



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 1 Examination in Engineering: May 2022

Module Number: IS1301

Module Name: Communication for Engineers

[Three hours]

[Answer all questions in the answer booklet provided]

Q1.

- a) Complete the following text using a/an or the (leave the space blank to indicate no article)

[5 Marks]

There has never been (i) _ more exciting time to produce (ii) _ new dictionary. Everything is changing and expanding: (iii) _ English language itself, (iv) _ technology that helps us to describe it, and (v) _ needs and goals of those learning and teaching (vi) _ English. (vii) _ 1980s saw (viii) _ development of (ix) _ first large corpora (special collections) of (x) _ English text.

- b) Complete the text with the correct form of tense. Decide whether to use the active or the passive voice.

[5 Marks]

The New York Police Department (i) _ just _ (announce) that the Portnoy's Bank (ii) _ (rob) yesterday afternoon. Two men in masks (iii) _ (enter) the bank at 4.30 with guns in their hands. Both the customers and the bank staff (iv) _ (ask) to lie down on the floor immediately and one of the bank clerks (v) _ (made) to fill the robber's bag with money. After that, the two men (vi) _ (leave) the bank quickly and hurried to their car. The police officer Jason Gregson says that more than 200,000 dollars (vii) _ (steal) yesterday, but luckily nobody (viii) _ (injure). Jason Gregson believes that the robbers (ix) _ (find) sooner or later. The bank (x) _ (close) since yesterday and it will be open again in two days.

Q2.

Read the passage and answer the questions given below in complete sentences.

1. In 2013, the world's population of humans hit 7 billion. In the same year, the number of mobile phones in the world was 6.8 billion. This means that there were that many entry points to the internet. Accessibility to mobile phones has helped the farming and agricultural community all over the world.

2. Eric Owandu, a farmer in Kenya participated in a regional trial of a text messaging service for farmers. The service gave Eric advice on crop management, the different maize varieties available, the right fertilizer to use, and other such relevant data. In his own words, "This service has helped me a lot to improve my production and profits." A clear advantage of the service was that important information reached farmers faster than the usual personal visits by agriculture advisors. The farmers were also able to time their planting at the correct time based on the advice sent to them. This advice was always based on expert analysis of the weather and climate patterns and many other parameters. Much of this is information that the farmers did not have before.

3. Since 2011, rice farmers in the Philippines have been receiving free fertilizer guidelines via their mobile phones. A simple call on a toll-free number gave them advice on the right type and quantity of fertilizer to use on their crops, as well as the right timing of their fertilizer programmes. The information given to farmers helped to maximize production and profits and also to reduce wastes.

4. A similar mobile phone application launched in Indonesia helped more than 300 rice farmers across nine provinces in the country. Farmers in all the provinces increased their rice yields and earnings by making the recommended changes to their fertilizer regimen. An added benefit of the programme is information retrieval from the fields, especially about the occurrence of pests and diseases. This helps to provide early intervention when needed.

5. India has launched a comprehensive agro-advisory service for smallholders using mobile device technology. Small-scale dairy, poultry, and goat farming have been especially targeted at the initial implementation of the programme. These initiatives promote the use of the mobile telephone to help farmers maximize their resources. Mobile phones are used to share all kinds of information relevant to farmers.
6. Kerala is a small state in the southeast corner of India. It has seen an amazing impact on the use of mobile phones among fishermen. Kerala has successfully eliminated 100% waste of throwaway fish at the port markets.
7. US farmers are well ahead of other farmers around the world in the use of mobile phone technology in their farming enterprises. Computer technology provides them with accurate data on the weather, irrigation scheduling, market prices, and many other management tools.
8. With the advent of mobile phones, farmers no longer look to signs in nature to plan their farming activities. There were many quirky and strange parameters that farmers used to understand the weather. Some looked in the direction of the wind. Others observed the striations in clouds. The most comical was killing a goat and studying patterns on its intestines. Today, the same farmer will be looking in different directions simply to find out in which direction his mobile phone signal is best.
9. In a futuristic scenario, a farmer inspecting his fields may take a photo of an unfamiliar insect and upload it to a relevant authority. The authority may ask him to make a check to see how widespread the infestation is. Then he would be asked to send them the GPS coordinates of the area infested. He would then be connected to a trustworthy pest control company that can handle the problem. The company would give him a quotation on the cost of the necessary pesticide application in the area. The farmer would confirm the order and make payment using his mobile. As he drives away, the pest control company would send a drone with the necessary quantity of pesticide and spray the area. By this time, the farmer himself would be in some faraway corner of his field attending to other matters.

