

**Physics**

**Sixth Form Examination**

**Mark Scheme**

**Sixth Form Specimen Examination Mark Scheme – Physics**

**Multiple Choice Section**

Q1 A

Q2 B

Q3 B

Q4 B

Q5 B

Q6 C

Q7 B

Q8 B

Q9 C

Q10 D

Q11 D

Q12 A

Q13 B

Q14 E

Q15 C

Q16 E

Q17 A

Q18 C

Q19 E

Q20 B

**Longer Written Answers**

**B1**

1. (i) a=128/1.4 (1 mark) = 320 (1 mark) m/s2 (1 mark)

(ii) Area under graph used/identified as distance (1 mark) ½ 28X1.4 (1 mark) 19.6m (1 mark)

(iii) 0.06 s (1 mark)

1. (i) F=ma (or any correctly rearranged version (1 mark)

(ii) m=F/a quoted or used (1 mark) 1250 kg (1 mark)

**B2**

1. Energy required to fracture specimen = Initial gravitational potential energy of mass – final gravitational potential energy of mass (1 mark)
2. (i) states or uses GPE=mgh (1 mark) 60X10X0.5 = 300 (J) (1 mark)

(ii) 300J (1 mark)

(iii) correctly rearranges ½ mv2 to find v2 (v2=600/60) ( 1 mark) v= 3.3m/s (1 mark)

(iv) energy lost to surroundings/air resistance/friction (1 mark)

(v) 300-70 = 130 J (1 mark)

(vi) energy can not be gained or lost only transferred (1 mark)

**B3**



**B4**





