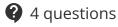


A Level · OCR · Physics





Multiple Choice Questions

Fundamental Particles

Antimatter / Hadrons & Leptons / The Quark Model / Beta Minus & Beta Plus Decay / Quarks in Particle Decay Equations

Easy (1 question) /1 Medium (3 questions) /3 **Total Marks** 14

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Easy Questions

1 Which column A, B, C or D, shows the correct sequence for the evolution of the Universe between the Big Bang and the formation of stars?

А	В	С	D
Universe starts to expand	Universe starts to expand	quarks and leptons form	quarks and leptons form
↓	↓	↓	↓
quarks and leptons form	hadrons form	nuclei form	hadrons form
101111	\downarrow	\downarrow	↓
hadrons form	quarks and leptons form	Universe starts to expand	Universe starts to expand
↓	ļ	ļ	↓
nuclei form	nuclei form	atoms form	nuclei form
↓ ↓	\downarrow	\downarrow	↓
atoms form	atoms form	hadrons form	atoms form

(1 mark)

Medium Questions

1 The table below shows the quark compositions of four particles A, B, C and D.

А	В	С	D
u u d	u d d	u d s	SSS

Which particle has a positive charge?

(1 mark)

- **2** Which statement is correct?
 - **A.** Hadrons are made up of protons and neutrons.
 - **B.** A positron and a proton are examples of leptons.
 - **C.** The positron and the electron have the same mass.
 - **D.** The weak nuclear force is responsible for alpha-decay.

(1 mark)

- **3** Which lepton is emitted in the decay of an up quark and is affected by a magnetic field?
 - **A.** neutrino
 - **B.** electron
 - **C.** positron
 - **D.** antineutrino

(1 mark)