

## Personal Statement: Part B

### Topics of Interest

(if you have selected “**Science & Applied Science**” as your first choice in “10. Desired Area(s) of Study” in online application form)

Applicant’s full name: \_\_\_\_\_

*Complete all sections in English. Respond to all questions. Part A and Part B should be written in an essay format. Although you may consult teachers, counselors, and friends, all final writing must be your own words. If we detect plagiarism, including material copied from websites, your application will not be considered any further. If you advance to the interview stage, you may be asked to answer questions or elaborate on your statement. Use 12-point font single-space (Times New Roman preferred).*

Explain any two of the following topics in one A4 sheet or within the specified frame:

- Why do artificial satellites not fall to earth?
- If you hang on a tree and jump vertically into a cart moving with certain speed, what will happen to the speed of the moving cart? If you stand on a vehicle moving in the same direction but with a higher speed than the moving cart and then jump into the cart, what about the change to the speed of the moving cart in this case?
- What are the causes of acid rain and how does acid rain affect your neighborhood trees, plants, public gardens and infrastructures?
- You can hear sound through a window even from a musical instrument that is not visible. Why can we hear sound around a corner but not see light? Explain the phenomena with reference to the characteristics of visible light waves and sound waves.
- Animal homeostasis is regulated by the coordination of the autonomic nervous system and endocrine system. Explain an example of homeostasis regulated by these two systems.

Note: Set and specify the detailed conditions necessary to explain the problem. Also, explain other phenomena that occur by the same principle.