UNIT - 2

APPRO JRD

- **Sudha Murty**

SUMMARY

Sudha Murthy, a well – known social worker and author, is renowned for her noble mission of providing computer and library facilities in all government schools of Karnataka. She is the Chairperson of the Infosys Foundation.

It was probably April of 1974. Bangalore was getting warm and Gulmohars were blooming at the IISc campus. She was the only girl in her postgraduate department and was staying at the ladies' hostel. Other girls were pursuing research indifferent departments of Science. She was looking forward to going abroad to complete a doctorate in computer science. She was offered scholarships from Universities in the US. She had not thought of taking up a job in India.

One day, while on the way to her hostel from their lecture hall, she saw an advertisement on the notice board. It was a standard job requirement notice from the famous automobile company TELCO. It stated that the company required young, bright engineers, hardworking and with an excellent academic background. At the bottom was a small line: 'Lady Candidates need not apply.' She read it and was very upset. For the first time in her life, she was up against gender discrimination. Though she was not keen on taking up the job, she saw it as a challenge. She had done extremely well in academics, better than most of her male peers. She knows that in real life academic excellence is not enough to be successful.

After reading the notice she went fuming to her room. She decided to inform the topmost person in Telco about the injustice the company was perpetrating. She got a postcard and started to write but there was a problem. She did not know who headed Telco. She thought it must be one of the Tatas. She knew JRD Tata was thehead of the Tata Group. She saw his picture in the newspaper. She took the card, addressed it to JRD and started writing. She remembered clearly what she wrote: "The great Tatas have always been pioneers. They are the people who started the basic infrastructure industries in India, such as iron and steel, chemicals, textiles, and locomotives. They have cared for higher education in Indiasince 1900 and they were responsible for the establishment of the Indian Instituteof Science." But she was surprised how a company such as Telco was discriminating based on gender.

She posted the letter and forgot it. Less than ten days, she received a telegram stating that she had to appear for an interview at Telco's Pune based company. She was taken aback by the telegram. Her hostel mate told her that she should utilize the opportunity. It was her first visit to Pune and she immediately fell in love with the city and remained dear to it. She felt as much at home in Pune as she did in Hubli, her hometown. The place changed her life in so many ways. She went to Telco's Pimpri office for the interview. There were six people on the panel and they whispered that this was the girl who wrote to JRD Tata. She heard somebody whispering as soon as she entered the room. By then she knew for sure that she would not get the job. The realization abolished all fear from her mind. So she was rather cool while the interview was being conducted. Even before the commencement of the interview she reckoned the panel as if they were biased, so she gave the answer rather impolitely. She hoped that this was only a

technical interview.

They were taken aback by her rudeness, and she was ashamed of her attitude. The panel asked her technical questions and she answered all of them. Then an elderly gentleman with an affectionate voice explained the difference between factory and academics. She was a young girl from small-town Hubli and her world had been a limited place. She did not know the ways of large corporate houses and their difficulties. Finally, after a long interview, she was told she was successful. She had never thought she would take up a job in Pune. She met a shy young man fromKarnataka and they became good friends and finally got married.

It was only after joining Telco that she realized who JRD Tata was. He was the uncrowned king of the Indian industry. Now she was scared to meet him, but she did not get an opportunity to meet him till she was transferred to Bombay. One dayshe had to show some reports to Mr. Moolgaokar, chairman, in his office on the first floor of Bombay House, when suddenly JRD walked in. That was the first time she saw 'appro JRD'. Appro means'our' in Gujarati. This was the affectionateterm by which people at Bombay House called him. She was feeling very nervous, remembering her postcard episode, SM introduced her nicely. Jeh, this young woman is an engineer and a postgraduate too. She is the first woman to work on the Telco shop floor. JRD looked at me. She was praying to God that he would not ask her any questions about her interview. Instead, he remarked it was nice that girls were getting into engineering in our country. After that, she used to see JRD on and off.

