Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B3 Infection And Response

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

Name of the Student:_____
Max. Marks : 25 Marks **Time : 25 Minutes**

Mark Schemes

Q1.

(a) endocrine (system)

ignore hormonal (system)

1

(b) D

1

(c) A

1

(d) (in / through / via) blood

allow (in / through / via) bloodstream

allow (in / through / via) plasma

*allow (in / through / via) blood vessels **or** named blood vessel*

1

(e) ovary / ovaries

in either order

1

testis / testes

allow testicle(s)

allow placenta

*if no other mark awarded allow gonad(s) for **1** mark*

1

(f) luteinising hormone (LH)

1

(g) **Level 3:** A judgement, strongly linked and logically supported by a sufficient range of correct reasons, is given.

5–6

Level 2: Some logically linked reasons are given. There may also be a simple judgement.

3–4

Level 1: Relevant points are made. They are not logically linked. 1–2

1–2

No relevant content

0

Downloaded from www.merit-minds.com

Indicative content

Advantages
- non-permanent like condom / diaphragm / IUDs / spermicides / abstinence **or** unlike surgical sterilisation
- longer lasting than condom / diaphragm / IUDs / spermicides
- no need to remember unlike oral contraceptive
- one injection rather than surgery for sterilisation
- surgery (for sterilisation) has risks, for example, infection
- no other method of long-lasting contraception (rather than sterilisation) relies on men

Disadvantages
- no protection from sexually transmitted diseases unlike barrier methods **or** named barrier method
- not as long lasting as (surgical) sterilisation
- at clinical / drug trial stage, so unknown side effects
- at clinical / drug trial stage, so unknown efficacy
- do not know how long it will last (as info only states 'up to 13 years')
- can stop taking a pill **or** using a condom if you change your mind / want to get pregnant, whereas have to wait 13 years with the injection
- (minor) risk of infection posed with an injection compared to no risk with the oral contraceptive

For **Level 3** references to advantages **and** disadvantages of the new drug compared to named existing methods are required.

[13]

Downloaded from www.merit-minds.com

Q2.

(a) **B**

1

(b) right atrium

1

(c) foxgloves

1

(d) **X** = 2800 / 52

1

53.846153

1

54 (cm^3)

an answer of 54 (cm^3) scores 3 marks

allow correct rounding of an incorrectly calculated value of stroke volume

1

(e) **Level 3:** Relevant points (reasons / causes) are identified, given in detail and logically linked to form a clear account.

5–6

Level 2: Relevant points (reasons / causes) are identified, and there are attempts at logical linking. The resulting account is not fully clear.

3–4

Level 1: Points are identified and stated simply, but their relevance is not clear and there is no attempt at logical linking.

1–2

No relevant content

0

Indicative content

effect of exercise
- during exercise body needs to transfer (more) energy
- energy transferred during respiration
- rate of respiration increases during exercise
- (so) more oxygen is needed

effect of beta blockers
- beta blockers reduce (the increase in) heart rate (during exercise)
- beta blockers reduce stroke volume (or described)
- beta blockers reduce cardiac output
- (so) heart cannot supply oxygen fast enough / in sufficient quantity to muscle cells

effect on breathing rate
- breathing rate increases to increase rate / amount of oxygen absorbed
- breathing rate increases to increase rate / amount of carbon dioxide removed from body
- (but) increased breathing rate cannot fully compensate for changes in heart function

A level 3 response should make links between all three sections of indicative content

A level 2 response should attempt to link effect of exercise with oxygen / energy

Downloaded from www.merit-minds.com

requirement **and** beta blockers to effect on heart function.

[12]

Downloaded from www.merit-minds.com