| Question Number | Scheme | Marks | Notes |
|---|---|---|---|
| **1(a)** | Use of CLM | M1 | All four terms and dimensionally correct. |
| | $6mu-8mu=-3mu+2mv$ | A1 | Correct unsimplified |
| | $v=\frac{1}{2}u$ | A1 | Must be positive |
| | | (3) | |
| **(b)** | $I=3m(u--2u)$ or $I=2m(\frac{1}{2}u--4u)$ | M1 | Impulse momentum equation for either particle. Accept +/-<br>Correct process seen or implied. Dimensionally correct.<br>Must link correct masses with the respective speeds |
| | $I=9mu$ | A1 | Must be positive |
| | | (2) | |
| | | **(5)** | |