In 1982 she had to resign from her job at TELCO. When she thought of leaving the company she wanted to meet JRD Tata. When she met him he gave suggestion to her to be confident and must give back to society. Finally, she considered JRD a great man, an extremely busy person, who valued one postcard written by a young girl seeking justice. Her love and respect for the house of Tatas remained undiminished by the passage of time. She always looked up JRD and considered him to be her role model- for his simplicity, generosity, kindness and the care he took for his employees.

Questions and Answers

Q.1. Describe Sudha Murty's first experience of gender discrimination.

Ans. Sudha Murty was pursuing her post graduation in computer science and staying in the ladies' hostel at the IISc campus. She was looking forward to going abroad to complete a doctorate in computer science. One day, while on her way to her hostel from the lecture hall complex, she saw an advertisement on the notice board. It was a standard job-requirement from the famous automobile company TELCO. It stated that the company required young, bright engineers, hardworking with an excellent academic background. But at the bottom of the advertisement it was written 'Lady candidates need not apply'. Sudha Murty read it and felt very upset and that was the first time she experienced gender discrimination.

Q.2. Convey in your own words what Sudha Murty wrote in her postcard to JRD Tata. What reply did she receive?

Ans-Tatas have always been leaders. They started the infrastructure industries in India, such as iron and steel, textiles and locomotives. They have always shown interest in higher education in India and established the prestigious Indian Institute of Science. I have had the good fortune to study there. But I am surprised that a prestigious company like Telco is discriminating on the basis of gender.

The reply which she got was that the reason they had never employed any ladies on the shop floor. He said that their company was not a co-ed college; it was a factory. He appreciated her bright academic record but said that people like her should work in research laboratories.

Q.3. Summarise what happened during Sudha Murty's interview at TELCO.

Ans. Sudha Murty went to the interview with the thought that she will not get selected for the Telco had clearly mentioned in the advertisement that 'Lady candidates need not employ'. She reckoned that the panel would be biased and hence spoke rather impolitely. The reason the ladies were not employed as it was a factory job. They suggested Sudha that she should work in research laboratories. Sudha replied that Telco must start somewhere otherwise no woman would ever be able to work in factories. After a long interview Sudha was successful and she was posted in Pune at Telco.

Q.4.Describe Sudha Murty's feeling about Pune, and the impact that moving to Pune has had on her life.

Ans. Sudha Murty was successful in the interview and posted in Pune. The city changed Sudha Murty's life in many ways. She met a shy young man from Karnataka who became good friends and later got married. After joining Telco Sudha realized how JRD was the uncrowned king of Indian industry. Her life changed a lot after joining Telco and realized how much freedom and liberty does women gets living in Pune. After few years Narayan Murty started his own company Infosys and Sudha Murty had to leave Telco to join her husband. She was reluctant to leave Telco but had no other option.

B. Answer the following questions in about 250 to 300 words each.

1. **Draw a character sketch of Sudha Murty as seen from the facets of her personality she reveals in this essay.**

Ans. An eminent writer Sudha Murthy was born on 19th August 1950 in Karnataka. She studied Computer science and engineering at the Indian Institute of Science (IISc), Bangalore. She was a scholar student and a gold medallist in UG and PG. She started her career with TELCO and then TATA. She has written many books in English and Kannada as well and is renowned for her novels such as *Dollar Bahu,* and *How I taught my grandmother to read*. She is a social worker and she has worked for the betterment of the people with many social organizations. Such a soft-hearted and iconic lady helped the government in so many eminent awareness programs such as providing computer education and library facilities in government schools. Also, she taught computer science. She is a member of healthcare initiatives of

the Gates foundation. She was very popular for her benevolent work through the Infosys foundation.

Sudha Murthy is portrayed as a lady who is opposed to gender discrimination. She has no qualms in showing this to anyone irrespective of age or designation. This can be seen by the way she expressed her views to a job ad from Telco that stated ladies need not apply for the post. Although she was not interested in the job, Sudha Murthy applied for the same just to show her protest against the company's gender bias and unjust policy. Moreover, she wrote to JRD Tata regarding her dismay about such a reputed company being gender biased.

