



মণিপুরৰ শাসনৰত্ন (সংস্কৃত)

DEPARTMENT OF EDUCATION (S)
Government of Manipur

Lesson – 13

A BRAVE HEART DEDICATED TO SCIENCE AND HUMANITY

SOLUTIONS:

1. Answer the following questions in a sentence each:-

- i. How was Marja Sklowdaska save money for her study in Paris?
Ans:-Marja took a job as a governess and save a little money for her study in Paris.
- ii. Why did Marja often faint while she was a student at Sorbonne?
Ans:-Marja often fainted for lack of food while she was a student at Sorbonne.
- iii. Where did Marie and Pierre set up a laboratory?
Ans:- Marie and Pierre set up a laboratory in a wooden shed near their flat.
- iv. Why did Marie Curie name one of the two substances she discovered “Polonium”?
Ans:-Marie Curie name one of the two substances she discovered “Polonium” in honour of her country Poland.
- v. How did the Curies get a windfall of a ton of pitchblende?
Ans:- The Curies get a windfall of a ton of pitchblende as a gift from the emperor of Austria.
- vi. In the treatment of which disease, is Radium used with great effect?
Ans:- Radium is used with great effect in the treatment of cancer.
- vii. For which subject, were the Curies awarded the Nobel Prize in 1903?
Ans:- The Curies were awarded the Nobel Prize in 1903 for Physics.
- viii. How did Marie react when Pierre was killed?
Ans:- Marie clung to his lifeless body and remained disconsolate.

2. Answer the following questions in about 20-25 words each:-

- i. Give examples of some great men and women who attained greatness?
Ans:-Columbus, Vasco-de Gama, Robert Peary, Sir Ronald Ross, Hillary and Tenzing, Armstrong are some great men and women who had attained greatness.

- ii. Why does the writer say that for Marie life in the university was a disheartening experience in poverty and hunger?
Ans:- The writer says that for Marie life in the university was a disheartening experience in poverty and hunger because she lived only on bread, butter and tea and she often fainted for lack of food.
- iii. How did Marie and Pierre meet and marry?
Ans:- Marie met Peirre in the University. Then they began to work together in a shabby laboratory. Soon, their friendship turned into love and in less than a year, they got married.
- iv. Describe the laboratory that the Curies set up?
Ans:- Marie and Peirre set up a laboratory in a wooden shed near their flat. It had a leaky skylight and an earthen floor.
- v. Why was Marie interested in uranium?
Ans:- Marie was interested in uranium because it was known to give off very powerful rays by which men could see through many substances.
- vi. In what way was Henri Becquerel's discovery different from that of Marie Curie?
Ans:- Henri Becquerel discovered that Uranium is radioactive while Marie Curie discovered that Radium and Polonium possessed radio active in much higher degree.
- vii. How did luck favour the Curies during their struggle for the discovery of Radium?
Ans:-Luck favoured the Curies when a windfall came to them. It was a gift of a ton of pitchblende from the emperor of Austria.
- viii. Describe the night in which the Curies discovered Radium?
Ans:- One night, when the Curies went to the laboratory to look at the small bowls into which they had poured filtered pitchblende. Rays of soft, bluish purple light were coming out from the bowls. Radium was discovered.
- ix. Why are the benefits of Radium incalculable?
Ans:- The benefits of radium in the world of medicine are incalculable. It is used in the treatment of Cancer and killing of bacteria of diseases such as typhus, cholera and anthrax.
- x. Why did Marie Curies refuse to patent the discovery of Radium?
Ans:- Marie Curies refused to patent the discovery of Radium because she want to give it free to the world to be used properly.

3. Answer the following questions in about 50-60 words each:-

- i. What characteristics are necessary in men and women to attain greatness? Explain with examples.

Ans:-The characteristics which are necessary in men and women to attain greatness are courage, commitment, dedication and singleness of purpose in their effort and an indomitable spirit which characterise the human spirit. Examples of such great men and women are Columbus and Vasco-de Gama sailing to the unknown sea, Robert Peary to race to the pole, Sir Ronald Ross to fight against malaria, Hillary and Tenzing to reach the top of Everest and Armstrong and his team to go to the moon.

