

Chapter – 4

A Truly Beautiful Mind

Thinking About The Text

Q1. Here are some headings for paragraphs in the text. Write the number(s) of the paragraph(s) for each title against the heading. The first one is done for you.

- (i) Einstein's equation 9.
- (ii) Einstein meets his future wife?
- (iii) The making of a violinist ?
- (iv) Mileva and Einstein's mother ?
- (v) A letter that launched the arms race ?
- (vi) A desk drawer full of ideas ?
- (vii) Marriage and divorce ?

Answer. 1. (i) 9 (ii) 7 (iii) 3 (iv) 10 (v) 15 (vii) 11

Q2. Who had these opinions about Einstein?

- (i) He was boring.
- (ii) He was stupid and would never succeed in life.
- (iii) He was a freak

Answer. (i) Einstein's playmates thought that he was boring.

(ii) Einstein's headmaster thought that he was stupid and would never succeed at anything in life.

(iii) Einstein's mother thought that he was a freak.

Q3. Explain what the reasons for the following are.

- (i) Einstein leaving the school in Munich for good.
- (ii) Einstein wanting to study in Switzerland rather than in Munich.
- (iii) Einstein seeing in Mileva an ally.
- (iv) What do these tell you about Einstein?

Answer. (i) Albert Einstein was not a bad pupil. He scored good marks in almost every subject. However, he hated the regimentation of school, because of which he often had clashes with his teachers. At the age of 15, when he felt too stifled to continue studying, he left the school in Munich for good.

(ii) According to Einstein, German-speaking Switzerland was more liberal than Munich. Hence, he wanted to study in Switzerland.

(iii) Einstein had a special interest in Mileva, who was his fellow student. He thought that she was a very clever person. She had come to Switzerland because the University in Zurich was one of the few in Europe where women could get degrees. Einstein instantly realised that she was an ally against all the people he was at odds with. He thought she was a clever person.

(iv) All these instances indicate that Einstein was a visionary. He was clever and never hesitated in keeping his point of view in front of others. He never went with the tide and did things the way he wanted to. Once he knew that he was right, he was not afraid of being at odds with his teachers or for that matter anyone else. Even though he was doing well in school, he left it because he found it too stifling. He eventually moved to Zurich because he thought that this city was much more liberal than Munich. He liked to mix with people who had the same attitude as him. He was a strong man who stuck to his principles and ideas and was not afraid of bringing them into practice.

Q4. What did Einstein call his desk drawer at the patent office? Why?

Answer. Einstein was working as a technical expert in the patent office in Bern. He called his desk drawer at the patent office the "bureau of theoretical physics." He called it so because while he was supposed to be assessing other people's inventions, he was actually developing his own ideas in secret and his drawer was where he stored these ideas.

Q5. Why did Einstein write a letter to Franklin Roosevelt?

Answer. When the Nazis came to power in Germany, Einstein emigrated to the United States of America. The American physicists were in an uproar because of the discovery of nuclear fission in Berlin. They were afraid that the Nazis could now build and use an atomic bomb. At the urging of a colleague, Einstein wrote a letter to Franklin Roosevelt to warn him of the consequences of an atomic explosion.

Q6. How did Einstein react to the bombing of Hiroshima and Nagasaki?

Answer. The Americans developed the atomic bomb in a secret project and dropped it on the Japanese cities of Hiroshima and Nagasaki. Einstein was deeply shaken by the extent of the destruction caused by the explosions. He proposed the formation of a world government. However, his proposal was not paid any attention. Over the next decade, he got more involved in politics, trying to agitate people to bring an end to the arms race. He campaigned for peace and democracy till his last days

Q7. Why does the world remember Einstein as a "world citizen"?

Answer. The world remembers Einstein as a "World citizen" because he was a visionary and a scientific genius. He not only made many discoveries in science but was also deeply concerned about the growing arms race between certain nations in the world. He used his popularity to campaign for peace and democracy till his last days.

Q8. Here are some facts from Einstein's life. Arrange them in chronological order.

