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**Question Paper Code : 11442**

B.E./B.Tech. DEGREE EXAMINATION, JANUARY 2013.

First Semester

(Common to all Branches)

HS 2111/HS 11/080020001 – TECHNICAL ENGLISH – I

(Regulation 2008/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Match the words in column 'A' with their meanings in column 'B' : (4 ×  $\frac{1}{2}$  = 2)

A	B
(a) augmentation	(i) a deep and narrow valley
(b) ravine	(ii) outstanding
(c) exceptional	(iii) calm, peaceful
(d) tranquil	(iv) increase.

2. Fill in the blanks with the appropriate forms of words : (8 ×  $\frac{1}{4}$  = 2)

Verb	Noun	Adjective
(a) navigate	_____	_____
(b) _____	_____	disagreeable
(c) expand	_____	_____
(d) _____	deregulation	_____

3. Rewrite the following sentences in the passive voice : (2 × 1 = 2)

- (a) They installed a new machine in the accounts section last week.  
 (b) We can complete the project in two years.

4. Edit the following passage by correcting the mistakes in spelling, grammar and punctuation :  $(8 \times \frac{1}{4} = 2)$

Primitive man found out by trial and error how to carry out a certain number of simple chemical changes but under the ancient Egyptian civilization men learned how to work copper, tin, iron and precious metals; knew how to make pottery glass soap and colouring agents, and how to bleach and dye textile fabrics. These arts was the beginnings of the chemical industries of today

5. Write a single sentence definition for each of the following terms :  $(2 \times 1 = 2)$

(a) Transformer

(b) Wrench.

6. Fill in the blanks in the following sentences with the comparative forms of the adjectives given in brackets :  $(4 \times \frac{1}{2} = 2)$

(a) A day on Mars is slightly \_\_\_\_\_ (long) than a day on Earth.

(b) Hotels in London are \_\_\_\_\_ (expensive) than those in Vienna.

(c) Venezuela is \_\_\_\_\_ (close) to the equator than Bolivia.

(d) A wise enemy is \_\_\_\_\_ (good) than a foolish friend.

7. Fill in the blanks in the following sentences with the appropriate tense forms of the verbs given in brackets.  $(4 \times \frac{1}{2} = 2)$

(a) They \_\_\_\_\_ (build) this castle in 1765.

(b) Liz \_\_\_\_\_ (not finish) her homework yet.

(c) Look! Jane and Joseph \_\_\_\_\_ (play) tennis.

(d) A heavy wind \_\_\_\_\_ (blow) when the helicopter landed.

8. Complete the following sentences indicating the conditions in which something will happen :  $(2 \times 1 = 2)$

(a) If I were you, I \_\_\_\_\_

(b) If we had gone to London, we \_\_\_\_\_

9. Expand the following compound nouns :  $(4 \times \frac{1}{2} = 2)$

(a) Steam chest

(b) Stop valve

(c) Workshop machinery

(d) Diesel engine.



10. Make antonyms of the following words by adding suitable prefixes : (4 ×  $\frac{1}{2}$  = 2)

- (a) courteous
- (b) inhabited
- (c) perceptible
- (d) justice.

PART B — (5 × 16 = 80 marks)

11. Read the passage and answer the questions that follow it :

Considering the enormous number of things which could turn a space mission into a fatal disaster, it is remarkable that there have been so few accidents. 1967 was a bad year; in January, the Americans lost three astronauts in a fire which occurred during tests on the ground and, in April, the Russians lost astronaut Komarov landing after sixteen successful Earth orbits. The accident was due to a parachute failure. Neither of these tragedies was quite what the world had expected. It was feared that one day astronauts would be stranded in space, alive but with no possibility of returning to Earth. This very nearly happened in 1970 during the flight of Apollo 13.

