



General Certificate of Secondary Education  
2012

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## **Home Economics: Child Development**

Unit 1

*assessing*

Parenthood, Pregnancy and Childbirth

**[GHC11]**

**MONDAY 28 MAY, AFTERNOON**

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**MARK  
SCHEME**

1 (a) Write down **one** function of: (AO1)

(i) the ovary

- produces or releases an ovum/egg
- secretes oestrogen
- secretes progesterone
- needed for puberty/maturation
- needed for menstruation
- holds, keeps egg
- stores egg
- eggs matured here.

All other valid points will be credited

(1 × [1])

[1]

(ii) the penis

- enlarges during sexual intercourse
- carries sperm
- carries urine
- releases sperm
- penetrates woman's vagina.

All other valid points will be credited

(1 × [1])

[1]

(iii) the testes

- where sperm is made
- where testosterone is produced
- produces semen.

All other valid points will be credited

store = [0]

protected by scrotum = [0]

(1 × [1])

[1]

(b) Label the diagram of the female reproductive system using the correct words from the box. (AO1)

(i) fallopian tube

(ii) ovary

(iii) uterus

(iv) cervix

(v) vagina

(5 × [1])

[5]

(c) Write down **two** methods of contraception. (AO1)

- IUD/coil
- IUS
- male sterilisation
- female sterilisation
- diaphragm with spermicide
- male condom
- female condom/femidom
- contraceptive patch
- contraceptive implant/bar
- pill/combined pill/progesterone only pill (POP)
- natural method
- contraceptive injection
- abstention/saying no
- withdrawal.

} to get two separate marks need to specify type of condom

All other valid points will be credited

implant = [0]

injection = [0]

morning after pill = [0]

(2 × [1])

[2]

10

2 (a) Complete the sentences below: (AO1)

(i) paediatrician

(ii) blood

(iii) prolactin

(iv) 40 – no other answer acceptable

(v) D – options = [0]

(vi) folic acid/folate

(6 × [1])

[6]

(b) Write down **two** checks that will be carried out at a mother's post-natal appointment. (AO1)

- blood pressure check
- urine check
- weight check
- stitches have dissolved
- cuts, tears to perineum have healed
- routine smear test
- uterus returned to pre-birth size
- check for signs of post-natal depression/mother's emotional well being
- return of menstruation/periods.

All other valid points will be credited

blood = [0]

advice = [0]

checks on baby = [0]

(2 × [1])

[2]

(c) Explain **one** benefit of an ultrasound scan during pregnancy.  
(AO1, AO2)

- reassurance for mother, can see if the baby is developing normally [1] heart beat
- age of baby, number of weeks, confirms EDD
- size of baby, weight of baby, length of limbs plus benefit
- position in womb, how baby is lying, e.g. breech, may require assistance during birth
- check if it is an ectopic pregnancy – will require hospital treatment and may lead to removal of fallopian tube
- position of placenta, e.g. placenta praevia, usually a Caesarean section will be needed to deliver the baby
- if twins are present, better able to prepare for multiple birth, regular antenatal care and monitoring
- baby developing normally, no defects visible – able to prepare emotionally
- can detect serious heart and kidney abnormalities, abnormalities of the baby's digestive system
- to check limbs, reassure
- father feel more involved, bonding experience
- may suggest other tests required/(abnormalities detected).

All other valid points will be credited

sex = [0] unless relates to benefit, e.g. male – haemophilia

information = [0]

(1 × [2])

[2]

10

3 (a) Write down **two** possible signs that labour has started. (AO1)

- regular or strong contractions
- waters break
- a show/mucus plug comes away
- diarrhoea
- nausea/vomiting
- backache, period type pain.

contractions = 0

pains = 0

(2 × [1])

[2]

(b) Explain **two** advantages of a hospital birth. (AO1, AO2)

- trained staff available to help during labour and birth, will reassure mum, important if an emergency arises
- equipment for emergency use, e.g. incubator, facilities for Caesarean section if needed to save baby's or mother's life
- mother has opportunity to rest and relax after the birth, midwives are always available, there are none of the worries of home life
- visiting is restricted, mother will not be exhausted by too many visitors
- other mothers to share experiences and worries with, this can be comforting
- a range of pain relief is available in hospital, e.g. epidural, an anaesthetist finds the correct space in the spine to place a hollow needle
- mother feels more at ease and reassured that doctors and equipment is there, not as stressed
- mother and baby get "after care" if there are any problems, concerns – can discuss these with staff and other mothers/give mother time to recover from birth.

