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

Name of the Student:_____
Max. Marks : 24 Marks **Time : 24 Minutes**

Mark Schemes

Q1.

(a) AB

for 1 mark

1

(b) (i) 0.7

for 1 mark each

1

(ii) 16.8

gains 2 marks

2

but correct working
(d = v.t, d = 24 × 0.7, or in terms of area under graph)

gains 1 mark

1

(c) a = (v-u)/t
= 24/4
= 6
m/s^2

(see marking of calculations)

(can work in terms of graph gradient)

4

(d) d = v.t
= 24/2 × 4
= 48

(see marking of calculations)

(can work in terms of area under graph)

3

(e) F = ma
= 800 × 6
= 4800

(see marking of calculations)

3

[15]

Q2.

(a) 7.5

correct answer with no working = 3 if incorrect allow 1 mark for (change in velocity from graph =) 15

1 mark for $\frac{change\ in\ velocity}{time\ taken}$

2 marks for $\frac{15}{2}$

N.B. correct answer from the incorrectly recalled relationship $\frac{distance}{time}$ *= 2 marks*

3

(b) (4 – 5 seconds) the bungee jumper slows down (decelerates)

1

(the rubber cord) stops the fall

1

(5 – 6 seconds) the bungee jumper starts moving (accelerating) upwards (in the opposite direction)

max 2 marks if no correct indication of time

1

[6]

Q3.

900 000

correct with no working = 3 if answer incorrect, allow:

1 mark for K.E. = $\frac{1}{2}$ × *mass* × *speed*^{2}

2 marks for $\frac{1}{2}$ × 5000 × 600^2

N.B. correct answer with the incorrectly recalled relationship $\frac{1}{2}$ × *weight* × *speed*^{2} *= 2 marks*

[3]