

| Question number | Answer | Notes | Marks |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 12 (a) | Terminal (velocity / speed); | allow bald 'terminal' | 1 |
| (b) | Any four of - MP1. weight acts downwards; MP2. drag/friction acts upwards; MP3. Idea that forces are balanced; MP4. reference to $f_{(R)} = ma$; MP5. Idea that when forces are balanced then acceleration is zero; MP6. constant velocity = no acceleration; | ignore <ul style="list-style-type: none"> • motion before terminal velocity • gravity allow <ul style="list-style-type: none"> • force of gravity • air resistance • acts to oppose motion • drag = weight • force up = force down • no resultant force Allow answers in terms of N I forces may be shown on diagram | 4 |

Total 5 marks