SAUDI RESEARCH SCIENCE INSTITUTE

King Abdullah University of Science and Technology

SRSI Application- Helpful hints and guidelines for answering essay-type questions

This document has been prepared to provide guidelines and directions to you, the applicant, in answering the essay-type questions in various sections of the SRSI application form.

Your answers to these questions will help the selection committee to know you as a person and to understand your motivations, strengths and abilities, so please do give relevant details whenever possible.

The table given below describes some points and guidelines to consider as you prepare your answers to each question. These are merely suggestions; we encourage you to think of other points for your responses so that your answers can be as unique as you are.

You must limit your response to each of the essays to 250-500 words. Please prepare your answers in a word document so that word count can be done and then copy/paste them to the application.

Section –Computer Proficiency

Question	Guidelines and Points to Think about
Briefly describe any past experience with computer programming, modeling and/or data analysis.	**Computer programming** — Programming languages such as Visual Basic, Python, C, C++ and so on that you may know. — Applications or software where you may have created subroutines /macros — Algorithms you may have developed etc. **Modeling and/or data analysis** — Have you worked with statistical data such as preparing summary statistics, data distributions and statistical inferences? — Experiments in science (physics, chemistry or biology) which involved data collection and analysis, or error analysis — Curve fitting, linear regression to find a mathematical relation or equation between different physical quantities

Section - Research Interests

For Question 2 in Research Interests, you need to select four distinct fields and sub-fields. For example, four distinct field choices would be:

Research Field Choice 1: Computer science	Subfield 1: Parallel computing
Research Field Choice 2: Mathematics	Subfield 2: Numerical modeling
Research Field Choice 3: Physics	Subfield 3: Photonics
Research Field Choice 4: Chemistry	Subfield 4: Chemistry of new materials/smart materials

Question	Guidelines and Points to Think about
For each Research Field selected in Question 2, explain why the research	— How did you learn about this field (classes, seminars, work experience, personal experience)? — What things/experiences have stimulated and reinforced your interest?

Question	Guidelines and Points to Think about
field/Sub field interests you. Give examples of one/two interesting problems in the field?	— Given a chance, what would you like to accomplish in this field? — Give specific examples as you answer these questions. For example if your major field is "Biology" and subfield is "genetics", give specific examples of why you are interested, where did you learn about it and what caused your interest to grow over time.

Section –Essays

Question	Guidelines and Points to Think about
Describe your vision of your own academic and professional life five years from now.	— Describe your academic and professional goals for the next 3-5 years — For academic goals you may describe the field of study you would like to pursue for undergraduate degree and if you plan to go for graduate study and in what area. Please describe why you are interested in that field, who/what inspired you to choose that field of study and what you hope to achieve from higher education. — For professional goals describe your career aspirations. You may describe the type of work you foresee yourself doing, the kind of organization you'd like to work for, and the specific areas of your contribution. Please use the same guidelines to answer the next question in the application.
What extracurricular activities and/or hobbies demonstrate your interest and ability to undertake scientific or mathematical research?	— Abilities needed to undertake scientific or mathematical research include: good grasp of the subject matter, critical thinking, problem solving skills, creative thinking, ability to analyze positives and negatives of a situation, attention to detail and accuracy, persistence, capacity for hard work to name a few. — If you have participated in science/math fairs, Mawhiba, MiSK or other programs, Olympiads, etc. then provide details of those activities and **the level of your participation**. — Skills or personal characteristics you possess that would enhance your chances for success in science, technology, engineering and mathematics (STEM) fields and relate them to activities in which you have developed or utilized those skills and characteristics. Examples are: • Hobbies – such as reading, solving puzzles • Interactive video games • Designing web pages or other digital media design • Creative activities – arts, crafts, creative writing — If you have held leadership positions at school describe how they have helped you develop those abilities

Question	Guidelines and Points to Think about
Describe your involvement and participation in extracurricular and community activities that do not relate directly to science, technology, engineering or mathematics.	— Think of the activities that you do in your free time after school and on weekends — These can include participation in sports, participation in cultural events, community service, volunteer work, organizing events at your school and so on. Examples of community service can be fundraising for needy people, helping people with special needs, or sick children. Other examples can be membership of organizations like boy/girl scouts, involvement with U.N. activities, and so on.