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

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Name of the Student:_____
Max. Marks : 19 Marks **Time : 19 Minutes**

Mark Schemes

Q1.

(a) it is the same size as the downward force

1

(b) weight is a vector

1

(c) centre of mass

1

(d)

*an answer of 441 (N) scores **2** marks*

W = 45 × 9.8

1

W = 441 (N)

allow 440 (N)

1

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

3–4

Level 1: Facts, events or processes are identified and simply stated but their relevance is not clear.

1–2

No relevant content

0

Indicative content

- as height changes gravitational potential energy changes
- gravitational potential energy decreases when moving to the lower bar
- as speed changes kinetic energy changes
- kinetic energy increases when moving to the lower bar
- transfer from gravitational potential energy to kinetic energy as height decreases
- the sum of the kinetic energy and gravitational potential energy is constant

(f) reduces the force exerted

ignore impact

1

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the risk of injury to gymnast is reduced

allow so the gymnast does not get injured

1

[11]

Q2.

(a) there is a resultant force on the ball

1

(b)

*an answer of 2.75 scores **2** marks*

s = 11 × 0.25

1

s = 2.75 (m)

allow 2.8 (m)

1

(c)

$\frac{75}{100}$ × 30.0

allow any correct method of determining 75% of 30

1

22.5 (cm)

1

(25.1 > 22.5) therefore the ball can be used

this mark can only be awarded if a supporting calculation has been done

allow any correct supported conclusion

allow a conclusion consistent with an incorrect percentage calculation

OR

$\frac{25.1}{30.0}$ × 100 (1)

84 % (1)

(84% > 75%) therefore the ball can be used (1)

this mark can only be awarded if a supporting calculation has been done

allow any correct supported conclusion

allow a conclusion consistent with an incorrect percentage calculation

1

(d) the smaller ball has a smaller area

1

(so) air resistance is less (on the smaller ball)

1

[8]

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