It is noteworthy that all the technology mentioned in the scenario is already available. It is only that they have not been employed in the way described.

a) Answer the questions below.

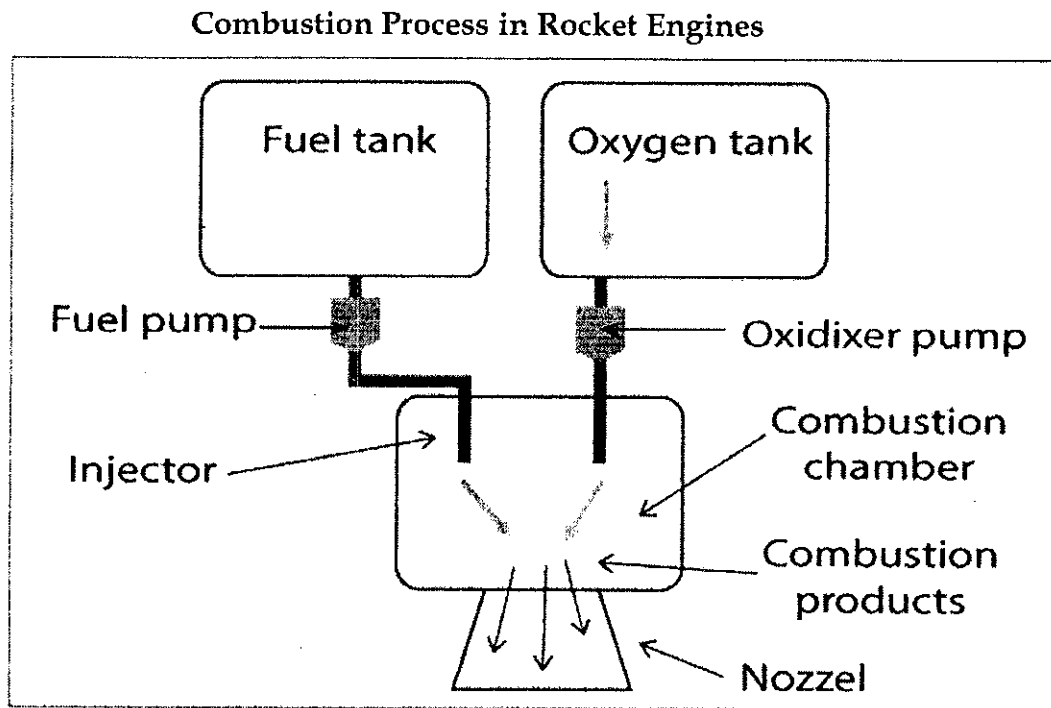
[10 Marks]

- i.) From paragraph 1, in your own words explain the difference between farming and agriculture.
- ii.) From paragraph 2, what advice did Eric Owandu get on his mobile phone?
- iii.) How did the service help Eric?
- iv.) From paragraph 3, when was the mobile phone service for rice farmers started in the Philippines?
- v.) What were the advice that the rice farmers were given?
- vi.) From paragraph 7, what information do US farmers get with computer technology?
- vii.) Mention two strange methods that farmers used to decide on planting times.
- viii.) In your opinion what is the foremost characteristic that benefits farmers in the coordinated use of mobile phones? (Characteristic and the reason)
- ix.) Based on the passage, write a summary of:
 - a) The benefits that farmers can enjoy by being in constant communication with relevant authorities.
 - b) How this could change the face of farming.

Q3.

- a) The diagram below shows the structure of a basic rocket engine. Summarize the information by selecting and reporting the main features, and make comparisons where relevant. You should write at least 150 words.

