CLASS X
ADDITIONAL ENGLISH
CHAPTER 3 - THE CONQUEST OF MALARIA
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SOLUTIONS

EXERCISES

A. Do the exercises as directed:-

1. Give the noun forms of the following words.

	Given words	Noun forms
(i)	Tropical:	***Tropic***
(ii)	Malarial:	***Malaria***
(iii)	Colossal:	***Colossus***
(iv)	Infected:	***Infection***
(v)	Monstrous:	***Monster***
(vi)	Definitely:	***Definiteness***
(vii)	Contrived:	***Contrivance***
(viii)	Dissected:	***Dissection***
(ix)	Reveals:	***Revelation***
(x)	Conclusive:	***Conclusion***
(xi)	Prevent:	***Prevention***

2. Frame sentences to illustrate the use of the following.

i. **Child's play:** Doing these sums is child's play when you have had some practice.

ii. **Suck up:** She sucked up to her teachers especially her Physics teacher.

iii. **On the right road:** We are on the right road to success.

iv. **Tried out:** He tried out the various guitars before buying one.

v. **Live on:** We have to live on whatever little we have.

vi. **Be in no hurry:** He would be in no hurry to leave the place.

vii. **After-effects:** This medicine had shown no after-effects when they experimented on monkeys.

3. Frame sentences to illustrate the use of the following as directed.

a. Live (as verb and as adjective)

i. Verb: I do not know where Mr. John and his wife live.
ii. Adjective: We watched the live coverage of the ceremony.

b. Infected (as verb and as adjective)

i. Verb: Many people were infected by an unknown virus.
ii. Adjective: The infected persons were air-lifted and taken to Delhi.

c. Powerless (as noun and as adjective)

i. Noun: The powerless had to suffer the oppression without any complaints.
ii. Adjective: I was powerless to help you as I had no money.

4. Give one word for each of the following groups of words.

i. A disease in which sugar and starch are not properly absorbed from the blood: ***Diabetes***

ii. An animal or plant that lives on or in another gets its food from it: ***Parasite***

iii. Inability to sleep: ***Insomnia***

iv. A disease of an abnormal growth of cells in the body which often causes death: ***Cancer***

v. A person who studies or writes about history: ***Historian***

vi. Celebration of a date that is exactly a year or a number of years after an event: ***Anniversary***

vii. An account written usually by somebody in public life of their own life and experiences: ***Autobiography***

viii. A disease which causes legs and arms or other parts of the body to assume monstrous proportions: ***Elephantiasis***

ix. A substance used for killing insects: ***Insecticide***

x. A rapid spread of a disease among many people in the same place: ***Epidemic***

xi. An infectious and often fatal disease causing diarrhoea and vomiting: ***Cholera***

xii. An often fatal disease of the liver suffered specially by people who drink too much alcohol: ***Cirrhosis***

B. Comprehension:-

1. What was the extent of the trouble which malaria used to cause in the tropical countries?

Ans: Malarial fever is the most common of all the tropical diseases. It causes roughly one-third of all the attendances at hospitals in the tropics and about one-third of the entire population in many hot countries suffer from it every year. Although only about one in several hundred proves fatal, yet the disease is so prevalent that the total number of deaths due to it is colossal. It has been officially estimated that in India alone something like **1,300, 000** deaths are caused by it in an average year.

2. Why did malaria remain a plague over the vast part of the earth's surface?

Ans: ***Malaria*** threatened at every turn all that lived within the region affected. For years, scientists and doctors sought the secret of how malaria was spread but without any success. So, it remained a plague over the vast part of the earth's surface.

3. What were the theories scientists and doctors used to advance about the possible cause of malaria?

Ans: For many years, scientists and doctors were not able to find how malaria was spread. Some declared it to be caused by night air and others were of the opinion that it came from infected waters. Both theories were to be disproved.

4. What was the discovery of *Sir Patrick Manson*?

Ans: ***Sir Patrick Manson*** discovered that filarial parasites which cause ***elephantiasis*** are transmitted by mosquitoes.

5. What was the famous partnership in the history of research referred to in the lesson? What was the outcome of the partnership?

Ans: The famous partnership in the history of research referred to in the lesson is the partnership between ***Sir Patrick Manson*** and ***Major Ronald Ross*** in the search for the spread of malaria.

