Practice Question Set For GCSE
Subject : Physics
Paper-2 Topic: Forces (Standard Demand Questions)

Name of the Student:_____
Max. Marks : 22 Marks **Time : 22 Minutes**

Mark Schemes

Q1.

(a) 2.75

*allow **1** mark for correct substitution, ie* $\frac{11}{4}$

or $\frac{23-12}{4}$

provided no subsequent step shown

2

m/s^2

1

(b) driving force increases

1

frictional force increases

accept air resistance / drag for frictional force

1

driving force > frictional force

1

[6]

Q2.

(a) (i) 16 000

*allow **1** mark for correct substitution ie 3200 × 5*

2

(ii) 16 000 or their (a)(i)

1

(iii) less than

1

(b) increases

1

decreases

correct order only

1

[6]

Q3.

(a) (i) 120

1

(ii) 20

accept 140–their (a)(i) provided answer is not negative

1

(iii) as speed increases

1

drag force / water resistance / friction / **D** increases

1

(until) **D** = 140 N or (until) **D** = **T**

forces balance is insufficient

1

(b) (i) (average) speed (of swimmer)

1

(ii) any **two** from:

- more data
  accept results for data
  *do **not** accept more accurate data*
- force may vary (a lot) / change
- give more reliable average
  ignore references to anomalies
  ignore accurate / precise

2

(iii) examples of acceptable responses:

- most / some females produce smaller forces
  *do **not** accept all females produce smaller forces*
- most / some males produce larger forces
  *do **not** accept all males produce larger forces*
- some females swim as fast as males but use a smaller force
- most of the faster swimmers are male
  *do **not** accept all males swim faster*
- most of the slower swimmers are female
  *do **not** accept all females swim slower*
- range of the (average) speed of males is smaller than the range of the (average) speed of females
- range of the (average) force of the males is greater than the range of the (average) force of the females

1

(iv) exert maximum (hand) force (throughout the swim / stroke)

accept (any method to) increase (hand) force

practise more is insufficient

1

[10]