National Institute of Technology, Hamirpur

End-Term Examination- March 2021

B.Tech. (1st Semester)

Communication Skills (Course code-HS 101)

Max. Marks: 50

Time: 2.00 Hours

Note: All the questions are compulsory.

1. Read the following passage carefully and answer the questions that follow. **5x2=10**

The next few decades will see great changes in the way energy is supplied and used. In some major oil producing nations, 'peak oil' has already been reached, and there are increasing fears of global warming. Consequently, many countries are focusing on the switch to a low carbon economy. This transition will lead to major changes in the supply and use of electricity. Firstly, there will be an increase in overall demand, as consumers switch from oil and gas to electricity to power their homes and vehicles. Secondly, there will be an increase in power generation, not only in terms of how much is generated, but also how it is generated, as there is growing electricity generation from renewable sources. To meet these challenges, countries are investing in Smart Grid technology. This system aims to provide the electricity industry with a better understanding of power generation and demand, and to use this information to create a more efficient power network.

Smart Grid technology basically involves the application of a computer system to the electricity network. The computer system can be used to collect information about supply and demand and improve engineer's ability to manage the system. With better information about electricity demand, the network will be able to increase the amount of electricity delivered per unit generated, leading to potential reductions in fuel needs and carbon emissions. Moreover, the computer system will assist in reducing operational and maintenance costs.

Smart Grid technology offers benefits to the consumer too. They will be able to collect real-time information on their energy use for each appliance. Varying tariffs throughout the day will give customers the incentive to use appliances at times when supply greatly exceeds demand, leading to great reductions in bills. For example, they may use their washing machines at night. Smart meters can also be connected to the internet or telephone system, allowing customers to switch appliances on or off remotely. Furthermore, if houses are fitted with the apparatus to generate their own power, appliances can be set to run directly from the on-site power source, and any excess can be sold to the grid.

With these changes comes a range of challenges. The first involves managing the supply and demand. Sources of renewable energy, such as wind, wave and solar, are notoriously

unpredictable, and nuclear power, which is also set to increase as nations switch to alternative energy sources, is inflexible. With oil and gas, it is relatively simple to increase the supply of energy to match the increasing demand during peak times of the day or year. With alternative sources, this is far more difficult, and may lead to blackouts or system collapse. Potential solutions include investigating new and efficient ways to store energy and encouraging consumers to use electricity at off-peak times.

A second problem is the fact that many renewable power generation sources are located in remote areas, such as windy uplands and coastal regions, where there is currently a lack of electrical infrastructure. New infrastructures therefore must be built. Thankfully, with improved smart technology, this can be done more efficiently by reducing the reinforcement or construction costs.

Although Smart Technology is still in its infancy, pilot schemes to promote and test it are already underway. Consumers are currently testing the new smart meters which can be used in their homes to manage electricity use. There are also a number of demonstrations being planned to show how the smart technology could practically work, and trials are in place to test the new electrical infrastructure. It is likely that technology will be added in 'layers', starting with 'quick win' methods which will provide initial carbon savings, to be followed by more advanced systems at a later date. Cities are prime candidates for investment into smart energy, due to the high population density and high energy use. It is here where Smart Technology is likely to be promoted first, utilising a range of sustainable power sources, transport solutions and an infrastructure for charging electrically powered vehicles. The infrastructure is already changing fast. By the year 2050, changes in the energy supply will have transformed our homes, our roads and our behaviour.

a) What kind of challenges have forced countries towards investing in Smart Grid technology?
b) How may the better management of power and supply lead to reductions in fuel needs and carbon emissions?
c) In what possible ways Smart Grid technology may offer benefits to the consumers?
d) How does the author perceive the future of Smart Grid Technology vis-à-vis its current stage of infancy?
e) In your opinion, what is the central point that the author attempts to make in the above write up?

2. Write a paragraph in about 200-300 words on the mental health of students under the pressures of demanding academic load. **10**
3. "Reading/listening is breathing in, writing/speaking is breathing out." Elaborate how. While putting forth your arguments, comment on the interrelation between these two groups of activities. **10**
4. "Developing effective public speaking is essential and crucial for the students and no-verbal communication plays an important role in it". Do you agree? What are possible ways in which students can improve their public speaking skills? **10**
5. What is a report? What are the different types of reports? Write in brief about salient features of a good report? **10**

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End Semester Examination, March 2022

Communication Skills (Course code: HS 101)

B. Tech. (First Semester)

Max. Marks: 50 **Time: 2 Hours**

Note: Part I and Part II are compulsory.

Part I

1. Read the following passage carefully and answer the question that follow: (10 marks)

A prominent multinational company was manufacturing and marketing shoes globally. In order to increase its business volume, the company sent two marketing research teams to find out market potential for its shoes in African continent. Both the teams surveyed the shoe-bearing habits of people in a number of countries of African continent independently. Both the teams observed that people were not wearing shoes at all. When the teams arrived at head office of the company, they presented their reports to management. The first team mentioned in its report, "There is no scope of marketing shoes in African continent as no one wears shoes there." The second team mentioned in its report, "There is very high scope of marketing shoes in African continent as no one has shoes." Now the question emerges: Why did two teams arrive at contrasting conclusion? The answer is perception. It explains how people see the same phenomenon differently and derives meaning from it. Human beings are different from computers. While all the computers process a piece of information in the identical manner with identical output, human beings may differ because of their differences and uniqueness. Different people may perceive the same environmental event differently based on 'aspects of the situations they choose to observe, how they organize this information, and the manner in which they interpret it to obtain the grasp of the situation.' Thus, the subjectively perceived 'reality' in any given setting may be different for different people. In any organization, perception plays an important role. It affects the outcome of behavior. This is so because people act on the basis of what they see. Hence, all the people working in any organization must recognize that facts people do not perceive as meaningful usually will not influence their behavior, whereas the things they believe to be real, even though factually incorrect, will influence it.

a) Why did the company send marketing research teams to African continent? (2)
b) What did the teams find out after surveying the shoe-bearing habits of people in different countries of African continent? (2)
c) Please write a summary of the passage in around 150 words and suggest a suitable title. (5+1)

Part II

*Attempt any five questions: (5*8=40 marks)

2. What is listening? How is it different from hearing? (200 words)
3. Write a Paragraph in 200-250 words on the pros and cons of online learning.
4. What are the greatest challenges/barriers to good communication? (200 words)
5. How are resumes, CV and Biodata different from each other? Do they also have any

similarity? Explain in 200 words.

6. “Voice quality impacts your business presentation.” Do you agree? Explain in 200 words.
7. What are the traits of a good listener? Discuss in detail. (200 words)