

**B. E. / B.Tech. DEGREE EXAMINATIONS 2014**  
**SECOND SEMESTER**  
**HS6251 – TECHNICAL ENGLISH II**  
**(Common to All Branches)**  
**Regulations 2013**  
**MODEL QUESTION PAPER**

Time: Three hours

Maximum: 100 marks

Answer ALL the questions

**PART – ‘A’ (10 x 2 = 20)**

1. Rewrite the following as numerical expressions. (4 × ½ = 2)

- |                                     |                             |
|-------------------------------------|-----------------------------|
| a. A team consisting of three men   | c. A period of 45 minutes   |
| b. A bulb with a power of 100 watts | d. A book with eighty pages |

2. The underlined words in the following sentences are homonyms. Use any **two** of them in sentences of your own, each with a meaning different from the meaning given. (2 × 1 = 2)

Names in the **right** hand column of the register, please! And **place** your bags under the **light** please!

3. Complete the following conditionals with the correct forms of the verbs (4 × ½ = 2)

- a. If I were a pilot, I \_\_\_\_\_ (fly) around the whole world.
- b. If she \_\_\_\_\_ (be) more careful, she would not have been involved in the accident.
- c. If I do not get a bus, I \_\_\_\_\_ (take) an auto to work.
- d. If it \_\_\_\_\_ (not stop) raining, the match will be abandoned.

4. Rewrite the following in their passive form. (2 marks)

Computers have definitely transformed our classrooms. The use of computers in the classroom enhances the learning experience of students.

5. Fill in the blanks with suitable modal verbs choosing from the list given: (4 × ½ = 2)  
can, should, must, may, would

You \_\_\_\_\_ come for the fitness camp if you want to get back in shape. You will be provided with food at the camp but you \_\_\_\_\_ bring snacks like whole grain biscuits if you wish. However fried snacks will not be allowed. You \_\_\_\_\_ use cell phones in the camp, but you \_\_\_\_\_ switch them off during the exercise and yoga sessions.

6. Make sentences using **any two** of the following phrasal verbs. (2 × 1 = 2)

(a) break down (b) catch up (c) drop out (d) give in

7. Combine the given two sentences into one sentence using appropriate clause. (2 × 1 = 2)

- a. People live in the Arctic region. They are called Eskimos.
- b. We travelled to a village. The village is near Madurai.

8. Choose the right option to complete the given idiomatic sentences. (4 × ½ = 2)

- i. The management of the PSU offered a golden handshake to many of their aged employees as they \_\_\_\_\_.
  - (a) wanted to be polite to them
  - (b) wanted to give them gold
  - (c) wanted to cut down on the man power
  - (d) wanted to make them happy
- ii. People took Pooja's words with a pinch of salt because \_\_\_\_\_.
  - (a) they found she was not completely dependable
  - (b) they had a salt deficiency
  - (c) they found her words too bland
  - (d) they found her too sweet
- iii. He stood his ground in support of his friend \_\_\_\_\_.
  - (a) because there was an earthquake
  - (b) in spite of several family interferences
  - (c) since his friend was going to faint
  - (d) as there was a flood.
- iv. The film hit the box office with a flying start as \_\_\_\_\_.
  - (a) it had a very poor collection
  - (b) the cinema halls were empty
  - (c) there was poor reception from the audience
  - (d) collected the highest revenue on day 1.

9. Fill in the blanks with right options to complete the collocations. (4 × ½ = 2)

- i. Youngsters today seem to prefer \_\_\_\_\_ food.
  - (a) quick
  - (b) fast
  - (c) rapid
  - (d) speed
- ii. She \_\_\_\_\_ tears when she heard the news.
  - (a) burst into
  - (b) blew up in
  - (c) burst away
  - (d) blew away
- iii. Working mothers often find that they are unable to \_\_\_\_\_ time for their children.
  - (a) waste
  - (b) save
  - (c) spare
  - (d) spend
- iv. He wasn't sure if he would get an appointment but he was willing to go to the CM's office and take a \_\_\_\_\_.
  - (a) opportunity
  - (b) choice
  - (c) break
  - (d) chance

10. Choose **any one** word from the following and write two sentences using the same word, one in noun form and the other in verb form. (2 × 1 = 2)

- (a) guarantee
- (b) report
- (c) impact

**PART B (5 × 16 = 80)**

11. Answer both sections (i) and (ii)

(i) Read the following passage and answer the questions given below:

(10 marks)

(1) There are two types of diabetes, *insulin-dependent* and *non-insulin-dependent*. Between 90–95% of the estimated 13–14 million people in the United States with diabetes have non-insulin-dependent, or Type II, diabetes. Because this form of diabetes usually begins in adults over the age of 40 and is most common after the age of 55, it used to be called adult-onset diabetes. Its symptoms often develop gradually and are hard to identify at first; therefore, nearly half of all people with diabetes do not know they have it. For instance, someone who has developed Type II diabetes may feel tired or ill without knowing why. This can be particularly dangerous because untreated diabetes can cause damage to the heart, blood vessels, eyes, kidneys, and nerves. While the causes, short-term effects, and treatments of the two types of diabetes differ, both types can cause the same long-term health problems.