All other valid points will be credited

"reassure" only awarded once

take baby away = [0]

(2 × [2])

[4]

(c) Explain the following: (AO1, AO2)

(i) ectopic pregnancy

- when fertilised egg develops in fallopian tube instead of implanting in uterus wall. Operation needed to remove embryo and may need to remove the fallopian tube. Dangerous to mother's health – can cause internal bleeding. First sign severe abdominal pain with spotting of blood from vagina
- foetus/baby aborted, removed.

All other valid points will be credited

miscarriage = [0]

(1 × [2])

[2]

(ii) the use of forceps during birth

- large tongs used to help ease baby through birth canal. The cervix must be fully dilated. Mother will be given a local anaesthetic and an episiotomy. Needed when contractions not strong enough to push out baby or baby is lying in awkward position. Used when baby is breech or premature or mother has had an epidural and cannot feel when to push. Baby can be left with bruised face, misshapen head initially
- used in second stage labour.

All other valid points will be credited

(1 × [2])

[2]

10

4 (a) Explain why a pregnant woman should eat foods which contain:  
(AO1, AO2)

(i) protein

- growth of her expanding body and for baby's growth
- repair/maintenance of body cells
- energy source if required/secondary source.

All other valid points will be credited

growth and repair = [1]

energy = [0]

foods = [0]

(1 × [2])

[2]

(ii) calcium

- strengthen mother's bones for carrying baby
- maintains woman's bone density
- baby uses up mother's calcium supply
- for baby's developing skeleton, bones form in eighth week of pregnancy
- keeps teeth healthy.

All other valid points will be credited

bones and teeth = [1]

(1 × [2])

[2]

(iii) NSP

- prevents bowel disorders, e.g. constipation, common in pregnancy, due to hormonal changes
- energy source – needs extra energy for carrying extra weight in last three months
- NSP foods low in fat, contain minerals and vitamins
- high satiety value – less likely to snack on high fat or sugar foods, helping to maintain a healthy weight gain.

All other valid points will be credited

(1 × [2])

[2]



(b) Explain why a pregnant woman should avoid certain foods.  
(AO1, AO2)

- soft cheeses, blue veined cheeses, paté, meat not cooked through and cook-chill foods not reheated properly, prepared salads, e.g. potato salad and coleslaw. Can result in listeriosis which can cause miscarriage, stillbirth or severe illness in the newborn baby
- raw or lightly cooked eggs, foods made with raw egg, e.g. mayonnaise, meringues, contain salmonella bacteria which can cause food poisoning in mother and if severe miscarriage or premature birth
- food high in vitamin A, e.g. liver and liver products, can cause birth defects
- undercooked meat may contain a parasite called toxoplasmosis, this could severely damage the foetus, resulting in miscarriage, stillbirth, eye damage/salmonella bacteria (as above) only for undercooked chicken
- poorly washed fruit, vegetables and salad ingredients as pregnant women may be infected with toxoplasmosis resulting in miscarriage, stillbirth, eye damage
- nuts and nut products – allergic reaction in baby if close family have topia disease or allergy
- prawns, unless fresh and thoroughly cooked, avoid in restaurants, cause salmonella
- caffeine/energy drinks/coffee and tea – limit intake – lead to low birth weight, miscarriage, restlessness, fatigue, increased heart beat
- avoid too many processed foods – can be high in fat, sugar and/or salt, risk of high blood pressure and pre-eclampsia. Can contain food additives and tend to be low in NSP
- avoid foods high in saturated fats – energy dense, could cause excessive weight gain, diabetes, difficult birth and weight could be hard to lose after birth
- no more than two portions of oily fish per week – can contain pollutants. Limit tuna/shark fish intake to avoid excess mercury which can harm baby's nervous system
- avoid too much sugar – weight gain, diabetes, difficult birth
- prawns, unless fresh and thoroughly cooked, avoid in restaurants, cause salmonella (and why)
- nuts and nut products, allergic reaction in baby if mum and dad have allergy/close family have ectopic disease or allergy
- caffeine/energy drinks/tea and coffee, limit intake, lead to miscarriage, restlessness, fatigue, increased heart rate
- perishable foods, check use-by-date, food poisoning, miscarriage.

All other valid points will be credited

spicy foods, indigestion = [1]

list foods = [0]

(3 × [2])

[6]

12

- 5 Explain the effects of alcohol, smoking and drugs during pregnancy.  
(AO1, AO2, AO3)

**Effects of alcohol**

- can pass across the placenta to the foetus's blood, baby takes in alcohol
- regular drinking can interfere with unborn baby's growth and development
- during first 10 weeks development of unborn baby, alcohol can cause malformations to heart, limbs and facial disfigurements
- if mother is alcoholic baby can be born with long term brain damage/foetal alcohol syndrome (mental retardation, abnormal facial features, e.g. cleft palate), missing limbs
- if mother is drunk she may be unsteady, could fall and harm unborn baby
- mother's diet may suffer if she is drinking and baby's development could suffer from lack of nutrients
- increases the risk of miscarriage and stillbirth
- ectopic pregnancy
- addicted to alcohol/unsettled.