The life-support and other systems of spacecraft are interlinked. This means that if one system fails it is likely to cause other systems to fail too. Designers have tried to avoid disasters by duplicating, and in some cases triplicating, important pieces of equipment; for example, Apollo has no less than three fuel cells. Even so, a breakdown in the service module of Apollo 13 was nearly fatal. On 13 April one of the low-temperature oxygen tanks in the service module suddenly broke open; the explosion probably damaged the other oxygen tank close beside it. The exact reason for the explosion may never be known. The important point to note is that the oxygen from these tanks is not only used by the crew but also feeds the fuel cells and the fuel cells produce electrical power and water. So, one failure immediately caused a major power failure affecting nearly every system in the command module and produced a shortage of oxygen and water for life-support.

The safe return of the astronauts was due to their ingenuity and powers of improvisation. They managed to adapt their equipment. They were able to use it for different purposes from those for which it had been originally intended.

Intelligence and the ability to use limited resources for self-preservation have always been admired by writers of adventure books. The shipwrecked sailor who converts bits of wreckage into a raft and an explorer who makes a bow and arrow from branches and bootlaces are considered heroes because they survive by their own wits. Many people thought that the advanced technology of space flight ruled out all opportunities for makeshift repairs, but Apollo 13 proved them wrong. Luckily, at the time of the accident the lunar module was still joined to the command and service modules, and the lunar module had most of the things urgently needed by the disabled modules. The spacecraft was not on a free return trajectory, one which would bring it round the moon back to Earth, and rocket power was needed to bring it into such a



trajectory. Without a proper power supply, the rocket of the service module could not be fired; the rocket of the lunar module had to be used instead. Inside this module there was a supply of oxygen, water and power, and a guidance system. Though it was designed for a crew of two for only about thirty hours, and intended for landing on the moon, this vehicle became the lifeboat of Apollo 13.

Life for the three crew members was difficult but bearable. A lunar module cannot reenter the Earth's atmosphere without burning up, so the crew had to return to the command module, jettison their lifeboat and the service module, and turn themselves into the right positions for re-entry, hoping that their heat-shield had not been damaged by the explosion of the oxygen tank. Re-entry and recovery were totally successful.

(a) Write the response which best reflects the meaning of the text :

(4 × 1 = 4)

(i) 1967 was

- (1) A good year for the Russians and the Americans.
- (2) A good year for the Americans but not for the Russians.
- (3) A bad year for the Americans and the Russians.
- (4) A bad year for the Americans but not for the Russians.

(ii) Why was the breakdown of the oxygen supply so important?

- (1) Because it could cause an explosion.
- (2) Because they could not fire their rocket without it.
- (3) Because they never found out the reason for it.
- (4) Because it affected all the systems in the module.

(iii) The astronauts survived because

- (1) The command module was not very badly damaged.
- (2) The lunar module was intended as a lifeboat.
- (3) They managed to improvise.
- (4) They had read a lot of adventure stories.

(iv) How did the astronauts get back into the atmosphere from space?

- (1) By using a parachute.
- (2) By going back into the command module.
- (3) By staying in the service module.
- (4) By burning the lunar module.

(b) State whether the following statements are true or false : (6 × 1 = 6)

- (i) The Americans lost an astronaut when his parachute did not open.
- (ii) People expected that some day astronauts would be left in space.



- (iii) Makeshift repairs are impossible in space.
- (iv) The spacecraft was on a trajectory which would have brought in back to earth.
- (v) Life for the astronauts in Apollo 13 was unbearable.
- (vi) The heat-shield of the command module had been damaged by the explosion.
- (c) Choose the definition which best reflects the meaning of the word as it is used in the text : (6 × 1 = 6)

- (i) fatal
- (1) causing injury
  - (2) causing death
  - (3) causing illness
  - (4) causing failure
- (ii) stranded
- (1) delayed
  - (2) isolated
  - (3) injured
  - (4) killed
- (iii) jettison
- (1) get off
  - (2) turn over
  - (3) throw away
  - (4) break open
- (iv) makeshift
- (1) expensive
  - (2) elaborate
  - (3) technical
  - (4) improvised
- (v) wits
- (1) endurance
  - (2) experience
  - (3) intelligence
  - (4) connections

- (vi) ruled out
  - (1) ruined
  - (2) excluded
  - (3) improved
  - (4) justified.