The outcome of the partnership was that after four years of toil, ***Ross*** was able to discover that malaria was transmitted to men by female ***Anopheles*** mosquitoes which carry the malarial parasites.

C. Composition:-

1. Describe the experiments of *Sir Ronald Ross* which led to his abandonment of the theory of *Manson*.

Ans: To establish the truth or otherwise of the infected water theory put forward by ***Manson***, ***Ross*** took four mosquitoes which had fed upon a malarial victim and placed them in two bottles with a little water. The bottles were kept in a cool place for a week, at the end of which the mosquitoes were dead. The bottles contained grubs showing that the eggs laid by the insects had been hatched.

Then, ***Ross*** made his test. He removed the bodies of the mosquitoes but not the grubs. He gave the contents of the bottles to certain natives who volunteered after a full explanation of the water. The result of the experiment was odd. One man developed an illness which at first seemed like malaria. But when his blood was examined no malarial parasites were found. Two other men who drank the infected water remained quite well. Further experiments with infected water yielded negative results. Eventually ***Ross*** abandoned ***Manson's*** theory, so far as the infection was concerned and began to search for other means by which the parasites within the mosquito might enter the blood of human being.

2. Describe how *Ross* found out two unknown things from his experiments.

Ans: In the ***August*** of **1897**, ***Ross*** made specimens of ***dappled-winged brown*** mosquitoes suck blood from a malarial patient. When he examined the stomachs of the mosquitoes, he saw cells of clear and almost perfectly circular outline. When he focused his lens carefully on one of these cells, he found that it contained granules of some black substances, exactly like the pigment of the parasites of malaria.

Thus, he discovered that the germs of malaria were sucked by certain mosquitoes from the body of an infected person and developed in the stomach tissue of the insect. The discovery was really two discoveries. He was able to discover two unknown quantities simultaneously – the kind of mosquito which carries the parasite and position of the parasite within it. The mosquito was the ***Anopheles*** and the parasite lives in or on its gastric wall and can be recognized by its characteristic pigment. By toiling for many years, ***Ross*** was able to make one of the greatest medical discoveries and help in saving millions of lives.

3. Write a project report on eradication programme of malaria organized in your locality.

Ans: ***Malaria Eradication Programme at Malom Tuliyaima:*** In the lead-up to this year's ***World Malaria Day*** celebrated every year on the ***25th of April***, community members of the locality did something very commendable. The ***Malom Youth Club*** declared ***April, 2020, the Anti- Malaria Month***. In the first week of the month, Volunteers held awareness campaigns with the help of experts from ***Vector Borne Diseases*** of the ***State Medical Department***. The experts highlighted how malaria spread and measures to contain it successfully if not eradicate fully. Slide shows were shown on how vector control programmes in conjunction with the monitoring and treatment of the infected humans could curtail the reduction in numbers of infection.

Later on, the volunteers worked together so that there were no wetland breeding grounds for mosquitoes to lay eggs, meetings were held for changes in water management and community members were encouraged to use screens in dwellings.

The programme ended with quizzes, debates and painting competition for school going students of the locality. It was felt by many that these measures would greatly reduce the number of infection by malaria and lead to complete eradication of what was once a curse on mankind.

4. "The hour of the final onslaught had struck, *Manson* explained his theories to *Ross*……….."
Why does the writer say that the meeting of *Sir Ronald Ross* and *Manson* was the hour of the final onslaught?

Ans: ***Major Ronald Ross*** of the ***Indian Medical Service*** was a doctor who had long been interested in the study of malaria and other tropical diseases. In **1894**, he returned home to London on leave. While he was in London, he called upon ***Manson***. ***Sir Patrick Manson*** had worked as a medical officer at a ***Chinese hospital in Formosa*** and discovered that mosquitoes were the carriers of the germs which caused elephantiasis. In this meeting, ***Manson*** explained his theories to ***Ross*** who resolved to begin his experiments upon his return to India.

Thus, began one of the most famous partnerships in the history of research. It was a partnership between two devoted servants of humanity, one in London and the

other in India who laboured for four years inspiring and encouraging each other when doubts assailed them. As this meeting set the motions of the conquest for malaria going, the writer rightly said that the meeting of ***Sir Ronald Ross*** and ***Manson*** was the hour of the final onslaught.

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