**Effects of smoking**

- harmful chemicals cross the placenta into baby's blood, circulated round baby's body
- nicotine in cigarettes makes baby's heart beat faster
- carbon monoxide in cigarette smoke takes place of oxygen in blood, baby receives less oxygen and growth and development is affected
- low birth weight babies with resulting developmental difficulties
- greater risk of miscarriage, stillbirth, premature birth
- baby can have slower growth rate
- thought to be a contributory factor in cases of SIDS
- high risk bronchitis and asthma
- greater risk morning sickness
- facial disfigurements
- mother, lung cancer
- baby lung capacity affected
- risk ADHD, behaviour.

addicted = [0]

**Effects of drugs**

- drugs cross the placenta into baby's blood, circulated round baby's body
- baby can be born prematurely, with low birth weight
- baby could be born addicted to drugs and have withdrawal symptoms, e.g. irritability, joint stiffness, vomiting, diarrhoea
- baby can be born with low blood sugar (hypoglycaemia), internal head bleeding
- medicines can affect baby – not recommended, need to check with doctor first – can cause premature onset of labour
- chance of baby getting HIV if mum shares needles
- mother's diet may suffer and baby's development could suffer from lack of nutrients
- miscarriage/still birth
- abnormalities in baby.

All other valid points will be credited

**Level 1 ([1]–[3])**

Overall impression: basic

- limited range of points, not all explained
- shows basic understanding of effects
- quality of written information is basic.

**Level 2 ([4]–[6])**

Overall impression: competent

- good range of valid, explained points
- shows competent understanding of effects and includes effects of at least two substances
- quality of written information is competent.

**Level 3 ([7]–[9])**

Overall impression: highly competent

- wide range of valid, well explained points
- shows excellent understanding of effects and includes detailed effects of all three substances
- quality of written information is highly competent. [9]

9

[0] is awarded for a response not worthy of credit

6 Discuss the benefits for a young couple of planning for a family.  
(AO1, AO2, AO3)

- can plan for the cost of the baby and financial implications for the couple, have time to save money, plan for less money coming in if both now work, have time to find out about benefits available and can decide how to cope with extra costs, e.g. equipment for baby
- can plan for changes to their house, have time to consider moving to bigger house for more space, can extend the house or re-plan use of rooms for when baby is born
- can prepare for pregnancy – stop smoking and limit alcohol intake to increase sperm count, eat a balanced, varied diet, e.g. low in fat, include folic acid, take regular exercise, have a GP check up, e.g. immunity to Rubella, genetic counselling if there is a history of certain medical conditions, birth plan
- can plan work/childminding before they have baby, have time to consider all options, e.g. working part-time, family support available, who will stay at home
- have control over size of family, can plan when is the best time, can discuss number of children they would like, cultural influences
- can plan their social life, e.g. talk about what they will still be able to do if they have a baby, may help them have less arguments when baby comes along and their life changes, can help ease them into changes that will happen
- their relationship could benefit from them not rushing into having a baby, having time together as a couple and not feeling stressed or pressurised to have a family, will feel they both decided when to have a baby/emotionally ready, mature
- will be using contraceptives to try to avoid an unplanned pregnancy, can be more relaxed with each other, plan number of children, gap between children
- the couple can prepare a home environment that will encourage PIES development in the baby/young child and access information on parenting skills, look at schools, nursery in area
- can make decisions about religion, culture values and traditions, less chance of arguments when baby is born.

All other valid points will be credited

(Answers must relate to the **benefits** for the **couple**)

**Level 1 ([1]–[3])**

Overall impression: basic

- limited range of points, not all discussed
- shows basic understanding of the benefits of planning for a family
- quality of written information is basic.

**Level 2 ([4]–[6])**

Overall impression: competent

- good range of valid, discussed points
- shows competent understanding of the benefits of planning for a family
- quality of written information is competent.

**Level 3 ([7]–[9])**

Overall impression: highly competent

- wide range of valid, well discussed points
- shows excellent understanding of the benefits of planning for a family
- quality of written information is highly competent
- can make decisions about religion, culture, values and traditions, less chance arguments when baby is born. [9]

[0] is awarded for a response not worthy of credit

changes to lifestyle = [0]

benefits of having a family = [0]

being young = [0]

**Total**

9

**60**