



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 1 Examination in Engineering: July 2017

Module Number: IS1302

Module Name: Communication for Engineers

[Three hours]

[Answer all questions in the answer sheet provided]

Q1.

- a) Complete the sentences with the correct form of the verb in brackets. [10 Marks]
- Students _ (stage) a drama last Monday and it was really interesting.
 - Mr. Ranasighne _ (work) at a private firm in Colombo these days.
 - The detectives _ (conclude) the evidence to be inconclusive yesterday.
 - There _ (be) many students who do part time jobs while studying in the university.
 - The lecturer _ (give) an assignment tomorrow.
 - Hafeez _ (smoke) around 20-30 cigarettes every day. In fact, he is a chain smoker!
 - The pilgrims _ (observe) the ruins of the ancient capital when they heard the strange noise.
 - In 2004, the government _ (strive) to make dramatic changes in the constitution.
 - Rajesh says that he _ (want) the report now itself.
 - I was a bit worried, because I thought I might _ (miss) my train.

- b) Rewrite the following sentences changing them from active voice to passive voice. [10 Marks]
- Nimal suspends a 1kg mass from a light bar.
 - The students measured the distance between the mass and the fulcrum.
 - We can calculate the moment of the force in two ways.
 - Ajith and Sadesh are measuring the extension in the steel bar.
 - Saltwater eventually corroded the metal beams.
 - The construction company will accept the proposal.
 - Two other forces act on the roller.
 - We called the third force the normal reaction.
 - To keep the force in equilibrium we must apply a force.
 - Galileo and Newton have investigated a force of attraction exists in everybody in the universe.

Q2.

a) Read the passage and answer the questions given below.

[10 Marks]

Communication is defined as the exchange of information, ideas, feelings and thoughts. Evidence indicates that communication skills are what mainly helped humans evolve beyond other species and develop into the advanced societies of earth today. English has been widely accepted as the dominant language used for communication in the world. It is cited as the major language of international business, diplomacy and science. It is the prime means of communication, and can often serve as the global language between two people from two different cultures, where English is not the native tongue.

Today private sector organizations are in search of the most suitable graduates for executive posts and mere subject knowledge won't guarantee one a good job. The recruits very often have to deal with the global clientele directly. Thus graduates are not considered employable when they only possess the necessary qualification, learning attitude and expertise in the field where they want to seek employment. The reality is that companies consider the candidate's ability or inability to communicate fluently in English as one of the major selection criteria. Poor English communication skills in employees is the most frequently cited cause of discontent within organizations and it would be reasonable to expect that employers are seeking to appoint people with good communication skills. It is no surprise, then, that people often cite "excellent communication skills" as one of their key qualities on their CV.

Research findings indicated that personnel in private organization usually 75 percent of their daily working time on communication through the four skills in English: reading, writing, listening and speaking. Effective communication skills in English are essential for the success of an organization. A recent newspaper report said that of every hundred interviews, only five candidates qualified for employment. It is not that they lacked in educational qualifications, but they lacked communication skills. Communication skills are as important as academic qualification for graduates aiming at a bright career. Poor communication skills, low confidence levels and improper body language have bad results in the job race.

A good command in English plays a vital role in the recruitment process. Effective communication centers round the usage of words, speed of delivery of words and body

language. Using the right tools to communicate the right message at the right time can salvage a crisis and motivate people to work towards success. Thus it is high time to accept the importance and necessity of possessing good communication skills with a professional degree.

Source: adapted from
http://worldwidejournals.com/ijer/file.php?val=April_2014_1396445084_131fa_72.pdf

- i.) What played a main role in development of mankind?
- ii.) Why English is accepted as the dominant language of communication in the world?
- iii.) Name four main requirements which make graduates employable?
- iv.) Name two qualities, other than good communication skills, a graduate should possess to win the job race.
- v.) Write two skills you have to develop for effective communication skills.

b) State whether True or False in questions

[05 Marks]

- i.) English is the most used language for international communication.
- ii.) Subject knowledge is the only criteria required to find a good job.
- iii.) Less than half of the daily working time is spent on communication.
- iv.) Only five out of 100 applicants for jobs are selected for employment.
- v.) Body language too is an effective device in communication.

c) Match the words with the meanings. The first one is done for you.

