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Courses » LDPC and Polar Codes in 5G Standard

Announcements

**Course**

Ask a Question

Progress

FAQ



## Unit 12 - Week 2 Assignments

**Register for  
Certification exam**

### Course outline

How to access  
the portalMatlab access  
and Learning  
ModulesWeek 0 :  
Introduction to  
Error Correction  
CodesWeek 0 : Linear  
Binary Block  
CodesWeek 0 :  
AssignmentJoin the 5G  
Revolution in  
IndiaWeek 1: LDPC  
Codes for 5GWeek 1: 5G  
StandardWeek 1:  
AssignmentsWeek 2: Building  
Blocks for

### Matlab Assignment 2

The due date for submitting this assignment has passed.

As per our records you have not submitted this  
assignment.**Due on 2019-02-25, 23:59 IST.**

Write MATLAB code for solving the following problems. Run the code with the required input and find answers to the questions below.

Consider a coded-BPSK transmission over an AWGN channel using a 5G NR-LDPC code with the 46 x 68 base matrix given in the text file *NR\_1\_1\_384.txt* ([click here](#)) and expansion factor 384. Let the received symbol vector be as given in the text file *received\_vector.txt* ([click Here](#)). Let  $\hat{m}_1$  be the decoded message bit vector using the minsum SISO iterative message passing decoder (without layering) and  $\hat{m}_2$  be the decoded message bit vector using the layered minsum SISO iterative message passing decoder (with each block row in the base matrix considered as a layer). The number of positions at which  $\hat{m}_1$  and  $\hat{m}_2$  differ

1) After 4 iterations of each of the respective decoders is \_\_\_\_\_

**No, the answer is incorrect.****Score: 0****Accepted Answers:***(Type: Range) 633,673***5 points**

2) After 8 iterations of each of the respective decoders is \_\_\_\_\_

**No, the answer is incorrect.****Score: 0****Accepted Answers:**

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**Assignments**

- ☐ Quiz : Assignment 2
- ☐ Quiz : Matlab Assignment 2
- ☐ Upload Matlab code 2
- ☐ Suggested assignment Week 2
- ☐ Assignment 02 Solutions

**Week 3****Week 3 Assignments****Week 4****Week 4 Assignment****VIDEO DOWNLOAD****Interaction session**

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**No, the answer is incorrect.****Score: 0****Accepted Answers:***(Type: Range) -1,1***5 points**[Previous Page](#)[End](#)