12. (a) Write a set of eight instructions that are to be followed by students in the language laboratory. (16)

Or

(b) Write a set of eight instructions that are to be followed while travelling by bus. (16)

13. (a) You happen to live in an area where political meetings are held frequently. Students are unable to focus attention on their studies because of high noise level from loud speakers used in the political meetings. Senior citizens suffer from various diseases like sleep disorder because of noise pollution in this area. Write a letter to the editor of a newspaper highlighting these problems faced by the residents and suggest some measures to ensure peaceful life in that area. (16)

Or

(b) Imagine that you are the NSS (National Service Scheme) co-ordinator. Along with Programme Officers, you visit a village near Chennai and find that most of the villagers are agricultural workers who do not send their girl children to schools. You feel that an awareness programme will be immensely useful to the villagers. As a part of the programme, you plan to organise a guest lecture. Write a letter to the Chief Educational Officer, Chennai inviting him to deliver a special lecture on the significance of education to girl children. Give him details like the date, time, venue, number of participants and mode of conveyance. (16)

14. Write two paragraphs on the following topics. Each paragraph should not exceed 150 words. (16)

(a) Impact of electronic media on society

Or

(b) Traffic problems in cities.

15. Read the following passage and draw a flow chart. (16)

(a) Pure water is not found in nature. Unlike ground water, surface water requires different treatment processes as bacteria, chemicals and other contaminants enter lakes, rivers, and reservoirs through run off. Before water enters the plant for treatment, it flows through intake screens that remove large objects such as plants and logs. Next step is chemical treatment which is called pre-treatment process. Now chlorine, ammonia,

and lime are injected into the untreated water. Chlorine and ammonia together form a chemical called chloramines, which disinfects the water by killing harmful bacteria and viruses. Then lime is added to adjust the pH of the water. The third step is physical treatment. After the injection of pre-treatment chemicals, the water is rapidly mixed with aluminum sulfate to evenly distribute the chemicals. The aluminum sulfate acts as a coagulant and it neutralizes particles and other impurities in the water to form large, heavy particles called floc. This is called flocculation and it takes place in flocculation basins. From the flocculation basins, the water flows into sedimentation basins, where the floc comes to the bottom and the resulting residuals are removed. Then the water travels through large filters made of sand, gravel, and anthracite. This removes the suspended particles which cannot be removed during sedimentation. Once the water is filtered, other chemicals are added to disinfect the water and adjust pH. Chlorine is added as the primary disinfectant. Lime is injected to readjust the pH to normal levels and fluoride is added to help the prevention of tooth decay. Orthophosphate is also added to the water to prevent corrosion of water pipes. Finally, chlorine and ammonia are added to disinfect the storage tanks and distribution pipes.

Or

- (b) Chocolate is a delicious dessert that many people enjoy. It is rich with antioxidants which keep the immune system in perfect condition. To prepare this dessert, one may need cocoa beans, sugar, additional flavouring, vanilla, and milk. First the raw cocoa beans have to be roasted for about 30 minutes in 300 degree oven. Then the beans can be cooled and the husks can be removed. Now the beans can be broken into small pieces by using mortar and pestle. In the next stage of crushing, pepper grinder can be used to crush the beans. The beans are now turned into a brown mush. Afterwards the cocoa bean paste is transferred to a small pan and the pan is kept in a large pan. The large pan is full of water and it is heated. Then the paste is transferred to a bowl where mortar can be used till the paste attains its smoothness. Next sugar, flavouring, milk and vanilla are added. After mixing sugar and flavouring, chocolate is poured into a mold or a large pan so that chocolate can be cut into small bars. The chocolate is then cooled. This can be done at room temperature. Finally the chocolate is cut into small bars.