- Einstein publishes his special theory of relativity.
- He is awarded the Nobel Prize in Physics.
- Einstein writes a letter to U.S. President, Franklin D. Roosevelt, and warns against Germany's building of an atomic bomb.
- Einstein attends a high school in Munich.
- Einstein's family moves to Milan.
- Einstein is born in the German city of Ulm.
- Einstein joins a university in Zurich, where he meets Mileva.
- Einstein dies.
- He provides a new interpretation of gravity.
- Tired of the school's regimentation, Einstein withdraws from school.
- He works in a patent office as a technical expert.
- When Hitler comes to power, Einstein leaves Germany for the United States.

Answer. 1. Einstein is born in the German city of Ulm.

2. Einstein attends a high school in Munich.

3. Einstein's family moves to Milan.

4. Tired of the school's regimentation, Einstein withdraws from school.

5. Einstein joins a university in Zurich, where he meets Mileva.

6. He works in a patent office as a technical expert.

7. Einstein publishes his special theory of relativity.

8. He provides a new interpretation of gravity.

9. He is awarded the Nobel Prize in Physics.

10. When Hitler comes to power, Einstein leaves Germany for the United States. 11. Einstein writes a letter to U.S. President, Franklin D. Roosevelt, and warns against Germany's building of an atomic bomb.

Thinking About Language

Q1. Here are some sentences from the story. Choose the word from the brackets which can be substituted for the italicised words in the sentences.

1. A few years later, the marriage *faltered*. (failed, broke, became weak).

2. Einstein was constantly *at odds* with people at the university. (on bad terms, in

disagreement, unhappy)

3. The newspapers *proclaimed* his work as “a scientific revolution.” (declared, praised, showed)

4. Einstein got ever more involved in politics, *agitating* for an end to the arms buildup. (campaigning, fighting, supporting)

5. At the age of 15, Einstein felt so stifled that he left the school for good. (permanently, for his benefit, for a short time)

6. Five years later, the discovery of nuclear fission in Berlin had American physicists *in an uproar*. (in a state of commotion, full of criticism, in a desperate state)

7. Science wasn't the only thing that *appealed* to the dashing young man with the walrus moustache. (interested, challenged, worried)

Answer. 1. Became weak

2. In disagreement

3. Declared

4. Campaigning

5. Permanently

6. In a state of commotion

7. Interested

QII. Study the following sentences.

- Einstein became a gifted amateur violinist, maintaining this skill throughout his life.
- Letters survive in which they put their affection into words, mixing science with tenderness.

The parts in italics in the above sentences begin with –ing verbs, and are called participial phrases. Participial phrases say something more about the person or thing talked about or the idea expressed by the sentence as a whole. For example: – Einstein became a gifted amateur violinist. He maintained this skill throughout his life. Complete the sentences below by filling in the blanks with suitable participial clauses. The information that has to be used in the phrases is provided as a sentence in brackets.

1. _____, the firefighters finally put out the fire. (They worked round the clock.)
2. She watched the sunset above the mountain, _____ (She noticed the colours blending softly into one another.)
3. The excited horse pawed the ground rapidly, _____ (While it neighed continually.)
4. _____, I found myself in Bangalore, instead of Benaras. (I had taken the wrong train.)
5. _____, I was desperate to get to the bathroom. (I had not bathed for two days)
6. The stone steps, _____ needed to be replaced. (They were worn down).
7. The actor received hundreds of letters from his fans, _____ (They asked him to send them his photograph.)

Answer. 1. Working round the clock, the firefighters finally put out the fire.

