

**GCSE Physics B (Twenty First Century Science)**  
**J259/01** Breadth in Physics (Foundation Tier)

**Question Set 29**

Multiple Choice Questions

- 1 Kareem researches nuclear fission and nuclear fusion.
- (a) (i) Complete the sentence to explain what is meant by nuclear fission.  
Put a (ring) around the correct answer.  
Fission is when nuclei **fuse / grow / shrink / split** to form smaller nuclei. [1]
- (ii) Complete the sentence to explain what causes nuclear fission.  
Put a (ring) around the correct answer.  
Fission happens because some nuclei are **negative / positive / unstable / stable**. [1]
- (b) During nuclear **fission**, energy is released in two main forms.  
How is the energy released?  
Tick (✓) **two** boxes.
- |   |                          |
|---|--------------------------|
| Elastic potential energy of the new particles       | <input type="checkbox"/> |
| Gamma radiation                                     | <input type="checkbox"/> |
| Gravitational potential energy of the new particles | <input type="checkbox"/> |
| Kinetic energy of the new particles                 | <input type="checkbox"/> |
| Radio waves   | <input type="checkbox"/> |
| Sound waves   | <input type="checkbox"/> |
- [2]
- (c) (i) Describe what happens during nuclear **fusion**. [2]
- (ii) During nuclear **fusion** some of the mass is lost.  
What is this mass converted into? [1]

**Total Marks for Question Set 29: 7**

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