

## Large Hadron Collider (10 points)

### Part A. LHC accelerator (6 points)

**A.1** (0.7 pt)

$v =$

**A.2** (0.8 pt)

approximation:  $\Delta =$

numeric:  $\Delta =$

**A.3** (1.0 pt)

formula:  $B =$

numeric:  $B =$

**A.4** (1.0 pt)

$P_{\text{rad}} \propto$

**A.5** (1.0 pt)

$P_{\text{tot}} =$

**A.6** (1.5 pt)

$T =$

## Part B. Particle Identification (4 points)

**B.1** (0.8 pt)

$m =$

**B.2** (0.7 pt)

$l =$

**B.3** (1.7 pt)

$m =$

**B.4** (0.8 pt)

Particle	Measured mass; mass unit [     ]:	Identified as:
A		
B		
C		
D		