

UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 1 Examination in Engineering: October 2019

Module Number: IS1301

Module Name: Communication for Engineers

[Three hours]

[Answer all questions in the answer booklet provided]

Q1.

a) Complete the following text by inserting a/an/the or (0) in each blank.

[5 Marks]

THE ORIGINS OF @

Giorio Stabile, (i) ___ professor of (ii) ___ history at La Sapienza University in Rome, has demonstrated that (iii) ___ @ sign, now used in email addresses, was actually invented 500 years ago. Professor Stabile has shown that (iv) ___ @, now (v) ___ symbol of (vi) ___ internet, was first used by (vii) ___ Italian merchants during (viii) ___ sixteenth century. He claims that it originally represented (ix) ___ unit of volume, based on (x) ___ large jars used to carry liquids.

b) Complete the following sentences by using the most suitable tense for the verb in brackets.

[5 Marks]

- i.) Home ownership ___ (rise) steadily since 1950.
- ii.) DIY ___ (stand for) do it yourself.
- iii.) Last year they ___ (sell) nearly five million books.
- iv.) By the time he died in 1987 he ___ (take out) over 50 patents.
- v.) In ten years most people in the world ___ (have) a mobile phone.
- vi.) At the moment the class ___ (work) on an engineering project.
- vii.) The professor ___ (give) a lecture when the earthquake happened.
- viii.) Lee (1965) ___ (dispute) Sakamoto's theory.
- ix.) In the last six years inflation ___ (fall) sharply in Europe.
- x.) Raja ___ (exhibit) the new invention in the next Robotic exhibition.

Q2.

Read the passage and answer the questions given below.



A Revolution in Knowledge Sharing

The pressure to transform our institutions of learning continues. Virtually every enterprise and institution is grappling with the disruptions and opportunities caused by Web-enabled infrastructures and practices. New best practices, business models, innovations, and strategies are emerging, including new ways to acquire, assimilate, and share knowledge. Using technologies that are already developed or that will be deployed over the next five years, best practices in knowledge sharing not only are diffusing rapidly but will be substantially reinvented in all settings: educational institutions, corporations, government organizations, associations, and nonprofits. But institutions of learning are in a unique position to benefit from an added opportunity: providing leadership in e-knowledge.

E-knowledge finds expression in many shapes and forms in a profoundly networked world. It is not just a digitized collection of knowledge. E-knowledge consists of knowledge objects and knowledge flows that combine content, context, and insights on application. E-knowledge also emerges from interactivity within and among communities of practice and from the troves of tacit knowledge and tradecraft that can be understood only through conversations with knowledgeable practitioners.

E-knowing is the act of achieving understanding by interacting with individuals, communities of practice, and knowledge in a networked world. E-knowledge commerce consists of the transactions based on the sharing of knowledge. These transactions can involve the exchange of digital content/context and/or tacit knowledge through interactivity.

Transactable e-knowledge can be exchanged for free or for fee. E-knowledge is enabling not only the emergence of new best practices but also the reinvention of the fundamental business models and strategies that exist for e-learning and knowledge management. E-knowledge is technologically realized by the fusion of e-learning and knowledge management and through the networking of knowledge workers.

Transactable e-knowledge and knowledge net-working will become the lifeblood of knowledge sharing. They will create a vibrant market for e-knowledge commerce and will stimulate dramatic changes in the knowledge ecologies of enterprises of all kinds. They will support a "Knowledge Economy" based on creating, distributing, and adding value to knowledge, the very activities in which colleges and universities are engaged. Yet few colleges and universities have taken sufficient account of the need to use their knowledge assets to achieve strategic differentiation.

In "*It Doesn't Matter*," a recent article in Harvard Business Review, Nicholas G. Carr endorsed corporate leaders' growing view that information technology offers only limited potential for strategic differentiation. Similar points are starting to be made about e-learning, and knowledge management has been under fire as ineffectual for some time.

The truth is that e-learning and knowledge management can provide strategic differentiation only if they drive genuine innovation and business practice changes that yield greater value for learners. Carr's article provoked a host of contrary responses, including a letter from John Seely Brown and John Hagel III. Brown is well-known for his insights into the ways in which knowledge sharing can provide organizations with a solid basis for strategic differentiation.