[05 Marks]

Words	Meanings
Communication	i
Dominant	
Recruits	
Clientele	
Discontent	
Salvage	

- i.) The exchange of information, ideas, feelings and thoughts.
- ii.) The act of saving something.
- iii.) More important and powerful than most or all others.
- iv.) The group of people who are regular customers at a particular business.
- v.) A feeling of unhappiness or disapproval.
- vi.) Personnel who have recently joined a company, organization etc.

Q3. Read the following passage and write a summary in 100 words.

[10 Marks]

Pollution in its many forms

One of the most serious problems facing the world today is pollution that is the contamination of air, land and water by all kinds of chemicals such as poisonous gases, waste materials and insecticides. Pollution has upset the balance of nature, destroyed many forms of wildlife and caused a variety of illnesses. It occurs in every country on earth but is most prominent in industrial countries.

Breathing polluted air is very common to most people, especially those living in cities. In heavily industrialized areas, fumes from car exhausts and thick smoke from factory chimneys can be seen darkening the atmosphere. This would reduce visibility and make the air unpleasant to breathe. Large scale burning of fossil fuels, such as coal, gas and oil, in homes and industries also produces a wide range of pollutants. This includes Sulphur dioxide which damages plants, destroys buildings and affects health. Other known pollutants are carbon monoxide, nitrogen dioxide and dirt particles. The fumes produced by car exhausts and factories would normally disperse in the air, but sometimes they are trapped by air layers of different temperatures. The result is a fog-like haze known as smog. Britain and some other countries introduced smokeless zones and smokeless fuels some years ago and smog no longer occurs, but it still remains a very real problem in Japan and the United States.

The motor car is a major source of pollution. In densely populated cities where there are millions of cars on the roads, the level of carbon monoxide in the air is dangerously high. On windless days, the fumes settle near ground level. Fumes from car exhausts also pour out lead and nitrogen oxide.

The testing of nuclear weapons, and the use of atomic energy for experimental purposes in peaceful times have exposed some people to levels of radiation that are too high for safety. Crop-spraying by aircraft also adds chemical poisons to the air.

Domestic rubbish is another very serious pollution problem. The average American citizen throws away nearly one ton of rubbish every year. Much of this consists of plastic, metal and glass packaging that cannot be broken down naturally. Instead it lies with old refrigerators, broken washing machines and abandoned cars in huge piles for

years without decaying. Each year the problem of rubbish disposal becomes more serious.

Sewage causes another form of pollution. Most of it flows straight into rivers, where it is broken down by tiny bacteria. The bacteria need oxygen for this process, but because of the vast quantities of sewage, the bacteria uses up all available oxygen in the water, causing the death of countless fish and other river life. Rivers provide a very convenient outlet for industrial waste, as well as being a source of water for cooling in nuclear and other power plants.

Like rivers, oceans have been used as dumping grounds for waste of all kinds. One of the recent sources of sea pollution is oil and millions of tons of it spill into the sea each year. Oil not only pollutes beaches, it also kills fish and seabirds.

Source adapted from: <http://www.englishdaily626.com/summary.php?033>

Q4.

a) Find all the proper nouns in the text below and capitalize them. The first four are done for you.

e.g. Australian/the Sydney Morning Herald

[10 Marks]