[5 Marks]

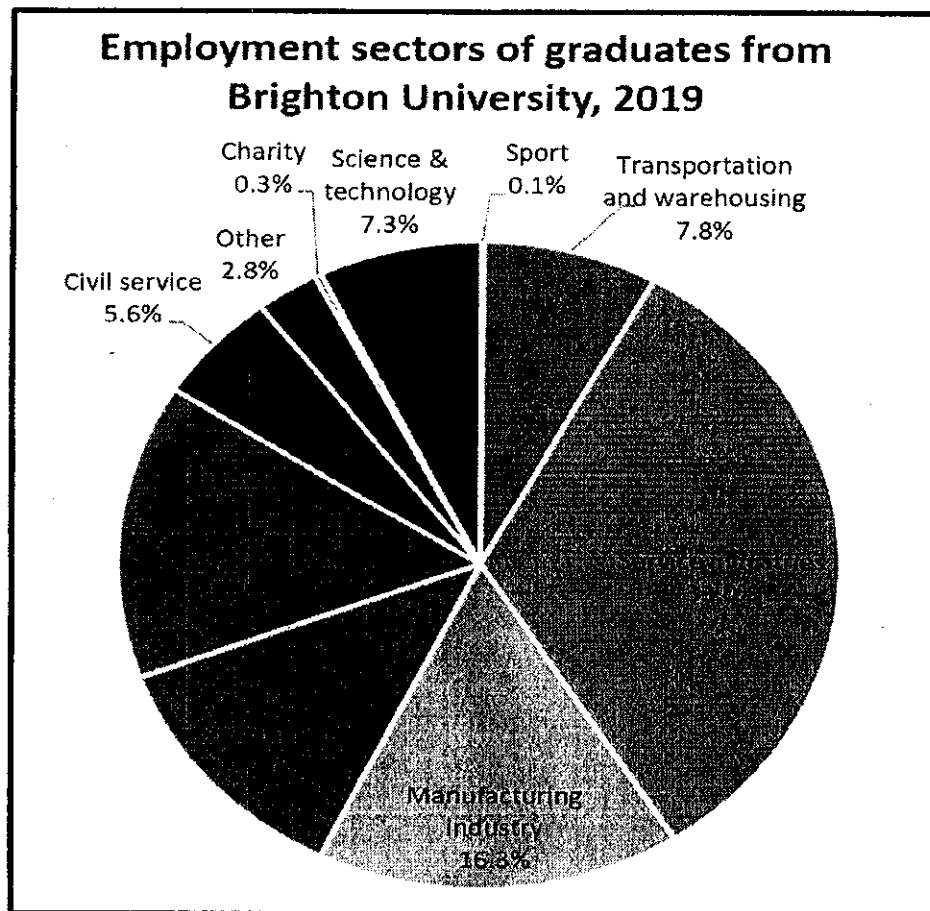


(Source: <https://essayforum.com/writing/process-basic-rocket-engine-1-78776/>)

Figure 01

- b) The chart below shows the proportions of graduates from Brighton University in 2019 entering different employment sectors. Comment and analyze the information given in the pie chart. Write at least 150 words.

[5 marks]



