専門科目「システム情報学」の出題意図

システム情報学専攻では、森羅万象を認識と行動のシステム科学の視座から捉え、情報学と物理学を駆使して現象の解析を行い、新しい原理や方法論あるいは機構やシステムを創出し、諸分野での応用を可能とする教育・研究を進めています。本専攻での学修と研究には、その横断的性格から、情報、数理、物理、電気、機械の基礎的な理解と知識が求められます。専門科目試験では、「信号処理」、「電子回路」、「制御」に関する出題を行い、受験生の前述の能力を評価しました。受験生の専門性を引き出すために、これらの三つの分野に対応する大問のうち、二つを選択し解答する形式としました。各大問は、それぞれの分野における受験生の理解と知識の深さを問う内容としています。

Purpose of the Specialized Subject (Information Physics and Computing) Questions

In the Department of Information Physics and Computing, education and research are conducted from the perspective of systems science of recognition and control, aiming to understand a wide range of phenomena by leveraging both information science and physics. Through the analysis of such phenomena, the department seeks to create new principles, methodologies, mechanisms, and systems, thereby enabling applications across diverse fields. Due to the interdisciplinary nature of the department, students are expected to possess a fundamental understanding and knowledge of information science, mathematics, physics, electrical engineering, and mechanical engineering. In the specialized subject examination, questions were set in the areas of “signal processing,” “electronic circuits,” and “control,” in order to evaluate the aforementioned abilities of the applicants. To draw out each applicant’s expertise, the examination format required candidates to select and answer two out of the three major questions corresponding to these fields. Each major question was designed to assess the depth of the applicant’s understanding and knowledge in the respective area.