



# UNIVERSITY OF RUHUNA

## Faculty of Engineering

End-Semester Examination in Engineering: July 2022

**Module Number: IS3307**

**Module Name: Society and the Engineers**

**[Three Hours]**

**[Answer all questions, Each question carries 12 Marks]**

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Q1. Discuss any **three** of the following : [ 250 words each ] [ 4x3 = 12 Marks ]

- To be a competent professional engineer, engineering graduates should be equipped with relevant engineering knowledge applicable to their respective disciplines.
- Engineers are problem solvers. Hence, the general public expects engineers to solve their problems without creating additional problems from engineering work.
- Engineers are leaders and have to work with various teams in the industry. Hence, engineering undergraduates should develop leadership and team working skills.
- With time, engineers will become top-level managers in their workplaces. So, good knowledge of Economics and Management is essential for engineers.

Q2. Describe any **three** of the following : [ 250 words each ] [ 4x3 = 12 Marks ]

- Engineers should be creative in problem-solving and designing.
- When designing engineering components, it is not enough to just satisfy technical specifications. There are a lot more other aspects to consider.
- Engineering problem-solving methodology has several steps to follow.
- The 5S concept can be used to arrange the space in the workplace, which will reduce most of the problems in various industries.

Q3. Comment on any **three** of the following : [ 250 words each ] [ 4x3 = 12 Marks ]

- Public funds are getting wasted on most of the projects in Sri Lanka. Engineers should not support and contribute to any such projects.

- b. Can engineers support the country's development by taking up leadership roles as president, prime minister or cabinet ministers in Sri Lankan government?
- c. Although few engineering students involve in dishonest academic acts like making fake signatures on behalf of their absent friends for lectures, they are the people who should be truthful and objective in their reports and engineering works in future.
- d. Professional Engineers should try their best to reduce environmental impacts from their engineering work.

Q4. Discuss any **three** of the following: [ 250 words each ] [4x3 = 12 Marks]

- a. Engineers should understand how their engineering works affect society to provide more service with less adverse effects.
- b. Engineers have a huge responsibility to maintain a healthy and safe workplace for their workforce.
- c. Engineers should incorporate the concept of sustainability into their works which has environmental, economic and social dimensions.
- d. Knowledge of legal matters relevant to engineering will help engineers perform well in the workplace with fewer problems.

Q5. Discuss any **three** of the following: [ 250 words each ] [4x3 = 12 Marks]

- a. Competent engineers have both technical knowledge and effective communication skills.
- b. Engineering students can utilize resources and opportunities available within their Universities to improve their communication skills and fluency in English.
- c. Preparing a presentation and delivering it effectively to an audience is not a simple and easy task. There are many things to consider.
- d. Professional Engineers should have updated knowledge about the latest trends in their field of practice. Therefore, engineers should develop lifelong learning and independent learning skills