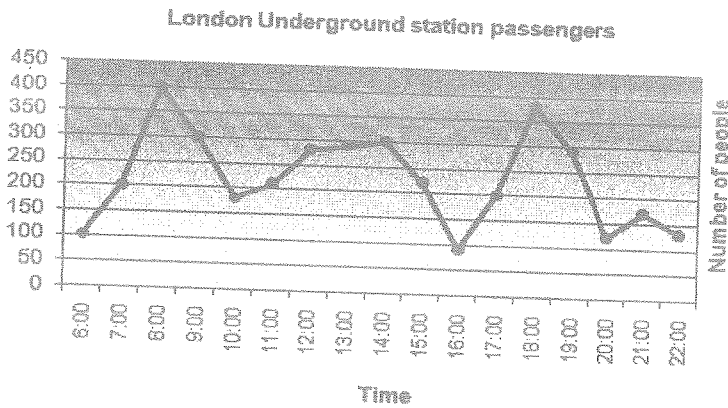
A report in an Australian daily newspaper, the Sydney Morning Herald (Tuesday May 28), reveals that Sydney's air is fast becoming unfit to breathe. Researchers at the University of Sydney claim that the benefits ensuing from the removal of lead from petrol have been largely offset by an increase in other harmful air pollutants.

Research conducted by Dr. Michael Dawson and Dr. Brent Young of the University's Chemistry Department, and partly based on surveys taken in Britain, concludes that levels of benzene in the air are now a major health concern. An environmental consultant, Mr. Noel Child, believes that breathing Sydney's air is equivalent to smoking ten cigarettes a day.

However, according to the New South Wales Environment Protection Authority, current levels of benzene in the city's air are not a cause for concern and air pollution levels are stable. The position taken by the Authority would seem to be highly questionable given that another government department, the NSW Roads and Traffic Authority, disclosed in

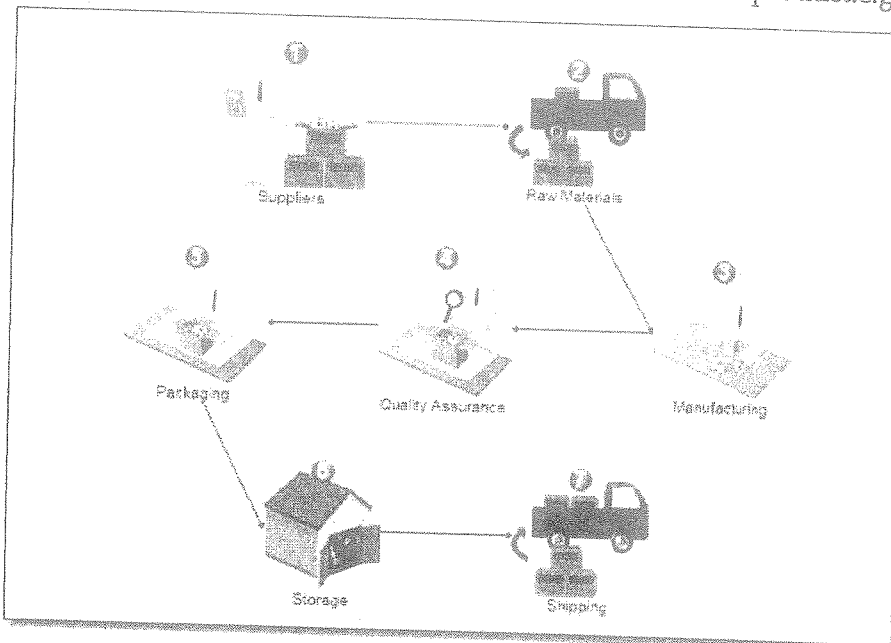
the same report that there had been a 12-15% increase in traffic on sydney's major roads in the past year. (*international environment association -july 1998*)

b) Describe the following graph by using 150 words.



[10 Marks]

Q5. Describe the various stages of the production process of a product labeled as 1 to 7 in the diagram given below. (You must decide on a suitable product.e.g. Soap production)



[10 Marks]

(1. Suppliers 2. Raw materials 3. Manufacturing 4. Quality assurance 5. Packaging 6. Storage 7. Shipping)

Q6. Select one of the topics given below and write an essay. Write about 250 words.

- a) To what extent is nuclear technology a danger to life on earth and what are the benefits and risks associated with its use? [20 Marks]
- b) Importance of time management for a university student.
- c) Education in future.