(Source adapted from: <https://takeielts.britishcouncil.org/take-ielts/prepare/free-ielts-practice-tests/reading-academic/section-1>)

a) Answer the questions below.

[4 Marks]

- i.) Does e-knowledge limits only to digitalized collection of knowledge? Discuss.
- ii.) What is e-knowledge commerce?
- iii.) What are the new modes of invention of e-knowledge?
- iv.) What are the main roles played by Transactable e-knowledge and knowledge net-working?

b) Read the article and complete the summary below. For questions i-iv, choose NO MORE than TWO WORDS for each answer.

[2 Marks]

Thanks for the advent of computer, learning institutions today are providing new ways of acquiring knowledge, through tools that are i) ___ fast and which are being already ii) ___ in all fields and settings, despite the, iii) ___ the process may entail, which all institutions are all now iv) ___.

c) For the questions below write your answers in your answer script whether:

YES if the statement agrees with the views of the writer

NO if the statement contradicts the views of the writer

NOT GIVEN if it is impossible to say what the writer thinks about this

[04 Marks]

i) E-knowledge is primarily based on practices used in business. ()

ii) Educational institutions can be leaders in knowledge net-working. ()

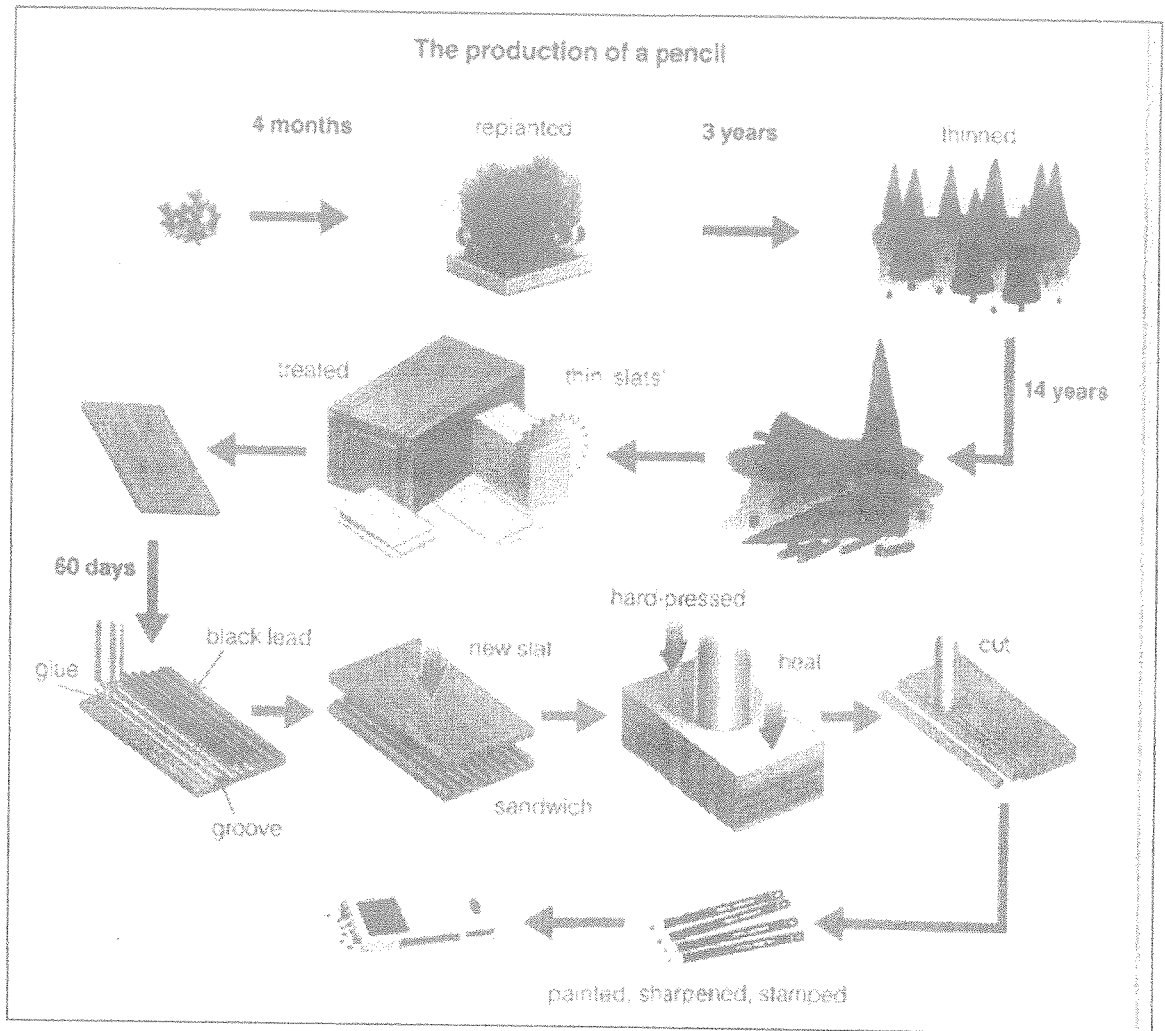
iii) Communities of practice are one source of E-knowledge. ()