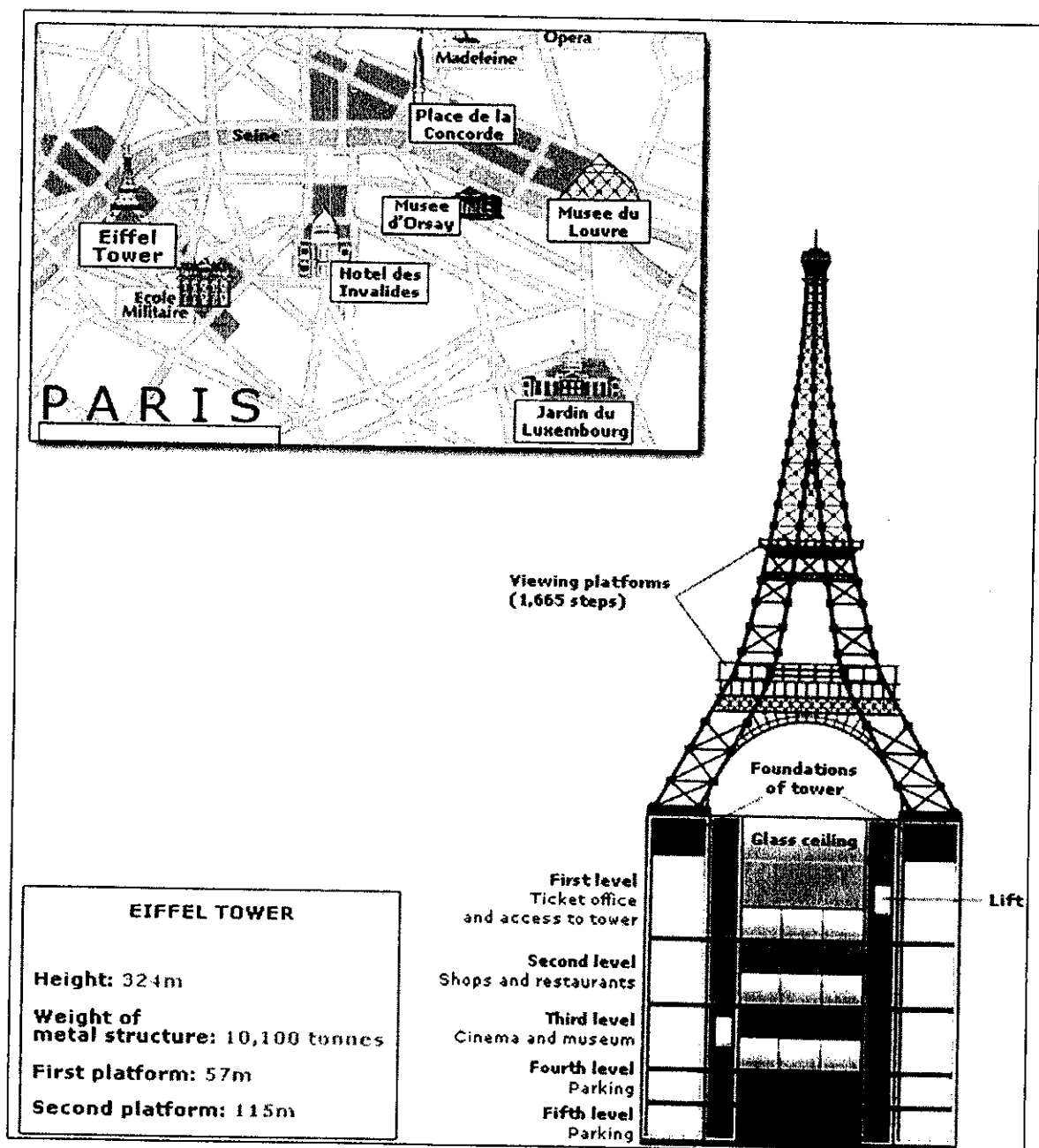
(Source: https://www.english-exam.org/academic_writing_samples_task_1/1153)

Figure 02

Q4.

The diagram below gives information about the Eiffel Tower in Paris and an outline project to extend it underground. Write a report for a university lecturer describing the information shown. You should write at least 200 words.

[10 Marks]



(Source: https://www.english-exam.org/academic_writing_samples_task_8/1189)

Figure 03

Q5.

Write short descriptions on the following topics. (80 words each)

[10 Marks]

- a) How can critical thinking skills be improved?
- b) Importance of problem-solving for engineers.
- c) Engineers shall hold paramount on safeguarding the health, safety, and welfare of the public.
- d) Lifelong learning at work.
- e) How to improve listening skills?

Q6.

Select **one** of the topics given below and write an essay. Write about 250 words.

[10 Marks]

- a) Is online education better than traditional education?
- b) Do we still need to bother with environmental protection? What can we do every day to change the situation?
- c) Technology and its intimacy.

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