The goal of this examination is to test the candidate’s knowledge of fundamentals in the broad area of communication theory and systems. The examination will consist of 8 problems, of which a candidate must answer 4 problems of his/her choice. Each problem is worth 25% of the total mark and the candidate is expected to obtain a passing mark for every problem answered. The list of problem topics is given below.

A candidate must register for the written examination at the start of the semester (deadline for which is to be set by the department). At this time, the candidate must also submit to the department office (in consultation with the supervisor) a list of problem topics (chosen from the list given below) that he/she wishes to be examined on. All students registered for the candidacy exam in a given semester shall receive the same written exam paper.

The problems shall be prepared by a committee consisting of at least two faculty members.

- The duration of the examination will be 3 hours.
- The examination will be closed-book. No printed material is allowed. However, the candidates are allowed to bring two letter size, hand-written formula sheets. Photocopies are not allowed.
- A non-programmable calculator is allowed. No other electronic devices are permitted.

**List of Problem Topics**


Problem 7: Data Link Layer - Chapter 9, *Principles of Communications Networks and Systems*, Nevio Benvenuto and Michele Zorzi (Editors), John-Wiley and Sons (2011).


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1Updated May 2014.