ECS 452: In-Class Exercise # 8

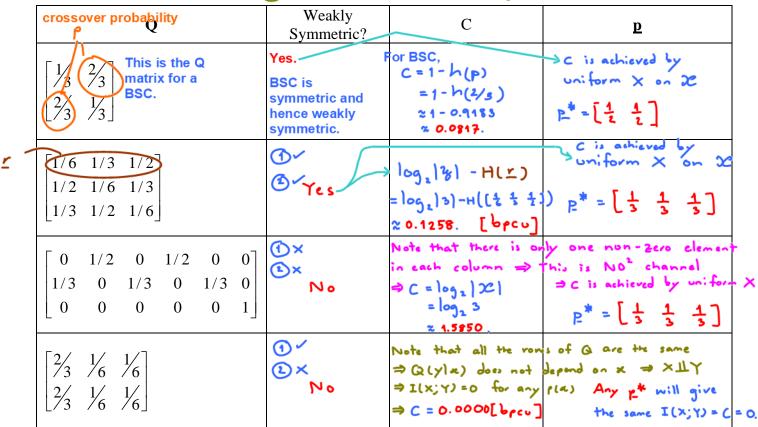
Instructions

- 1. Separate into groups of no more than three persons.
- 2. The group cannot be the same as your former group.
- 3. Only one submission is needed for each group.
- 4. Do not panic.

Date: 1 4 / 0 3 / 2017			
Name	ID (last 3 digits)		
Prapun	5	5	5
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1. For each of the following DMC's probability transition matrices **Q**, (i) indicate whether the corresponding DMC is weakly symmetric (Yes or No), (ii) evaluate the corresponding capacity value (your answer should be of the form X.XXXX), and (iii) specify the channel input pmf (a row vector **p**) that achieves the capacity.

(1) all the rows of Q are permutations of each other (2) all the column sums are equal



In this problem, |22 = 2.

Therefore, p can be any row vector of length = 2

[P1 P2]

that represents a prof which means

P1. P2. >0

P1 P2 = 0