2. Why does Sudha Murty have such great respect for JRD Tata? What did Sudha Murty's encounters with JRD Tata reveal about the latter?

Ans. Sudha Murthy became the first female engineer hired at India's largest auto manufacturer TATA Engineering and Locomotive Company (TELCO). She joined the company as a Development Engineer in Pune and then worked in Mumbai & Jamshedpur as well.

Her appointment in TELCO is an interesting tale in itself. There was a time when women were not employed by India's largest auto manufacturer company TELCO. However, Murthy changed that and became the first woman engineer in the company. When the author, philanthropist appeared on a TV show, she shared amazing life stories wherein she revealed this story as well. In the show, Murthy shared the story of how she became the first woman engineer of her village Shiggaon and went on to become the first female engineer at TELCO. Talking about the incident, Murthy said, "When I was in college in 1974, I got a scholarship to study in America and I was preparing to go there. However, one day I came across a TELCO job vacancy advertisement but the advertisement mentioned that only men can apply."

She further revealed how she wrote a postcard to JRD Tata complaining gender discrimination at TELCO. "This made me furious. I decided to write a letter to the company about the matter but since I didn't know the person to whom I had to address the letter, I wrote the postcard to JRD Tata complaining about the "only male" employees policy and stated my point that women work better than men and if they are not given the chance, they won't be able to prove themselves," Murthy added.

Talking about JRD Tata's response to her postcard, she said, "JRD Tata was a man with an extraordinary vision. He changed the only 'male employees' policy and ordered to conduct interviews and examinations for female applicants also." As a result, she was granted a special interview and hired immediately. Murthy later joined Walchand Group of Industries at Pune as Senior Systems Analyst.

Angered at seeing a job advertisement posted by a Tata company asking female candidates not to apply, Sudha Murty sent a 'postcard' to JRD Tata to protest the discrimination. This is the beginning of an association that will change her life in so many ways.

Sudha Murty claimed that there was nothing great about her writing a letter to JRD Tata, the great thing was JRD read that postcard sent by a girl who was from a small town like Hubli.

She neither had any political/ money connection nor she knew anyone in Mumbai. She questioned him about not hiring a lady engineer. The way he responded made her realize that she values his patience, his time and his thinking more than her letter. It became the reason for Murty to consider him as her role model.

EXERCISES

Spellings.

A. *Spot the incorrectly spelt words in each sentence and correct the spelling mistakes.*

Answers:

1. Sudha Murty heads a foundation that supports the underprivileged. Her philanthropy influenced by JRD Tata who encouraged her to give back to society.
2. My niece is very careful about hygiene.
3. It is fascinating to see how the equipment works.
4. We enjoyed his humorous anecdotes.
5. Professor Sen retired today. The principal and Dr. Sen's colleagues gave her a beautiful memento.
6. The child watched with curiosity as the mechanic completed the maintenance work.
7. An argument between Komal and Kamal is nothing new. It's a regular occurrence.
8. The only certainty we can have is that nothing is permanent.

B. *Fill in the blanks using the correct spellings of the words given in brackets.*

1. Last year's harvest exceeded expectations. This year, however, the bad weather will result in a disappointing yield.
2. The people were inoculated against the disease.
3. A good calendar is indispensable for efficient time management.
4. He copied from the work of an amateur writer, but his plagiarism was soon discovered.
5. Their economy has grown; ours has been comparatively stagnant.
6. Please save the receipt of this transaction for future reference.

Homonyms, Homographs, Homophones

Exercises

C. Each set of sentences in Column X has homonyms. Match every sentence of each set in Column X with the corresponding meaning in Column Y of the homonym in the sentence.

