e-Yantra Robotics Competition (eYRC-2016)
Task 2 – Explorer Bot

This task is divided into two parts:

- Testing hardware with installed software
- Answer questions related to task

Please find the following folders within Task 2 folder that contains this Read Me file:

- First Folder is **Hardware Testing**
    - o Please find the following folders/files in this folder
        - Test files
            - Libraries
            - Python node
            - hardware_testing.hex
            - motor_testing_encoder.hex
            - Xbee.hex
        - Testing Instructions
            - ATmega2560
                - o Arduino_IDE_installation.pdf
                - o Making_board_for_power_supply_Motor_and_Quadrature_encoder.pdf
                - o Assembling Hardware for Testing.pdf
                - o Configuring_and_Testing_Xbee_Modules_with_XCTU.pdf
                - o NEX_AVR_USB_ISP_STK500V2.pdf
                - o Testing_Hardware.pdf
                - o problem_statement.pdf
            - Raspberry Pi
                - o Creating Bootable SD card for RPI.pdf
                - o ROS_interfacing_R-PI_PC.pdf
                - o WIFI Network connection and SSH.pdf
                - o Testing_Hardware.pdf
            - avrdude_script.sh
        - Testing_hardware_Instructions.pdf
    - o Open the file *Testing_hardware_Instructions.pdf* and follow the instructions to test all the hardware and complete the task as instructed.
- Second Folder is **Theory**
    - o Please find the following folders/files in this folder
        - Tutorials
        - Think and Answer
            - Questions.docx

Submission Instructions

The teams are expected to upload the solutions as follows:

Documents submission:

● Hardware Testing for microcontroller – Follow the instruction given in assembly_hardware_for_testing.pdf to create the schematic of interfacing.

● Think and answer- Answer the questions in the document Questions.docx and save the file.

● Save both the documents in <Team_ID>_*Task2* folder and compress it in .zip format. Then, upload <Team_ID>_*Task2.zip* in the Task2 tab of the portal.

Video link submission:

● Submit video link as instructed in Testing_hardware.pdf in the **Video Submission: Hardware Testing R-PI** submission box on the portal and

● Submit video link as instructed in problem_statement.pdf in the **Video Submission: Hardware Testing Microcontroller** submission box on the portal.

 Follow upload instructions in Task 2 tab on portal.

Warning:

• **IMPORTANT**: The document you submit should be in YOUR OWN WORDS. To avoid any copyright violations, you must NOT copy phrases directly from manuals or web.

• The team should NOT mail or upload the document anywhere else except on the portal.

• Teams failing to submit the document by the deadline will lose the marks for this task.

• e-Yantra WILL NOT entertain any request for extension of deadline for uploading the task.

• e-Yantra holds complete discretion to disqualify a team if any foul play is suspected.