(2) Most importantly, both types affect the body's ability to use digested food for energy. Diabetes does not interfere with digestion, but it does prevent the body from using an important product of digestion, *glucose* (commonly known as sugar), for energy. After a meal, the normal digestive system breaks some food down into glucose. The blood carries the glucose or sugar throughout the body, causing blood glucose levels to rise. In response to this rise, the hormone insulin is released into the bloodstream and signals the body tissues to metabolize or burn the glucose for fuel, which causes blood glucose levels to return to normal. The glucose that the body does not use right away is stored in the liver, muscle, or fat.

(3) In both types of diabetes, however, this normal process malfunctions. A gland called the *pancreas*, found just behind the stomach, makes *insulin*. In people with insulin-dependent diabetes, the pancreas does not produce insulin at all. This condition usually begins in childhood and is known as Type I (formerly called juvenile-onset) diabetes. These patients must have daily insulin injections to survive. People with non-insulin-dependent diabetes usually produce some insulin in their pancreas, but their bodies' tissues do not respond well to the insulin signal and, therefore, do not metabolize the glucose properly, a condition known as insulin resistance.

(4) Insulin resistance is an important factor in non-insulin-dependent diabetes, and scientists are searching for the causes of insulin resistance. They have identified two possibilities. The first is that there could be a defect in the insulin receptors on cells. Like an appliance that needs to be plugged into an electrical outlet, insulin has to bind to a receptor in order to function. Several things can go wrong with receptors. For example, there may not be enough receptors to which insulin may bind, or a defect in the receptors may prevent insulin from binding. The second possible cause of insulin resistance is that, although insulin may bind to the receptors, the cells do not read the signal to metabolize the glucose. Scientists continue to study these cells to see why this might happen.

(5) There's no cure for diabetes yet. However, there are ways to alleviate its symptoms. In 1986, a National Institute of Health panel of experts recommended that the best treatment for non-insulin-dependent diabetes is a diet that helps one maintain a normal weight and pays particular attention to a proper balance of the different food groups. Many experts, including those in the American Diabetes Association, recommend that 50–60% of daily calories come from carbohydrates, 12–20% from protein, and no more than 30% from fat. Foods that are rich in

carbohydrates, like breads, cereals, fruits, and vegetables, break down into glucose during digestion, causing blood glucose to rise. Additionally, studies have shown that cooked foods raise blood glucose higher than raw, unpeeled foods. A doctor or nutritionist should always be consulted for more of this kind of information and for help in planning a diet to offset the effects of this form of diabetes.

1. According to the passage, what may be the most dangerous aspect of Type II diabetes?
  - a. Insulin shots are needed daily for treatment of Type II diabetes.
  - b. Type II diabetes may go undetected and, therefore, untreated.
  - c. In Type II diabetes, the pancreas does not produce insulin.
  - d. Type II diabetes interferes with digestion.
2. Which of the following are the same for Type I and Type II diabetes?
  - a. treatments
  - b. long-term health risks
  - c. short-term effects
  - d. causes
3. A diet dominated by which of the following is recommended for non-insulin-dependent diabetics?
  - a. protein
  - b. fat
  - c. carbohydrates
  - d. raw foods
4. Which of the following is the main function of insulin?
  - a. It signals tissues to metabolize sugar.
  - b. It breaks down food into glucose.
  - c. It carries glucose throughout the body.
  - d. It binds to receptors.
5. Which of the following is mentioned in the passage as a possible problem with insulin receptors in insulin-resistant individuals?
  - a. Overeating causes the receptors to function improperly.
  - b. There may be an overabundance of receptors present.
  - c. A defect causes the receptors to bind with glucose.
  - d. A defect hinders the receptors from binding with insulin.
6. Based on the information in the passage, which of the following best describes people with Type I diabetes?
  - a. They do not need to be treated with injections of insulin.
  - b. They comprise the majority of people with diabetes.
  - c. Their pancreases do not produce insulin.
  - d. They are usually diagnosed as adults.
7. Your uncle who has diabetes comes to stay with you for a week and you have to look after him. Prepare a checklist of 4 items that you should check with respect to his diet and medication to make sure that his condition doesn't become worse. (4 marks)

