READING PASSAGE 2

You should spend about 20 minutes on ***Questions 14-26*** *which are based on Reading Passage 2 below.*

The Conquest of Malaria in Italy, 1900-1962

Malaria. Bad air. Even the word is Italian, and this horrible disease marked the life of those in the peninsula for thousands of years. Yet by 1962, Italy was officially declared malaria-free, and it has remained so ever since. Frank Snowden's study of this success story takes us to areas historians have rarely visited before.

A Everybody now knows that malaria is carried by mosquitoes. But in the 19th century, most experts believed that the disease was produced by "miasma" or "poisoning of the air". Others made a link between swamps, water and malaria, but did not make the further leap towards insects. The consequences of these theories were that little was done to combat the disease before the end of the century. Things became so bad that 11 million Italians (from a total population of 25 million) were "permanently at risk". In malarial zones the life expectancy of land workers was a terrifying 22.5 years. Those who escaped death were weakened or suffered from splenomegaly - a "painful enlargement of the spleen" and "a lifeless stare". The economic impact of the disease was immense. Epidemics were blamed on southern Italians, given the widespread belief that malaria was hereditary. In the 1880s, such theories began to collapse as the dreaded mosquito was identified as the real culprit.

B Italian scientists, drawing on the pioneering work of French doctor Alphonse Laveran, were able to predict the cycles of fever but it was in Rome that further key discoveries were made. Giovanni Battista Grassi, a naturalist, found that a particular type of mosquito was the carrier of malaria. By experimenting on healthy volunteers (mosquitoes were released into rooms where they drank the blood of the human guinea pigs), Grassi was able to make the direct link between the insects (all females of a certain kind) and the disease. Soon, doctors and scientists made another startling discovery: the mosquitoes themselves were also infected and not mere carriers. Every year, during the mosquito season, malarial blood was moved around the population by the insects. Definitive proof of these new theories was obtained after an extraordinary series of experiments in Italy, where healthy people were introduced into malarial zones but kept free of mosquito bites - and remained well. The new Italian state had the necessary information to tackle the disease.

C A complicated approach was adopted, which made use of quinine - a drug obtained from tree bark which had long been used to combat fever, but was now seen as a crucial part of the war on malaria. Italy introduced a quinine law and a quinine tax in 1904, and the drug was administered to large numbers of rural workers. Despite its often terrible side-effects (the headaches produced were known as the "quinine-buzz") the drug was successful in limiting the spread of the disease, and in breaking cycles of infection. In addition, Italy set up rural health centres and invested heavily in education programmes. Malaria, as Snowden shows, was not just a medical problem, but a social and regional issue, and could

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only be defeated through multi-layered strategies. Politics was itself transformed by the anti-malarial campaigns. It was originally decided to give quinine to all those in certain regions - even healthy people, peasants were often suspicious of medicine being forced upon them. Doctors were sometimes met with hostility and refusal, and many were dubbed "poisoners".

Despite these problems, the strategy was hugely successful. Deaths from malaria fell by some 80% in the first decade of the 20th century and some areas escaped altogether from the scourge of the disease. War, from 1915-18, delayed the campaign. Funds were diverted to the battlefields and the fight against malaria became a military issue, laying the way for the fascist approach to the problem. Mussolini's policies in the 20s and 30s are subjected to a serious cross- examination by Snowden. He shows how much of the regime s claims to have "eradicated" malaria through massive land reclamation, forced population removals

D and authoritarian clean-ups were pure propaganda. Mass draining was instituted — often at a great cost as Mussolini waged war not on the disease itself, but on the mosquitoes that carried it. The cleansing of Italy was also ethnic, as "carefully selected" Italians were chosen to inhabit the gleaming new towns of the former marshlands around Rome. The "successes" under fascism were extremely vulnerable, based as they were on a top-down concept of eradication. As war swept through the drained lands in the 40s, the disease returned with a vengeance.

In the most shocking part of the book, Snowden describes - passionately, but with the skill of a great historian — how the retreating Nazi armies in Italy in 1943-44 deliberately caused a massive malaria epidemic in Lazio. It was "the only known example of biological warfare in 20th- century Europe". Shamefully, the Italian malaria expert Alberto Missiroli had a role to play in the disaster: he did not distribute quinine, despite being well aware of the epidemic to come. Snowden claims that Missiroli was already preparing a new strategy - with the support of the US Rockefeller Foundation - using a new pesticide, DDT. Missiroli

E allowed the epidemic to spread, in order to create the ideal conditions for a massive, and lucrative, human experiment. Fifty-five thousand cases of malaria were recorded in the province of Littoria alone in 1944. It is estimated that more than a third of those in the affected area contracted the

disease. Thousands, nobody knows how many, died. With the war over, the US government and the Rockefeller Foundation were free to experiment. DDT was sprayed from the air and 3 million Italians had their bodies covered with the chemical. The effects were dramatic, and nobody really cared about the toxic effects of the chemical.

By 1962, malaria was more or less gone from the whole peninsula. The last cases were noted in a poor region of Sicily. One of the final victims to die of the disease in Italy was the popular cyclist, Fausto Coppi. He had contracted malaria in Africa in 1960, and the failure of

F doctors in the north of Italy to spot the disease was a sign of the times. A few decades earlier, they would have immediately noticed the tell-tale signs; it was later claimed that a small dose of quinine would have saved his life. As there are still more than 1 million deaths every year from malaria worldwide, Snowden's book also has contemporary relevance. This is a disease that affects every level of the societies where it is rampant. It also provides us

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with "a message of hope for a world struggling with the great present-day medical emergency".

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Questions 14-18

*Complete the summary below using **NO MORE THAN TWO WORDS** from the passage.*
*Write your answers in boxes **14-18** on your answer sheet.*

Before the link between malaria and **14** _____ was established, there were many popular theories circulating among the public, one of which points to **15** _____, the unclean air. The lack of proper treatment affected the country so badly that rural people in malaria infested places had extremely short **16** _____. The disease spread so quickly, especially in the south of Italy, thus giving rise to the idea that the disease was **17** _____. People believed in these theories until mosquito was found to be the **18** _____ in the 1880s.

Questions 19-21

Do the following statements agree with the information given in Reading Passage 2?
*In boxes **19-21** on your answer sheet, write*

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

19 The volunteers of the Italian experiments that provided assuring evidence were from all over Italy.

20 It's possible to come out of malarial zones alive.

21 The government successfully managed to give all people quinine medication.

Questions 22-26

*Reading Passage 2 has six paragraphs, **A-F**.*
Which paragraph contains the following information?
*Write the correct letter, **A-F**, in boxes **22-26** on your answer sheet.*

22 A breakthrough in the theory of the cause of malaria

23 A story for today's readers

24 A description of an expert who didn't do anything to restrict the spread of disease

25 A setback in the battle against malaria due to government policies

26 A description of how malaria affects the human body

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