Guidelines for preparation of general exam document

After the aims of the project have been approved by the thesis advisory committee, prepare your document abiding by these guidelines:

- Throughout the document, use an Arial, Helvetica, Palatino Linotype, or Georgia typeface, a black color, and a font size of 11 points or larger. A Symbol font may be used to insert special characters.
- Type density, including characters and spaces, must be no more than 15 characters per inch. Type may be no more than six lines per inch. Use 8 ½" x 11 size and at least one-half inch (NARROW) margins for all pages. No information should appear in the margins.

Specific Aims: 1 page max

State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved. List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.

Research Strategy: 12 pages

Organize the Research Strategy in the specified order. Start each section with the appropriate section heading - Significance, Innovation, Approach. Cite published data and provide the full reference in the Bibliography and References Cited section. The Research Strategy section, including tables, graphs, figures, diagrams, and charts, should be between 6 and 12 pages. These limits correspond to R21 and R01 NIH grant applications, respectively.

(a) Significance

- Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
- Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

(b) Innovation

Even not very innovative experiments can yield important results but it would be better if you propose to solve a problem in new ways. Consider answers to the following questions as definitions of innovation

- Do you propose a *novel* hypothesis?
- What *new* and *transforming* technologies does you research use?
- Are you developing *new* approaches in this project?
- Are you combining existing approaches in a *new* way?
- What *unique* resources have you developed or have access to?

(c) Approach

- Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Include how the data will be collected, analyzed, and interpreted.
- Describe the preliminary data you have obtained to demonstrate feasibility of the project and your research progress.
- Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
- If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high risk aspects of the proposed work.
- If you have multiple Specific Aims, you may address Significance, Innovation and Approach for each Specific Aim individually, or may address Significance, Innovation and Approach for all of the Specific Aims collectively.

References Cited: No page limit