2. She watched the sunset above the mountain, noticing the colours blending softly into one another.

3. The excited horse pawed the ground rapidly, neighing continually.

4. Having taken the wrong train, I found myself in Bangalore, instead of Benaras.

5. Having not bathed for two days, I was desperate to get to the bathroom.

6. The stone steps, being worn down, needed to be replaced.

7. The actor received hundreds of letters from his fans, asking him to send them his photograph.

Writing Newspaper Reports

Q1. Here are some notes which you could use to write a report. 21 August 2005 — original handwritten manuscript of Albert Einstein unearthed — by student Rowdy Boeynik in the University of the Netherlands — Boeynik researching papers — papers belonging to an old friend of Einstein — fingerprints of Einstein on these papers — 16-page document dated 1924 — Einstein's work on this last theory — behaviour of atoms at low temperature — now known as the Bose-Einstein condensation — the manuscript to be kept at Leyden University where

Einstein got the Nobel Prize. Write a report which has four paragraphs, one each on:

- **What was unearthed.**
- **Who unearthed it and when.**
- **What the document contained.**
- **Where it will be kept. Your report could begin like this:**

Answer. Student Unearths Einstein Manuscript Netherlands, 21 AUGUST 2005. An original handwritten Albert Einstein manuscript has been unearthed at a university in the Netherlands. In the University of the Netherlands, A student , Rowdy Boeynik, unearthed an Original Albert Einstein manuscript. Researching papers was belonging to an old friend of Einstein when he stumbled upon the manuscript. The fingerprints of Einstein have been found on these research papers. The yellowed 16-page German manuscript was dated December 1924 shows that the German born genius was working on his last major theory. The theory 'Quantum theory of the monatomic ideal gas', contains Einstein's work which is now known as the Bose-Einstein condensation. It stated the behavior of atoms at a low temperature near absolute zero . It was the last major work of the scientific genius. The original handwritten manuscript of Albert Einstein will be kept at Leyden University where Einstein got the Nobel Prize for Physics in 1921.

Thinking About The Poem

Q1. 1. What kind of place is Innisfree? Think about:

- (i) the three things the poet wants to do when he goes back there (stanza I);**
- (ii) what he hears and sees there and its effect on him (stanza II);**
- (iii) what he hears in his “heart’s core” even when he is far away from Innisfree (stanza III).**

2. By now you may have concluded that Innisfree is a simple, natural place, full of beauty and peace. How does the poet contrast it with where he now stands? (Read stanza III.)

3. Do you think Innisfree is only a place, or a state of mind? Does the poet actually miss the place of his boyhood days?

Answer. 1. Innisfree is a small island in a lake called Lough Gill, in Sligo County, Ireland. It is a simple, natural place, full of beauty and peace.

(i) The poet wants to build a small cabin made up of clay and wattles. He wants to keep honey bee hives. He wants to plant 9 rows of beans.

(ii) The poet hears the crickets' song, sees the linnets flying across the sky and glimmering midnight and glowing rooms. It gives the poet beautiful reminiscences.

(iii) When the poet is far away from Innisfree, he hears the sound of the lake washing its shore in his heart's core.

2. The poet contrasts the clay and wattle made cabins, bee loud glade, evenings with linnets, morning with dews, etc with the busy life where he lives now.

3. I think that it is a state of mind. It is an representative of what the poet considers an ideal place to live. Yes, he misses the place of his boyhood days and recalls the sound of the lake washing its shore in his heart's core.

QII. 1. Look at the words the poet uses to describe what he sees and hears at Innisfree

(i) bee-loud glade

(ii) evenings full of the linnet's wings

(iii) lake water lapping with low sounds What pictures do these words create in your mind?

2. Look at these words; ... peace comes dropping slow Dropping from the veils of the morning to where the cricket sings What do these words mean to you? What do you think "comes dropping slow...from the veils of the morning"? What does "to where the cricket sings" mean?

Answer. 1. (i) Bee loud glade - brings images of buzzing bees to our mind.

(ii) Evenings full of linnet's wings - bring to our mind the image of linnets flying across the sky.

(iii) Lake water lapping with low sounds- evoke the image of a lake's water washing the shore.

2. The given lines mean that "peace of mind can be slowly acquired from natural surroundings." According to the poem it is peace that comes dropping slow... from the veils of morning. To where the cricket sings indicates "a peaceful place where one can hear the vibrant sounds of nature like the sound of crickets at dawn."