iv) The key to the success of knowledge management and e-learning is offering strategic differentiation. ()

Q3.

The diagram below shows the production process of a pencil. Summarize the information by selecting and reporting the main features, and make comparisons where relevant. You should write at least 150 words

[10 Marks]



(Source:<https://essayforum.com/writing/process-production-lead-pencil-78776/>)

Q4.

Read Passage A and Passage B carefully. Use information from both passages to describe the toxic danger of new cars and how these can be avoided. Write a summary by using 100 words. At the end of your summary count the number of words. [10 Marks]

Passage A

Australian scientists warned drivers and passengers of new cars that danger lurks within their brand new vehicles. It is not the soft fabric or leather that encases comfortable bucket seats, or the shining new dashboard, or the designs of the sporty steering wheel that harbor the danger. It is the reassuring smell of the new car that spells danger. The odor actually contains high levels of toxic air emissions that can make the driver and passengers ill.

A research organization in Australia conducted a comprehensive research on three cars. Drivers were asked to keep logs on how they felt and reacted to the lush interiors of their cars. The researchers also carried out observations on the reactions of the drivers and at the same time interviewed them.

Anecdotal evidence was therefore carefully gathered and analyzed. The results revealed that the very smell of a new car that enthralls the new owner, contains high levels of toxic emissions. What is even more alarming is the fact that these toxic emissions are present in cars even after 6 months or longer of leaving the showroom. Anecdotal evidence during the study revealed that drivers were becoming ill when they drove their new cars. A lawyer reported being ill with headaches, lung irritation, and swellings for several days after collecting a new car and driving it for only 10 minutes.

Passage B

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is Australia's main scientific body. They conducted a research on the toxicity of the interior of new cars over a period of two years. Steve Brown, the head of the CSIRO's air quality control research unit draws a parallel between the home and the car. He says, "Just as air inside our homes and workplaces is often much more polluted than

the air outside, so sitting in your new car can expose you to levels of toxic emissions that are many times beyond health guideline goals."

The toxic emissions contain many chemicals and they include for example, benzene, acetone, ethylbenzene, and xylene isomers. The effects of each are far from benign. Benzene is a cancer-causing agent, acetone is a mucosal irritant, ethylbenzene is a systemic toxic agent, and xylene isomers is a fetal development toxic agent.

So what are the precautions that new car owners have to take? Brown pointed out in a statement that the remedy was simple. "To avoid some exposure to this toxic cocktail, people who buy new cars should make sure that there is plenty of outside air entering the vehicle while they drive it for at least 6 months." The implications are clear. Drivers should refrain from using their car air-conditioners and drive with their windows rolled down.

(Source :<https://www.englishdaily626.com/summary.php?036>)

Q5.

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

[10 Marks]

- a) Continuing Engineering Education (CEE)
- b) Verbal and non-verbal communication
- c) Importance of leadership to be an engineer
- d) Skills of a team member
- e) Presentation skills

Q6.

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

[10 Marks]

- a) In what way the education system can be improved by the government?
- b) Importance of soft skills in life.
- c) Pros and cons of advancement of technology.