unsafe or inappropriate for child, parents cannot cope long term with bringing up child
 - step parent wants to adopt child to make them part of their family, e.g. step dad adopts child to give them same family name as mum
 - child has been fostered for long term period and adoption is next step, social services have agreed with parents that this is best option for the child
 - parents may be dead or in prison long term and therefore unable to look after child, another relative, e.g. grandparents, may adopt child to give them stability and keep them in family
 - adoptive parents are unable to have their own child due to infertility problems, e.g. blocked fallopian tube, IVF or other options may not have worked and they want to love and care for a child
 - adoptive parents may already have children and want to give a child who is to be adopted a stable home, may feel they can give a child a good future
 - unplanned pregnancy, mother doesn't want baby.

(parents ill = [0])

All other valid answers will be credited

(1 × [2])

[2]

- (b) Explain why the following are carried out at an ante-natal appointment:

(i) Blood test

- to test for anaemia, lack of iron, may make mum feel tired and less able to cope with blood loss during birth
- to determine mum's blood group, if she needs a blood transfusion during birth staff will know her blood group and can quickly access blood
- test for rubella (German measles) which can seriously damage unborn baby
- test for Hepatitis B, virus can cause serious liver disease, may infect baby if mum is carrier but baby can be immunised at birth to prevent infection
- test for STIs as they could lead to miscarriage and still birth if left untreated, may determine type of birth
- test for HIV (human immunodeficiency virus) which can cause AIDS and is passed to baby during pregnancy, if mum test positive mum and baby can be treated immediately after birth to reduce risk of baby becoming infected

- test to check rhesus factor, if mum is rhesus negative and baby rhesus positive mum will need injection immediately after birth because during birth mum can produce antibodies against the baby if small amounts of the baby's blood enter her bloodstream. The antibodies can cross the placenta leading to anaemia, jaundice, foetal brain damage
 - blood sugar, indicates if mother has diabetes.
- (infection/abnormalities/baby's blood type = [0])
 All other valid answers will be credited
 (1 × [2]) [2]

(ii) Check on mother's weight

- weight is checked to ensure mother is not putting on excess weight eating for two, more likely to need an assisted birth, increased risk of pre-eclampsia, after birth it will be difficult to remove extra weight and could lead to long term obesity and possible CHD, hypertension, diabetes
 - low weight can be sign that mother is not eating enough or has severe vomiting, which could mean she is not getting sufficient nutrients to provide for baby's development
 - gains 450g per week, indicates baby growing.
- All other valid answers will be credited
 (1 × [2]) [2]

(c) Write down and explain the role of **two** hormones during pregnancy and birth.

| Name of hormone | Explanation |
|--|---|
| <p>PROGESTERONE</p> <p>1 x [1] [1]</p> | <ul style="list-style-type: none"> • helps prepare womb to receive fertilised egg • controls menstrual cycle • needed to maintain the state of pregnancy/pregnancy hormone [1] • helps implantation of fertilised egg in lining of uterus • helps relax muscles in uterus to provide room for growing baby • female sex hormone [1]. <p>All other valid answers will be credited 1 x [2] [2]</p> |
| <p>OXYTOCIN</p> <p>1 x [1] [1]</p> | <ul style="list-style-type: none"> • stimulates the uterus to contract during child birth/to form birth canal • responsible for enlargement of uterus [1] and breasts during pregnancy [1] • helps relax the pelvis joints to allow easier birth of baby • used to induce birth [1], drip, pessary, gel to soften cervix. <p>All other valid answers will be credited 1 x [2] [2]</p> |

- 5 Alice is six months pregnant. Evaluate this breakfast for Alice.

Bacon and scrambled egg
Toasted wholemeal bread
Coffee

Bacon

Advantages:

- protein for growth of mother's body tissue and developing baby
- protein for repair of maternal tissue
- secondary source of energy
- fat for energy/for carrying extra weight of baby
- can be grilled for low fat option/extra weight difficult to loose after birth
- high satiety food/helps Alice control her weight gain
- iron – prevents anaemia, common in pregnancy.

Disadvantages:

- high in fat/not part of recommended healthy diet/extra weight difficult to loose after birth
- high in salt content/may lead to hypertension (high blood pressure)
- undercooked bacon, toxoplasmosis, miscarriages, stillbirth, eye damage.

Toasted wholemeal bread

Advantages:

- (bread) carbohydrate for energy/for carrying extra weight of baby
- (bread) high in NSP/prevent constipation which can be a problem during pregnancy
- folic acid, reduces risks of NTDs, e.g. spinabifida
- wholemeal healthy carbohydrate choice/keep Alice feeling fuller longer and prevent unhealthy snacking/high satiety value
- releases energy slowly into the body/low GI food
- iron prevents anaemia – increases risk of low birth weight
- fortified with vitamin D for absorption of calcium – strong bones and teeth.

