



**SLIATE**

**SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION**  
(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

A IA 35  
35 29 b

**Higher National Diploma in Building Services Engineering**  
**Higher National Diploma in Engineering (Civil/Electrical/Mechanical)**  
**Higher National Diploma in Food Technology**  
**Higher National Diploma in Information Technology**  
**Higher National Diploma in Technology (Agriculture)**  
**Higher National Diploma in Quantity Surveying**

**English for Technology II - Paper B**  
**First Year Second Semester Examination 2017**

**Answer four questions only**  
Question 01 is compulsory

No. of questions : **05**  
No. of pages : **05**  
Time : **02 Hours**

**Question 01**

Write an essay on one of the following with not less than 300 words.

1. Advantages and disadvantages of privatising higher education.
2. Inter- ATI Sports meet create unity among students.
3. SLIATE is one of the Higher Educational Institutes available for higher education.

**(25 Marks)**

**Question 02**

**Read the following paragraph and answer the questions given below.**

**HELIUM'S FUTURE UP IN THE AIR**

**A** In recent years we have all been exposed to dire media reports concerning the impending demise of global coal and oil reserves, but the depletion of another key nonrenewable resource continues without receiving much press at all. Helium – an inert, odourless, monatomic element known to lay people as the substance that makes balloons float and voices squeak when inhaled – could be gone from this planet within a generation.

**B** Helium itself is not rare; there is actually a plentiful supply of it in the cosmos. In fact, 24 percent of our galaxy's elemental mass consists of helium, which makes it the second most abundant element in our universe. Because of its lightness, however, most helium vanished from our own planet many years ago. Consequently, only a minuscule proportion –

0.00052%, to be exact – remains in earth's atmosphere. Helium is the byproduct of millennia of radioactive decay from the elements thorium and uranium. The helium is mostly trapped in subterranean natural gas bunkers and commercially extracted through a method known as fractional distillation.

**C** The loss of helium on Earth would affect society greatly. Defying the perception of it as a novelty substance for parties and gimmicks, the element actually has many vital applications in society. Probably the most well-known commercial usage is in airships and blimps (non-flammable helium replaced hydrogen as the lifting gas *du jour* after the Hindenburg catastrophe in 1932, during which an airship burst into flames and crashed to the ground killing some passengers and crew). But helium is also instrumental in deep-sea diving, where it is blended with nitrogen to mitigate the dangers of inhaling ordinary air under high pressure; as a cleaning agent for rocket engines; and, in its most prevalent use, as a coolant for superconducting magnets in hospital MRI (magnetic resonance imaging) scanners.

**D** The possibility of losing helium forever poses the threat of a real crisis because its unique qualities are extraordinarily difficult, if not impossible to duplicate (certainly, no biosynthetic ersatz product is close to approaching the point of feasibility for helium, even as similar developments continue apace for oil and coal). Helium is even cheerfully derided as a “loner” element since it does not adhere to other molecules like its cousin, hydrogen. According to Dr. Lee Sobotka, helium is the “most noble of gases, meaning it’s very stable and non-reactive for the most part ... it has a closed electronic configuration, a very tightly bound atom. It is this coveting of its own electrons that prevents combination with other elements”. Another important attribute is helium’s unique boiling point, which is lower than that for any other element. The worsening global shortage could render millions of dollars of high-value, life-saving equipment totally useless. The dwindling supplies have already resulted in the postponement of research and development projects in physics laboratories and manufacturing plants around the world. There is an enormous supply and demand imbalance partly brought about by the expansion of high-tech manufacturing in Asia.

**E** The source of the problem is the Helium Privatisation Act (HPA), an American law passed in 1996 that requires the U.S. National Helium Reserve to liquidate its helium assets by 2015 regardless of the market price. Although intended to settle the original cost of the reserve by a U.S. Congress ignorant of its ramifications, the result of this fire sale is that global helium prices are so artificially deflated that few can be bothered recycling the substance or using it judiciously. Deflated values also mean that natural gas extractors see no reason to capture helium. Much is lost in the process of extraction. As Sobotka notes: "The government had the good vision to store helium, and the question now is: Will the corporations have the vision to capture it when extracting natural gas, and consumers the wisdom to recycle? This takes long-term vision because present market forces are not sufficient to compel prudent practice". For Nobel-prize laureate Robert Richardson, the U.S. government must be prevailed upon to repeal its privatisation policy as the country supplies over 80 per cent of global helium, mostly from the National Helium Reserve. For Richardson, a twenty- to fifty-fold increase in prices would provide incentives to recycle.

**F** A number of steps need to be taken in order to avert a costly predicament in the coming decades. Firstly, all existing supplies of helium ought to be conserved and released only by permit, with medical uses receiving precedence over other commercial or recreational demands. Secondly, conservation should be obligatory and enforced by a regulatory agency. At the moment some users, such as hospitals, tend to recycle diligently while others, such as NASA, squander massive amounts of helium. Lastly, research into alternatives to helium must begin in earnest.