Answers:

(I) 1. You must always bank on him- rely on

2. She withdrew money from the bank - financial institution

3. I sat on the bank of the river- sloping land beside a water body

(II) 1. He was fair-skinned- lightly colored

2. It wasn't a fair deal - free from bias and deception

3. We visited the fair- travelling show or exhibition

4. Her performance was fair- slightly above average quality

(III) 1. It will suit my needs -be acceptable to

2. I wore my best suit- set of garments

3. I brought a suit against him - legal proceedings

(IV) 1.The map was not to scale - ratio between actual size and its image

2. The thief could easily scale the wall - get on top of

3. The patient stood on the scale- weighing instrument

4. They were ranked on a scale of 10- standard of reference

(V) 1. We need someone to lead the team- be in charge of

2. The police are following a lead - clue pointing to possible solution.

3. She lost her lead in the final round- advantage held by a competitor

D. Fill in the blanks in each set of sentences with a single homonym.

Answers

1. She wrote a new play.

The children went to play in the park.

2. I was asked to pen a few lines of verse.

The sheep are not in their pen.

She uses a brush pen for calligraphy.

3. The spruce tree is found in temperate regions.

Let's spruce up the house before the guests arrive.

4. We didn't realize the cord of the pandemic.

The symphony is in the cord of C major.

You need to cord the fish before cooking it.

5. Watch out for fraudulent call and e-mails.

   She got me an expensive watch for my birthday.

Homographs

Exercise

E. For each set, match both sentences in Column X with the corresponding meaning in Column Y of the homograph in the sentence.

Answers:

1. (i) The mayor will present the award - to give, especially an award.
   (ii) She gave me a present for Diwali - something given as a gift.
2. (i) You missed the train by a minute - unit of time.
   (ii) The chances of success are minute - immeasurably small.
3. (i) I watched the match live on TV - being broadcast at the time of occurrence
   (ii) I live in Hyderabad - to inhibit.
4. (i) She did not bow before the queen - to lower one's head in respect.
   (ii) The archer picked up his bow - weapon for shooting arrows.
5. (i) Pick up the object - a material thing.
   (ii) I did not object to her demand - to express disapproval or disagreement.
6. (i) She did not shed a single tear - liquid produced by the eye when one cries.
   (ii) Do not tear the paper - to separate by force.
7. (i) The pipe was made of lead - a type of metal
   (ii) This will lead to success - result in
8. (i) My wound has not yet healed -injury
   (ii) I wound the tape -to arrange or coil around.
9. (i) She asked me to close the window - to shut
   (ii) He stood close to the window -very near

F. For each of the following words, make two sentences each that clearly demonstrate the different meanings these words have.

1. Bear - The banner bears a controversial message.
   I can bear the punishment.
2. Desert - The inhabitants had deserted the town.
   They were in the middle of the desert in New Mexico.
3. Fair -I am doing fair today.

The game was played fair and square.

4. Park - He hit the ball out of the park.

Vehicles are not allowed to park on the right side of the street.

5. Type - He continued to type while I was reading.

We do not need this type of drama.

6. Blue - The new tattoo blued his upper arm.

The job offer came out of the blue.

7. Train - She is a trained nurse.

We can catch the early morning train.

8. Saw - How much does a new saw cost?

We saw a great movie last week.

Homophones

Exercise

Answers:

G. Fill in the blanks with correct homophones from the options given in the box below.

1. bored, board
2. rode, road
3. principal, principle
4. they are, their, there
5. two, to, too
6. band, banned

H. Fill in the blanks with the correct homophone from the options given in the brackets.

1. pair
2. reign
3. tow
4. scent
5. wear

I. Show the difference between the words in the given sets of homophones by using them in sentences of your own.

1. aisle - She walked down the aisle looking for a place to sit.

   Isle - The British isles have an interesting history.

2. break - I will leave the door unlocked so you don't have to break into the house.

   Brake - The driver did not apply brakes at the zebra crossing and broke the traffic rules.

3. four - The teacher split up the students into groups of four.

   fore – The butterfly had beautiful fore and hind wings.

4. heal – John's dermatologist healed his skin diseases, which was very rare and poorly understood.

   heel - They will be kicking their heels for the next three months.

5. pane – Tania sat with her nose pressed against the dirty window pane.

   Pain - Robin felt a sharp pain in his shoulder.

