National University of Singapore Department of Electrical & Computer Engineering

Midterm for

EE5139 Information Theory and its Applications

(Semester I, 2021/22) September 2021

Time Allowed: 1.0 hours

INSTRUCTIONS FOR CANDIDATES:

- This paper contains **THREE** (3) questions, printed on **THREE** (3) pages.
- The total number of marks is 25.
- You can consult the lecture notes, your own notes and all the homework problems and other materials distributed in class.
- You can also use the internet but you CANNOT communicate with anybody during the exam.
- Try to answer all questions. Not all questions are equally difficult. Invest your time wisely.
- The notation used is the same as in the lecture notes. All logarithms (log) are to the base 2.