Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B4 Bioenergetics

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Name of the Student:_____
Max. Marks : 23 Marks **Time : 23 Minutes**

Mark Schemes

Q1.

(a) 66 (beats per minute)

1

(b) heart rate increased

1

(c) 4

1

(d) any **two** from:

- resting heart rate was lower
- heart rate did not increase as much
- heart rate did not increase as fast
- heart rate returned to normal sooner

2

(e) **Level 2 (3–4 marks):**
A detailed and coherent explanation is given, which logically links changes in the body during exercise to reasons for these changes.

Level 1 (1–2 marks):
Discrete relevant points made. Links may not be made.

0 marks:
No relevant content

Indicative content

Changes:
- breathing rate increases
- deeper breathing
- (body) temperature increases
- sweating occurs
- muscle fatigue
- vasodilation

Explanations linked to correct change:
- to provide more oxygen
- to remove carbon dioxide faster
- (as) more energy required
- (so) increased respiration
- (so) more energy transferred
- for movement or contraction of muscles
- some energy warms the body

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- (sweating) cools the body down
- (by) evaporation of sweat

4

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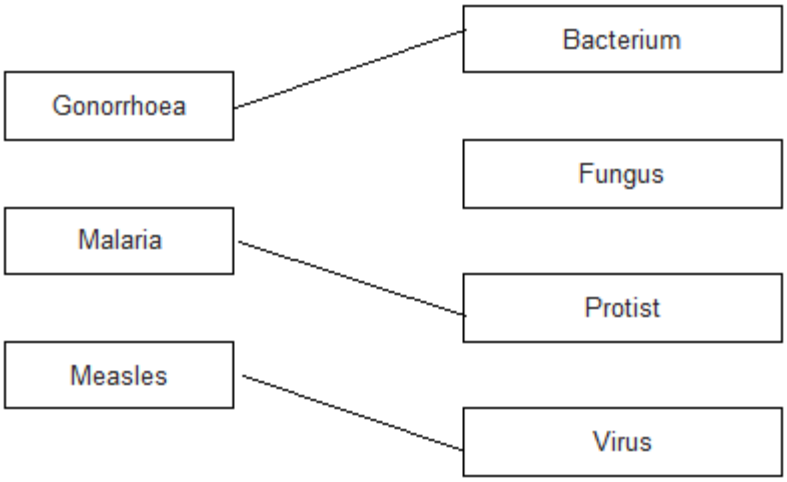
Q2.

(a)



3

(b) (trachea) has mucus

1

to trap pathogens

1

(trachea) has cilia

1

to move mucus out of trachea

1

(c) **dependent variable:**
number of times mosquitoes landed on socks

1

control variable:
any **one** from:

- number of mosquitoes in each container
- length of time socks worn
- dampness of socks
- same type of socks
- size of container
- time
- temperature
- species of mosquito
- age of mosquito

1

(d) use worn socks
or
use chemical from worn socks

1

to attract / trap infected mosquitoes

1

or accept:
wear clean socks / change socks regularly (1)
to reduce the chance of attracting mosquitoes (1)

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(e) less chlorophyll present

1

(so) less light absorbed

1

(so) reduced photosynthesis
or
(so) less sugar / food made

1

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