- ii. How did Marja Sklowdaska show her sense of determination when her father could not afford to send her to Sorbonne?

Ans:- When her father could not afford to send her to Sorbonne, Marja Sklowdaska took a job as a governess and saved a little money. With that little money she went to Sorbonne to study science. Her father could send her only a small amount and her life in the university was a disheartening experience in poverty and hunger. She lived only on bread, butter and tea and she often fainted for lack of food. In spite all this she pursued her studies indomitably.

- iii. Show how Marie Curie faced all the miseries of life with courage in her work to discover Radium?

Ans:-Marie Curie faced all the miseries of life with courage in her work to discover Radium along with her husband who loved and supported her. They sacrificed all the luxuries of life to save money to buy whatever little amount of extremely expensive pitchblende. They lived in utter penury, not buying costly food and warm clothes for the extremely cold Parisian winter. Often they could not sleep during the cold nights due to lack of warmth. Overwork seriously affected her health.

- iv. Write how the Curies worked for four more years for the discovery of radium after they received a ton of pitchblende as a gift?

Ans:- The Curies continued their work for four more years after receiving a ton of pitchblende as a gift. Marie toiled along stirring large pot of pitchblende ensuring that fires beneath were active throughout day and night. One night, after a day's tiresome work, they went home. They went to the laboratory to have another look at the hundreds of small bowls into which they had poured filtered pitchblende and discovered Radium.

- v. Write what kind of woman Marie Curie was?

Ans:-Marie Curie was a living example who pursued her life's goal with great courage, endurance, dedication and strength of character. She displays strength of mind that is not defeated by extremely hostile and unfavourable conditions of life. She could have patented her discoveries and become rich, but this noble woman refused to do so and gave it free to the world to be used properly.

4. Choose the correct answer from the four alternatives given and write it in the space provided :

- i. Marja Sklowdaska became a governess because she wanted to
Ans:- (b) earn money for her education in Paris.
- ii. The Curies received a ton of pitchblende from
Ans:- (d) the emperor of Austria
- iii. Radium that the Curies discovered looked like
Ans:- (c) salt
- iv. Marie Curie did not patent her discovery. It was so because
Ans:- (b) she was noble and great



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VOCABULARY

1. Match the words in A with the words that have opposite meanings to them (antonyms) in B.

A	B
Active	Cowardly
Depart	Contract
Bold	Despair
Cheap	Major
Expand	Export
Hope	Passive
Import	Arrive
minor	dear

Now, fill in the blanks in the sentences with suitable words from those given above:

- With the coming of March, spring, the season of flower and colour will arrive.
- Dr. Chaoba played a major role in the improvement of the conditions of the hospital.
- He always talks big, but when faced with danger he behaved in a cowardly manner.
- Let us not despair, life is beautiful and purposeful.
- The economy of the state is in a bad state. Our leaders cannot have a passive attitude to it.

Now, match the words in A below with their definition in B.

A	B
Biographer	A person who composes music
Chemist	A person who knows about language
Composer	A person who is a specialist in treatment of illness
Optician	A person who directs a film or drama
Director	A person who writes the life story of a person
Physician	A person who is an expert in chemistry
Linguist	A person who is a specialist about eyes

GRAMMAR

Define Connectors. Give some examples.

Ans:- Words that connect two sentences are called Connectors. Examples: and, but, while, when, which, where, so that, since, whereas, because, if, therefore, etc.

Now, use suitable Connectors in the following sentences. The place where the connectors will be used is indicated by the sign/.

- i. Ram is rich/Mani is poor.
Ans:- Ram is rich but Mani is poor.
- ii. The rain came down/the dance was in progress.
Ans:-The rain came down while the dance was in progress.
- iii. That is the dog/bit the cow.
Ans:- That is the dog that bit the cow.
- iv. Assam is a place /there are many fields.
Ans:- Assam is a place where there are many fields.
- v. Manju came early/she could get a front seat.
Ans:-Manju came early so she could get a front seat.
- vi. The Principal has been on leave/7th of July.
Ans:- The Principal has been on leave since 7th of July.
- vii. You can take rest/you are tired.
Ans:- You can take rest if you are tired.
- viii. Jonathan studies hard/he has stood first.
Ans:- Jonathan studies hard and he has stood first.



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