Disadvantages:

- toast may cause indigestion or heartburn/common during pregnancy
- butter on toast – weight gain and associated problems.

Scrambled eggs

Advantages:

- protein for growth of mother's body tissue and developing baby
- protein for repair of maternal tissue
- calcium for mum and baby's teeth and bones
- low fat method of cooking eggs/keep mum's weight down – extra weight difficult to loose after birth
- iron in egg yolk/transport oxygen in the blood/lack of iron can lead to anaemia which is associated with a low birth weight
- egg yolk – vitamin D for absorption of calcium for strong bones/teeth for mother and baby.

Disadvantages:

- if undercooked eggs can cause food poisoning, salmonella – risk of miscarriage, still birth
- lack of Vitamin C to aid absorption of iron in the egg
- adding salt and butter and explanation of disadvantage.

Coffee

Advantages:

- prevent dehydration/low calorie drink – keep weight controlled
- milk – calcium – bone and tooth development in foetus, maintaining mother's bone density.

Disadvantages:

- caffeine increases mother's heartbeat/additional risk of miscarriage
- high risk of low birth weight
- must mention added sugar – risk of tooth decay, encourages sweet tooth, if not used as energy source will be converted to body fat.

Additional valid points:

- quick and easy to prepare as Alice may be feeling tired at this stage of pregnancy, little preparation required
- reference to current dietary recommendations and how this breakfast meets them
- reference to Eatwell plate and explanation related to this breakfast.

All other valid answers will be credited

Level 1 ([0]–[3])

Overall impression: basic

- list of points, limited evaluation
- shows basic understanding
- quality of written communication is basic.

Level 2 ([4]–[6])

Overall impression: competent

- at least three foods explained, some evaluation evident
 - some reference to pregnancy included to achieve at the top level of this mark band
 - competent understanding
 - quality of written communication is competent.
- (for [6] and above must refer to pregnancy)

Level 3 ([7]–[9])

Overall impression: highly competent

- all foods discussed and evaluated
- shows understanding of relevance of choices for Alice
- highly competent understanding
- quality of written communication is highly competent.

For [6] and above must refer to pregnancy.

[9]

9

6 Discuss the following factors that affect the decision to have a baby:

- Stable relationship
- Financial considerations
- Parental age
- Available support

Stable relationship

- will the relationship cope with the disruption a baby will bring to the couple's lifestyle? need to think of effect a baby could have both positively, e.g. happier, feeling closer, or negatively, e.g. feeling stressed, unable to cope, arguing more often
- if in a committed relationship the couple can share the extra workload, e.g. share night feeds
- a couple who love each other will be good role model for child, child will feel loved and secure
- is their relationship strong enough to cope with the stress, extra workload, broken night's sleep, less money for themselves
- joint decision, both partner's committed.

Financial considerations

- the cost of having a baby, e.g. buying expensive equipment, nappies and formula feed, dad may need to take on overtime or another job, less money, maybe only one wage coming into the house, impact on relationship
- money available for leisure and social life, e.g. giving up gym membership, going out with friends, holidays
- will couple want to economise to save money for baby coming. How could they do this?
- couple may need to consider moving house to get more space for baby – will they be able to afford higher rent or mortgage? Will it be too much for them at this stage – should they wait until they save more money?
- mum will be on maternity leave and have less income from work – how will they cope? Will the mum be entitled to any benefits?
- childcare costs if mum returns to work and available options.

Parental age

- teenage couple may be ill prepared – relationship may not last, won't be a stable environment for the baby
- young couple/single mum need to have support, e.g. from family or friends, will need support as they are inexperienced
- young couple will be energetic, better able to cope with less sleep and extra workload than an older couple may be who may find extra physical effort required, e.g. lifting heavy car seat, a struggle
- older couple may be under pressure from family, biological clock
- younger couple have more chance of being fertile so may be better to consider starting family when younger/fertility decreases with age so couple need to consider what age to have a baby
- older couple more able to provide more opportunities, plus examples.

Available support

- what family help is available? couple will benefit from family support and advice, e.g. babysitting, talking through concerns
- if their friends have babies they will have a circle of support and can ask advice, borrow equipment (save money too)/mum will have company and help when baby is born, e.g. go on walks with friend, prevent mum feeling lonely
- what support will be available, e.g. local support groups, healthcare available, entitlements
- if mum returns to work, is there support for working mums in the workplace, e.g. a crèche, is flexitime available to help ease mum into returning to work?

All other valid answers will be credited

Level 1 ([0]–[3])

Overall impression: basic

- list of points, limited explanations evident
- shows basic understanding
- quality of written communication is basic.

Level 2 ([4]–[6])

Overall impression: competent

- two to three points well explained
- shows competent understanding of effects of factors on decision
- quality of written communication is competent.

Level 3 ([7]–[9])

Overall impression: highly competent

- all four points discussed and very well explained
- shows highly competent understanding of effects of factors on decision
- quality of written communication is highly competent.

[9]

9

Total

60