



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 3 Examination in Engineering: March 2023

Module Number: IS 3307

Module Name: Society and the Engineers

[Three Hours]

[Answer all questions, Each question carries 12 Marks]

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. They are not the creators of additional problems to general public.
- Leadership and team working skills are essential for engineers.
- Engineers will become engineering managers in their workplaces with the time. So, good knowledge of Economics and Management is essential for engineers.

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

- Creativity is essential for design engineers.
- When designing engineering components, it is not enough to just satisfy technical specifications. There are a lot more other aspects to consider.
- Engineers should solve problems in a systematic way. Engineering problem-solving methodology (8D) has several steps to follow.
- The 5S is a concept that can be used in the personal and professional life of engineers to save the time.

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

- Ethics is essential for engineers.
- Can engineers support the country's development by taking up leadership roles as president, prime minister or cabinet ministers in Sri Lankan government?

- c. Public funds are getting wasted on most of the projects in Sri Lanka. Engineers should not support and contribute to such projects.
- 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 prevent the adverse effects of their engineering works to the society.
- 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 will help engineers to perform well in the workplace.

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 should identify their weaknesses in the communication process 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.