- 2 1. What are the qualities of Helium as described in paragraph one? (02 marks)
- 2 2. What are the uses of Helium? (02 marks)
- 2 3. Why natural gas extractors see no reason to capture helium? (02 marks)
- 1 4. Is there any problems with the value of Helium? Explain. (02 marks)
- 2 5. According to Dr. Lee Sobotka, helium is the "most noble of gases. Why does he say so? (02 marks)
6. Reading Passage has six paragraphs, A to F. Which paragraph contains the following information?

Write the correct letter, A–F, for questions 1 -5 on your answer sheet.

- 6  
1. a use for helium which makes an activity safer 2
2. the possibility of creating an alternative to helium 2
3. a term which describes the process of how helium is taken out of the ground 2
4. a reason why users of helium do not make efforts to conserve it 0
5. a contrast between helium's chemical properties and how non-scientists think about it 0

(2x5 = 10 marks)

- vii. Write five grammatically correct meaningful sentences using the following words.  
**element, threat, extract, government, massive** (1x5= 5 marks)

(Total 25 Marks)

### Question 03

1. Sports Club of your department is going to organize an Inter ATI Cricket Match with the other ATIs. Imagine that you are the Secretary of the Sports Club and write a letter inviting the students from other ATIs to participate in it.

#### Include the following.

- a. The details of the match such as date, time, venue, etc.
  - b. The purpose of the event
  - c. The details of the accommodation and transport for the participants.
  - d. The details of the awarding ceremony. (15 marks)
2. Write a reply to the above letter. (10 marks)

(Total 25 Marks)

#### Question 04

- ✓ 1. Provide the appropriate positive, comparative or superlative adjective in the blank. Write your answer on the answer script. First one is done for you.

Smoking is ..... (dangerous) than taking alcohol.

Smoking is more dangerous than taking alcohol.

- ✓ a. The oral test is ..... (easy) than listening test.  
✓ b. The more stressed you are, the ..... (worse) it is for your health.  
✓ c. The sea was getting ..... (rough) today.  
✓ d. Malithi won the race very easily. She is the ..... (fast).  
✓ e. He became more and ..... (tired) as the weeks went by.  
✓ f. This is the ..... (difficult) exam I ever faced..  
g. Malithi is ..... (fast) than her sister.  
h. This restaurant is ..... (good) than the one in the town.  
i. It's the ..... (easy) way to travel.  
j. She was the ..... (clever) of the three sisters.  
k. This sofa is ..... (expensive) than that.  
l. I've always been ..... (quick) than my sister.  
m. Nipuni is the ..... (pretty) girl in our batch.  
n. Giraffe is the ..... (tall) animal.  
o. Mr. Liyanage is a ..... (helpful) person in our village.

(1x15=15 marks)

2. Write **five** grammatically correct sentences using the following conjunctions.  
(before, while, but, whether, unless)

7

**Example:** She only wears T-shirts **and** blue jeans.

(2x5= 10 marks)

**(Total 25 Marks)**

### Question 05

- ✓ 1. The committee members of the welfare society decided to participate in an adventure camp. All the members agreed with the suggestion. You as the president of the association met the Director to get permission.

Look at the conversation between you and the Director of your ATI.  
Complete it with appropriate responses.

President: Good Morning Sir, May I come in?

Director: .....

You: we planned to participate in an adventure camp.

Director:.....

.....(place and time)

You: We hope to go to Belihuloya Adventure Camp for two days.

Director: ..... (Ask about the  
Accommodation, transport and the participants)

You: Sir, We have arranged a bus and accommodation is provided by them.  
All the 1<sup>st</sup> years are participating in the camp.

Director: ..... (finishes the conversation  
giving them permission)

You: .....

(2x5=10 marks)

2. Write grammatically correct meaningful sentences. ① ②

1. and set him on fire / when a kerosene lamp in his house / sustained /  
accidentally fell on the ground / a drunkard / fatal burn injuries /

2. near the Anuradapura Railway Station / initiated an inquiry / a disabled person /  
the Anuradapura Police / who had hit-and-run. / to find the motorist /

3. from the Giritale Forest Reserve / charred remains / last morning / by the  
villagers / of a human skeleton / were recovered /

4. were taken into custody / who allegedly obstructed / and verbally abused him /  
three individuals / the official vehicle of Hatton magistrate / by the  
Kekirawa Police /

5. has decided to observe / to those who lost their lives / the Disaster Management  
Centre / that hit the coastal belt / two minutes of silence as a mark of  
respect / by the tsunami disaster / ~③

(3x5=15 marks)

(Total 25 Marks)