# NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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# DUE DATE:

**YEAR 11 ATAR PHYSICS**

**SEMESTER ONE 2015**

**CASE STUDY – NUCLEAR PHYSICS**

Choose one of the following topics, or a related topic, for your written report and have it checked by your teacher.

Research the topic and present one or two pages of hand-written research notes complete **with full referencing** on the topic. You will then be required to write an 800 – 1000 word case study **in class** based on your research, which should be **concise** and **informative**, for an audience of other Year 11 physics students. The language used in a report is **formal** and should be in the third person, past tense.

Present your case study *and r*esearch notes **along with this sheet** for marking purposes.

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| --- |
| **Possible Topics:** |
| PET Scans |
| Carbon Dating |
| Uranium-Lead Dating |
| Potassium-Argon Dating |
| Rubidium-Strontium Dating |
| Use of Iodine-131 |
| Use of Chromium-51 |
| Use of Technetium-99m |
| Use of Potassium-42 |
| Use of Xenon-133 |
| Use of Cobalt-57 |
| Use of Thallium-201 |
|  |
| **Other suitable topic as discussed with the teacher** |

**MARKING KEY:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Marks | 1 | 2 | 3 | 4 | 5 | Total |
| Content | Topic not discussed in a relevant and concise manner | Topic discussed and mostly relevant, some elements left unexplained | Topic discussed in a relevant and concise manner, and some physics explained | Topic discussed in a relevant and concise manner, and the physics explained | Topic discussed in a relevant and concise manner, topic fully explained in physics terms | /10 |
| Presentation | Untidy, disorganised, difficult to read. | Is difficult to read in places, doesn’t include a title, etc. | Includes a title, is adequately written and comprehensible. | Includes a title, reads well and is neatly written. | Includes a title, reads well, is neatly written, and well-presented. | /2.5 |
| Research  Notes | Inadequate or irrelevant notes, with no referencing | Inadequate or irrelevant notes, with some referencing | Clear notes, usually relevant, not in point form, but referenced  (includes a bibliography). | Clear and relevant notes, in point form with referencing  (a bibliography which shows a range of sources). | Clear relevant notes, in point form, well referenced  (a bibliography which shows a wide range of sources). | /7.5 |
| Communication | Very poor Grammar and choice of language, the lack of logical flow of ideas | Poor Grammar and choice of language, no logical flow of ideas | Satisfactory Grammar and choice of language, and a reasonably logical flow of ideas | Good Grammar and choice of language, the logical flow of ideas | Excellent Grammar and choice of language, the logical flow of ideas | /2.5 |
| Structure | Does not include the elements, introduction, body, conclusion, is not in formal language | Includes some of the elements, introduction, body, conclusion, is not in formal language and uses inappropriate headings | Includes all of the elements, introduction, body, conclusion, includes some formal language and usually uses appropriate headings | Includes all of the elements, introduction, body, conclusion, is usually in formal language and uses appropriate headings | Includes all of the elements, introduction, body, conclusion, is in formal language and uses appropriate headings | /2.5 |
| **Total mark** |  |  |  |  |  | /25 |