- (ii) Look the following information and graph about Tata Nano. Analyse the given data and give a short review of the performance of Tata Nano in a short paragraph of not more than 120 words. (6 marks)

#### About Tata Nano

- Tata Nano, one of the most ambitious projects of Tata Motors, started in 2003.
- It was envisioned by the Tata Group Chairman, Ratan Tata himself.
- Ratan Tata announced this project at the Auto Expo 2006 in New Delhi.
- Tata Nano was launched in January 2008 at the Auto Expo New Delhi.
- In Geneva 2008, the Nano made its first overseas premiere.
- On March 23, 2009, Tata started production of the Nano at Pantnagar and launched the car in three variants priced between Rs. 1,23,000 and Rs. 1,75,000.

#### The Downfall Saga

Tata witnessed a sequential fall in 2010, the lowest in November – Nano sales was 509 units.



12. (a) Read the following passage and answer the questions given below:

Today, bicycles are elegantly simple machines that are common around the world. Many people ride bicycles for recreation, whereas others use them as a means of transportation. The first bicycle, called a draisienne, was invented in Germany in 1818 by Baron Karl de Drais de Sauerbrun. Because it was made of wood, the draisienne wasn't very durable nor did it have pedals. Riders moved it by pushing their feet against the ground.

In 1839, Kirkpatrick Macmillan, a Scottish blacksmith, invented a much better bicycle. Macmillan's machine had tires with iron rims to keep them from getting worn down. He also used foot-operated cranks, similar to pedals, so his bicycle could be ridden at a quick pace. It didn't look much like the modern bicycle, though, because its back wheel was substantially larger than its front wheel. Although Macmillan's bicycles could be ridden easily, they were never produced in large numbers.

In 1861, Frenchman Pierre Michaux and his brother Ernest invented a bicycle with an improved crank mechanism. They called their bicycle a *vélocipède*, but most people called it a "bone shaker" because of the jarring effect of the wood and iron frame. Despite the unflattering

nickname, the *vélocipède* was a hit. After a few years, the Michaux family was making hundreds of the machines annually, mostly for fun-seeking young people.

Ten years later, James Starley, an English inventor, made several innovations that revolutionized bicycle design. He made the front wheel many times larger than the back wheel, put a gear on the pedals to make the bicycle more efficient, and lightened the wheels by using wire spokes. Although this bicycle was much lighter and less tiring to ride, it was still clumsy, extremely top-heavy, and ridden mostly for entertainment.

It wasn't until 1874 that the first truly modern bicycle appeared on the scene. Invented by another Englishman, H. J. Lawson, the safety bicycle would look familiar to today's cyclists. The safety bicycle had equal-sized wheels, which made it much less prone to toppling over. Lawson also attached a chain to the pedals to drive the rear wheel. By 1893, the safety bicycle had been further improved with air-filled rubber tires, a diamond-shaped frame, and easy braking. With the improvements provided by Lawson, bicycles became extremely popular and useful for transportation. Today, they are built, used, and enjoyed all over the world.

- 1) Write a short summary of the above given passage in not more than 100 words. (6 marks)
- 2) Complete the following sentences in NO MORE THAN THREE WORDS (4 x 1 = 4)
  - a. The *draisienne* was \_\_\_\_\_ as it was made of wood.
  - b. The innovation introduced by Macmillan to make his bicycle more longlasting than the *draisienne* was \_\_\_\_\_.
  - c. The other name for velocipede was boneshaker because \_\_\_\_\_.
  - d. The innovation introduced by James Starley that is still used in today's bicycles is \_\_\_\_\_.
- 3) Answer the following questions in two sentences: (3 × 2 = 6)
  - a. Describe the velocipede.
  - b. What are the uses of the bicycle?
  - c. What are the innovations introduced by Lawson in his bicycle design?

(OR)

(b) Read the following passage and answer the questions given below:

The first step towards the creation of computers as we know them today was made by an English mathematics professor, Charles Babbage who realized that all mathematical calculations can be broken up into simple repetitive operations that could be carried out by an automatic machine. Sadly, Babbage never completed the machine. Seventy years later an American inventor, Herman Hollerith, created a computing machine out of necessity. Hollerith's "computer" was the first machine to use electricity. Mathematician George Boole determined that all mathematical calculations can be stated as either true or false, and defined the binary system – to be used by all future computers.

