

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2009 question paper
for the guidance of teachers**

0637 CHILD DEVELOPMENT

0637/01

Paper 1 (Theory Paper), maximum raw mark 100

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

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Section A

- 1 Can put mother's life at risk/harms baby [1]
- 2 (i) Fallopian tube – takes eggs from ovary to uterus
– where fertilisation takes place [2]
- (ii) Uterus – where baby develops
– wall is muscular and enlarges during pregnancy as baby grows [2]
- (iii) Ovary – where eggs are made/female hormones produced [1]
- (iv) Vagina – place where sperm are deposited during intercourse [1]
- 3 Separation anxiety
- If they cannot see parents they do not understand that they still exist and will be withdrawn
 - Over/under eats
 - Emotionally upset and distressed [2]
- 4 (i) When babies change from an all milk diet to milk and solids diet [2]
- (ii) Approximately 4 months [1]

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Method	How it works	Advantages	Disadvantages
Male condom	Sperm prevented from entering vagina	Free from some places Widely available Protects from STIs	May split Put on correctly etc.
Diaphragm	Prevents sperm meeting egg	No side effects Wide variety of choice	Must stay in place for 6 hours Fitted by Doctor etc.
Intra-uterine device	Prevents implantation of a fertilised egg	Works immediately Can stay in place for 3–10 years	May cause heavy bleeding Not suitable for all Must be fitted by Doctor etc.
Contraceptive implant	Prevents egg and sperm meeting and/or implantation	Effective for 3 years Fertility returns immediately	Can be difficult to remove Can have side effects

[12]

- 6 Safety points
- Bars 45–65 mm apart
Reason – to prevent baby's head being caught between them
 - Mattress should fit tightly – no more than 4 cm anywhere
Reason – to prevent baby's head, arms or legs being trapped
 - Cots have one side which drops down with a catch
Reason – catch must be too difficult for baby to undo, etc. [6]

[Total: 30]

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Section B

- 7 (a) (i)** Swallowing and sucking reflexes
When anything put in mouth baby immediately sucks and swallows.
- (ii)** Rooting reflex
Baby turns head as if in search of nipple when gently touched on cheek.
- (iii)** Grasp reflex
Baby automatically grasps an object when put into their hand.
- (iv)** Walking reflex
Baby will make walking movements with feet touching a firm surface.
- (v)** Startle reflex
Fist clench, elbows bent to bring the forearms in, when startled by a sudden loud noise.
- (vi)** Falling reflex (Moro reflex)
Any feeling a baby gets that they are falling – they fling back their arms and open hands, bringing them together as if trying to catch something. [18]
- (b)** Any four ways explained:
Hunger
Boredom
Noise
Discomfort
Pain
Tiredness
Dislike of dark
Thirst
Colic [4]
- (c)** Any three ways described:
Rocking the baby
Baby massage
Making soothing noises e.g. like adult heartbeat
Audio tapes of “whooshing” noises [3]

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- 8 (a) (i) Poor diet/not enough nutrients [1]
- (ii) Stunts growth/can effect brain development [1]
- (b) Balanced diet
Correct amount of nutrients for the age of child to stay healthy/energy input is same as energy output etc. [2]
- (c) Any four:
Spicy foods – too strong for taste buds
Fatty foods – lead to obesity
Nuts – choking
High in sugar – tooth decay etc.
Bran and wheat based cereals – to avoid celiac disease etc.
(1 + 2 × 4) [12]
- (d) Vitamin D To prevent rickets/for healthy teeth and bones
Calcium For healthy teeth and bones [2]
- (e) Two reasons required.
 - Children need energy for growth, and whole milk contains more.
 - Have smaller stomachs and cannot take in a great quantity so need whole milk etc. [2]
- (f) (i) Two required.
 - Advertised and marketed to appeal
 - Favourite characters on packaging
 - Taste good etc.
- (ii) Three with reasons. [2]
 - High in: Fat
 - High in: Sugar
 - High in: Salt
 - Few nutrients
 - 'Fills up' child, so unable to eat nourishing food
 - May contain additives and preservatives [3]

[Total: 50]

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Section C

Enter part (a) or part (b)

- 13–20 marks High response – each section answered fully.
- 7–12 marks Medium response – each part attempted or parts answered in detail.
- 0–6 marks Low level response – answers lack detail or brief responses.

9 (a) Reasons: Male

- Blocked tubes connecting testicles to seminal vesicles (where sperm is stored).
- Could be caused by sexually-transmitted disease. Ejaculation failure.
- Very low sperm count, could be the man working with pesticides or metals such as lead, mercury etc. Tight underwear and overheating are two other causes.
- Testicular failure, a rare condition when the semen contains no sperm. A poor or unhealthy diet can result in a low sperm count.

Reasons: Female

- Hormonal imbalance causing egg not to be produced.
- Fibroids, totally benign growths in wall of uterus, usually in women over 35 years.
- Blocked fallopian tubes, due to STD, miscarriage or a terminated pregnancy.
- Endometriosis, where patches of uterus lining are found in ovaries, pelvis, fallopian tubes etc.

Treatment includes:

- Drugs for infections
- Counselling
- Good diet plus plenty of exercise, sleep etc.
- Fertility drugs
- Surgery
- IVF (in vitro fertilisation)
- Donor insemination
- Surrogacy etc.

[20]

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OR

(b) Blood tests

- Anaemia – lack of iron – makes mother feel tired and weak.
- Blood group – in case a blood transfusion should be needed in emergency.
- Rhesus factor, most people have this factor in the blood, and the blood is termed Rhesus positive. Those who do not have it are Rhesus negative. This is inherited. Problems arise where father is positive and mother is negative. It usually causes problems when a second baby is positive the baby may have anaemia and jaundice, may be mentally handicapped, or may even die. Mothers can be given an injection at 28 weeks pregnant again after birth to prevent build-up of harmful substances in her blood which could damage her babies.
- Immunity to rubella – if the mother is not immunised she can have a vaccination after the baby is born.
- Hepatitis B – baby would have to have special care to prevent infection.
- HIV – so that baby can be born in a special way to reduce risk of infection. So mother can receive treatment.

Three required.

Blood pressure check –

To see if rest is necessary perhaps even in hospital if very high. Could be a sign of pre-eclampsia.

Urine test –

To test for sugar – may be diabetic.

To test for protein – could indicate infection of kidneys or bladder, or early sign of pre-eclampsia.

Weight check –

If too much weight is gained, she will be advised to adjust diet to prevent high blood pressure.

Only routine tests acceptable, (now includes ultra sound scan).

[20]

[Total: 20]