6. past – It is past my bedtime.

   Passed – Jake passed the ball and I scored a goal.

7. paws – Hermine's cat licked his paws.

   Pause – Let us pause for a moment to consider how outrageous that is.

8. sell – This bool is selling like hot cakes.

   cell – The culprit was locked up in a cell.

Grammar

Noun- Pronoun Agreement

Exercise

Answers

A. **Fill in the blanks with suitable pronouns.**

1. her, the
2. themselves
3. its
4. it, their
5. his, the, their, this, his
6. his/her
7. the, their
8. the, the

Subject-Verb Agreement

B. Fill in the blanks in the sentences below using the appropriate form of the verb on the right. Use the verbs in the tenses suggested

Answers:

1. There **were** three crows on the tree branch.
2. The boys **were** playing table tennis.
3. Stephen **cleared** the table.

4. The planes **are approaching** the airport.
5. The children in this school **have** yoga classes twice a week.
6. Both the rice and the curd **were** delicious.
7. The rice and curd which the restaurant serves **is** delicious.
8. Rs. 20,000 a month **is** a good salary for a beginner.
9. Neither Murali nor Tara **knows** the answer to this question.
10. Either the boys or their parents **have collected** the report cards.

C. Fill in the blanks with either BE or HAVE in the present tense in a form that agrees with the subject of the sentence.

1. Neither of my brothers **have** any children.
2. The third innings of the match **has** begun.
3. Mathematics **is** an interesting subject.
4. This is the only one in his collection of stories that **is** worth reading.
5. My trousers **have** been stolen.
6. The shop, with all of its goods, **is** insured.
7. Seven lakh rupees **is** a large sum of money.
8. Aditi is one of the girls who **is** selected.
9. What **is** the news?
10. The police **have** arrested the culprit.

Reading

Answers

A. 1. JRD Tata

2. The author considers JRD Tata a great man, she always looked up to him, saw him as a role model for his simplicity, his generosity, his kindness and the care he took of his employees.

B. Without looking at Murty's essay again, say whether the following statements are true or false.

1. false
2. false
3. true
4. false

5. false
6. false
7. false

C. Choose the correct answers from the given below by scanning through Sudha Murty's essay.

1. b 2. a 3. b 4. b 5. c 6. a 7. c

D. Answer the following questions in a single word or Phrase. Find these answers by scanning through Sudha Murty's essay.

Answers:

1. Hubli
2. Sudha Kulkarni
3. Mr. Sumant Moolgaokar
4. Jamsetji Tata
5. Bombay House
6. IISC (Bangalore)
7. Tata Motors
8. Post Card
9. IISC (Bangalore)
10. 1982
11. Pune
12. Computer Science

Describing People, Objects, Places and Events

Exercises

F. Select <u>any three</u> of the topics given below, and mention three different ways in which each can be classified. **(One sample)**

1. Mobile phones:

A mobile phone is a wireless handheld device that allows users to make and receive calls. While the earliest generation of mobile phones could only make and receive calls, today's mobile phones do a lot more, accommodating web browsers, games, cameras, video players, and navigational systems. Also, while mobile phones used to be mainly known as "cell phones" or cellular phones, today's mobile phones are more commonly called "smart phones" because of all of the extra voice and data services that they offer.

The first mobile phones, as mentioned, were only used to make and receive calls, and they were so bulky it was impossible to carry them in a pocket. These phones used primitive RFID and wireless systems to carry signals from a cabled PSTN endpoint. Later, mobile phones belonging to the Global System for Mobile Communications (GSM) network became capable of sending and receiving text messages. As these devices evolved, they became smaller and more features were added, such as multimedia messaging service (MMS), which allowed users to send and receive images.

Most of these MMS-capable devices were also equipped with cameras, which allowed users to capture photos, add captions, and send them to friends and relatives who also had MMS-capable phones. Along with the texting and camera features, cell phones started to be made with a limited capability to access the Internet, known as “data services.” The earliest phone browsers were proprietary and only allowed for the use of a small subsection of the Internet, allowing users to access items like weather, news, and sports updates.

