Unit 3 SAMS Mark Scheme: Space

Text A:

1. Which 4 planets are known as terrestrial planets? [1]

***Award 1 mark to pupils who list the following 4 planets: mercury, venus, earth, marks***

1. What are the main components of the planet Neptune? [1]
2. Hydrogen and helium
3. **Ammonia, water and methane**
4. Rock and metal
5. According to the text, where could you find the asteroid belt? [1]

***Between Mars and Jupiter***

Text B

1. Explain how the astronaut selection process has changed. [5]

*This question tests the ability to demonstrate verbal reasoning skills in context.*

***Award one mark for an explanation that suggests the following: More qualifications are needed and applicants must have a degree, 3 years of experience (or 1000 hours experience), pass a NASA physical exam and be a US Citizen.***

1. According to the text, what approximate percentage of those who are invited to the first round of interviews make it through to the second round of interviews?

[2]

***Approx 50% of the 120 called to first interview. (Around 60 candidates)***

1. In your own words summarise the requirements for becoming a NASA astronaut.

[5]

*This question tests the ability to synthesise and summarise information.*

Award **one** mark for each of the following summarised in the own candidate’s words, to **a maximum of**

**five.**

* ***Applicants must be US Citizens***
* ***A bachelor's degree in engineering, biological science, physical science, computer science or mathematics.***
* ***At least three years of related professional experience obtained after degree completion OR at least 1,000 hours pilot-in-command time on jet aircraft.***
* ***The ability to pass the NASA long-duration astronaut physical. Distant and near visual acuity must be correctable to 20/20 for each eye. The use of glasses is acceptable.***
* ***Astronaut candidates must also have skills in leadership, teamwork and communications.***

Text C:

1. What is the purpose of this text? [1]
2. **Educational**
3. Occupational
4. Personal
5. Public
6. What is meant by the phrase ‘orbital debris’? [1]

***Rubbish or unnecessary items left behind in space by previous space travel***.

Text D

1. What is the Darpa Report’s solution to the problem of orbital debris? [2]

***Introducing a device which would push out debris further to prevent further collisions.***

1. How does the writer make ‘space junk’ sound dangerous? [10]

*This question tests the ability to use inference and deduction skills to retrieve and analyse information from written texts and reflect on the ways in which texts may be interpreted.*

***Give 0 marks for responses where there is nothing worthy of credit.***

***Give 1-2 marks to those who identify and begin to comment on some examples of content that are persuasive, but struggle to engage with the text and/or the question.***

***Give 3-4 marks to those who identify and give straightforward comments on some examples of persuasive content. These responses will simply identify some facts and/or evidence.***

***Give 5-6 marks to those who explain how a number of different examples from the text persuade, and begin to analyse how language and techniques are used to achieve effects and influence the reader. Carefully selected examples are used to support comments effectively.***

***Give 7-8 marks to those who make accurate comments about how a range of different examples from the text persuade, and begin to analyse how language and techniques are used achieve effects and influence the reader. Carefully selected examples are used accurately to support comments effectively.***

***Give 9-10 marks to those who make accurate and perceptive comments about how a wide range of different examples from the text persuade, and provide detailed analysis of how language and techniques are used to achieve effects and influence the reader, and begin to analyse how language and techniques are used achieve effects and influence the reader. Subtleties of the writer’s technique are explored in relation to how the reader is influenced. Well-considered, accurate use of linguistic terminology supports comments effectively.***

1. Both texts C and D are about ‘space junk’. Compare how the texts present the issue.

[5]

***This question tests the ability to interpret themes, meaning, ideas and information in a range of texts and comparing and evaluating the usefulness, relevance and presentation of content.***

***Give 0 marks for responses where there is nothing worthy of credit.***

***Give 1 marks to those who identify basic similarities and differences in terms of the new dog owners’ experiences between the two texts.***

***Give 2 marks to those who identify and give a straightforward description of the similarities and differences between the two texts and the writers’ experiences***

***Give 3 marks to those who identify the similarities and differences between the two texts, and make some comparisons and / or contrasts about the experiences that the two writers have had.***

***Give 4 marks to those who make detailed comparisons and contrasts about the two owners and the experiences they have had with their dogs, with valid comments on the similarities and differences between the two texts and the writers’ reactions to what they have experienced.***

***Give 5 marks to those who make comparisons and contrasts that are sustained and detailed, showing clear understanding of the similarities and differences between the two texts including the writers’ experiences, attitudes and feelings.***

Text E

1. What are your thoughts and feelings about Tim Peak after reading this article? [5]

***Give 0 marks for responses where there is nothing worthy of credit.***

***Give 1 mark to those who identify and begin to comment on one or two superficial details with linked basic textual reference.***

***Give 2 marks to those who identify and give straightforward comments on some general impressions of Tristram supported by straightforward textual references.***

***Give 3 marks to those who begin to show some understanding of Tim and support comments with appropriate textual references.***

***Give 4 marks to those who make accurate comments about a range of impressions about Tim supported by well-selected textual references.***

***Give 5 marks to those who make accurate and perceptive comments about a wide range of impressions about Tim supported by convincing, well selected examples and purposeful textual references.***

1. What makes Tim Peak’s run so important? [1]

***He is the first man to complete the marathon in space.*** …………………………………………………………………………………………………………………………

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