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## APPENDIX A DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

### 1. Acronyms and Abbreviations

- **ESA:** End Semester Assessment (Implied from file name context).
- **ISA:** In-Semester Assessment.
- **LLM:** Large Language Model.
- **NLI:** Natural Language Inference.
- **NLP:** Natural Language Processing.
- **QA:** Question Answering.
- **RAG:** Retrieval-Augmented Generation.
- **SRN:** Student Registration Number.

### 2. Definitions of Key Terms

- **Context Conflict:** A risk factor where contradictions exist between different source documents, potentially confusing the model.
- **Context Scarcity:** A condition where the retrieved context is too sparse or brief, forcing the LLM to guess and fill in blanks from its internal memory.
- **Domain Mismatch:** A situation where retrieved documents are not semantically relevant to the user's specific query.
- **Hallucination:** A phenomenon where Large Language Models produce content that appears plausible but is factually incorrect, undermining reliability.
- **Proactive System:** A proposed system designed to efficiently predict the risk of hallucination *before* generating a response, rather than correcting it afterward.

- **Reactive Methods:** Current solutions that attempt to detect or fix hallucinations only after the text generation process is complete.
- **Retrieval-Augmented Generation (RAG):** A technique that grounds LLM responses in external documents to improve factuality.
- **Routing System:** An intelligent mechanism that assesses risk and dynamically directs queries to the most appropriate pathway (e.g., direct generation vs. RAG vs. human review).
- **SelfCheck GPT:** A specific reactive method that checks for consistency across multiple generated answers to detect hallucinations.