The first electronic computers instead of using electromechanical relays, used fully electronic switches: vacuum tubes. These were about a thousand times faster than mechanical

switches, but they were gigantic. This is the most important reason they were replaced by smaller transistors in the 1950s.

As transistors replaced vacuum tubes in the 1950s, computers began to grow smaller and faster. Early supercomputers replaced binary codes with programming codes consisting of a few letters and had an operating system and a memory, and could store data on disk. Transistors created heat, which tended to damage the heat-sensitive components. This problem was eliminated by the invention of the integrated circuit in 1958. Another development of the 1960s was an operating system with a central program supervising other programs which could run simultaneously.

Since computers were no longer so large, they also became cheaper. In the 1970s, computer manufacturers were ready to bring computers to consumers. These computers had user-friendly programs and offered the first word processors, spreadsheets, and even the first computer games!

In 1981, the first IBM PCs were introduced into homes, schools and offices. The Apple Macintosh was introduced three years later. The number of personal computers soared from 2 million in 1981 to almost 6 million in 1982, to 65 million in 1992. As their potential grew, new ways of using computers were being developed. Computers could be linked together to form networks sharing software, memory space and information. The World Wide Web, which was started in 1989, links up computers worldwide to provide people with opportunities to share information and to enable communication via e-mail.

Today computers are an inseparable part of many people's lives and jobs and are likely to continue to be tools that we rely on.

- 1) Write a short summary of the above given passage in not more than 100 words. (6 marks)
  - 2) Complete the following sentences in NO MORE THAN THREE WORDS (4 x 1 = 4)
    - a. Vacuum tubes had the advantage of \_\_\_\_\_.
    - b. Transistors had the disadvantage of \_\_\_\_\_.
    - c. The operating system could \_\_\_\_\_.
    - d. The world wide web enables people to \_\_\_\_\_.
  - 3) Answer the following questions in two sentences: (3 × 2 = 6)
    - a. How did the invention of the integrated chip help the growth of the computer?
    - b. What were the qualities that pioneers of computers looked to integrate into the computer?
    - c. When did the computer become suitable for mass production and use?
13. Respond to the following with a job application and resume. (16 marks)
- a. Ved Engineering Solutions is looking for a dynamic engineers from all branches for its Chennai office. Incumbent should be an engineer from a reputed institute and should have a minimum of two years experience working with 10 – 25 member teams. Send your application with your resume to The HR Manager, Ved Engineering Solutions, Arignar Salai, T. Nagar, Chennai – 17.

(OR)

- b. Your friend is working as Quality Control Engineer in Shailam Software Solutions. But he has now got a job elsewhere and has given notice. He informs you that his resignation will create a vacancy in the company, which you could fill in. He advises you to email your application and CV to the HR Manager at [siva@shailam.com](mailto:siva@shailam.com). Prepare an email and resume for this purpose.

14. Write a report based on one of the following: (16 marks)

- a. You are heading the Research team of Projections Consulting Services. Image Cinemas approaches your company with a proposal to start a new multiplex (cinema hall complex) in the nearby town. Prepare a report in about 300 words showing your team's findings about the necessary buildings, expenditure, infrastructure etc (feasibility report) and stating whether it is possible to start the multiplex there.

(OR)

- b. You are the Project Head of an Educational Software company. Your team has developed online teaching materials in all subjects in Engineering. Write a report in about 300 words about the materials your team has developed in the project to submit to the General Manager.

15. Write a dialogue for one of the following situations: (16 marks)

- a. You have applied from your college for an exchange programme abroad. You are to appear for a preliminary interview with the Coordinator of the Exchange Programme. You are one of 25 candidates of whom only two will be chosen for the exchange programme. Write the dialogue that happened between you and the Coordinator. The first exchange is given for you to start the dialogue.

Coordinator: Why are you interested in this exchange programme?

You: I would like to gain some exposure to the academic atmosphere abroad as part of my learning experience

You should have minimum of eight exchanges (16 sentences) between you and the Coordinator.

(OR)

- b. You are working in a bank. You have developed a new security alarm system that you believe will increase the security at the bank. You are called to present your innovation to the Manager. Write the dialogue between you and the Manager. The first exchange is given for you to start the dialogue (16 marks)

Manager: We already have an alarm system in place. Why do we need a new one?

You: Sir, You are aware of the recent surge in the thefts at banks and ATMs. This new system will improve the security at our bank.

You should have minimum of eight exchanges (16 sentences) between you and your Manager.

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