

Multiple Choice Answers

Q40: B

Multiple Choice Answers

Q38: C

Multiple Choice Answers

Q40: D

6(a)	(a particle that) cannot be divided / subdivided (into smaller particles)
6(b)(i)	any combination of one quark and one antiquark
	up / charm / top and antiup / anticharm / antitop
	or down / strange / bottom and antidown / antistrange / antibottom
6(b)(ii)	$E_{(K)} = \frac{1}{2} mv^2$
	$2.1 \times 10^{-16} = \frac{1}{2} \times 0.67 \times 1.66 \times 10^{-27} \times v^2$
	$v = 6.1 \times 10^5 \text{ m s}^{-1}$
6(c)(i)	number of electrons = 88
6(c)(ii)	(number of nucleons = $228 - 5 \times 4 = 208$)
	number of protons = $88 - (5 \times 2) + 4$ = 82
	number of neutrons = $208 - 82 = 126$ = 126

Multiple Choice Answers

Q38: D

Q40: B

Multiple Choice Answers

Q39: A

Q40: B

Multiple Choice Answers

Q33: C

Q38: D

Q39: A