Eventually, phone makers started to engineer these phones to access the entire Internet, and webmasters for all sorts of businesses, government offices, and other domain holders started to make websites responsive to access by mobile phones. The trend, called “responsive design,” changed the face of the Internet, with mobile phone transactions making up a larger share of e-commerce sales and other activities.

A mobile phone typically operates on a cellular network, which is composed of cell sites scattered throughout cities, the countryside, and even mountainous regions. If a user happens to be located in an area where there is no signal from any cell site belonging to the cellular network provider he or she is subscribed to, calls cannot be placed or received in that location. However, the cellular networks used for mobile phones, now called “smart phones” when they encompass modern design, have also evolved. At the same time, the networks used by the smart have also evolved.

First, the 4G telecommunications network pioneered an all-Internet transmission system using things like smart antenna arrays and point-to-point network “fabrics.” While still being called a “cellular network,” 4G relied on IP transmission, rather than traditional telephone circuit switching, which led to certain reception and transmission efficiencies. Now, a dominant model called 5G is being unrolled throughout the world. The 5G system uses higher frequency waves and a closer cell structure, which changes the networking style and promises greater bandwidth for users.

On the device side, as companies continue to produce newer smart phones, two major operating systems have emerged. The Apple and Android operating systems are installed in the lion's share of new smart phones by various manufacturers. With both of these operating system platforms, it has become routine for engineers to build hundreds of different types of functionalities into modern smart phones through the design of mobile applications or “apps.” Application stores facilitate the purchase and use of these diverse applications.

G. Choose any <u>two topics</u> from the options given below and break them down into smaller categories in about 300-350 words. Remember to explain your criteria for classification and give examples as required.

1. Engineering:

Engineering is the application of science and mathematics to solve problems. Engineers figure out how things work and find practical uses for scientific discoveries. Scientists and inventors often get the credit for innovations that advance the human condition, but it is engineers who are instrumental in making those innovations available to the world. Engineers, as practitioners of engineering, are professionals who invent, design, analyse, build and test machines, complex systems, structures, gadgets, and materials to fulfil functional objectives and requirements while considering the limitations imposed by practicality, regulation, safety, and cost.

- Mechanical engineering involves the design, manufacturing, inspection, and maintenance of machinery, equipment, and components as well as control systems and instruments for monitoring their status and performance. This includes vehicles, construction and farm machinery, industrial installations, and a wide variety of tools and devices.
- Electrical engineering involves the design, testing, manufacturing, construction, control, monitoring, and inspection of electrical and electronic devices, machinery, and systems. These systems vary in scale from microscopic circuits to national power generation and transmission systems.
- Civil engineering involves the design, construction, maintenance, and inspection of large infrastructure projects such as highways, railroads, bridges, tunnels, dams, and airports.
- Computer engineering is the practice of designing computer software components, computer systems, networks, and computer software.
- Electronics and Instrumentation Engineering largely deals with the principle and operation of measuring instruments which are used in fields of design, the configuration of automated systems in electrical, pneumatic domains, etc.
- IT engineers are high-level IT personnel who design, install, and maintain a company's computer systems. They are responsible for testing, configuring, and troubleshooting hardware, software, and networking systems to meet the needs of the employer. IT engineers may also be required to train staff and manage projects.
- CSIT or Computer Science and Information technology is considered to be a sub-branch of CSE. It has similar subjects and curriculum as CSE. This course is more about software than hardware though. Subjects like machine learning, Artificial Intelligence are involved in this course.
- Electrical engineers design, develop, test, and supervise the manufacture of electrical equipment, such as electric motors, radar and navigation systems, communications systems, or power generation equipment.

The main objective of engineers and engineering is to benefit humankind by making life and living easier. The contributions of engineering cannot be summed up into a few words. Still, the right way to respect their immense role in society is by recognizing and using their inventions responsibly. Engineering always has and will continue to strive to lift our living standards through sustainable developments and considering conditions to protect our Earth's environment at all costs