

## PASSAGE 1 – Questions 1-10

Jonas Salk is the American physician and medical researcher who developed the first safe and effective vaccine for poliomyelitis. Salk received his M.D. in 1939 from New York University College of Medicine, where he worked with Thomas Francis Jr., who was studying how to develop vaccines from killed viruses. Salk joined Francis in 1942 at the University of Michigan School of Public Health and became part of a group that was working to develop a vaccine against influenza.

In 1947, Salk became associate professor of bacteriology and head of the Virus Research Laboratory at the University of Pittsburgh School of Medicine, where he began research on poliomyelitis. Working with scientists from other universities in a program to classify the various strains of the polio virus, Salk corroborated other studies in identifying three separate strains. He then demonstrated that killed virus of each of the three, although incapable of producing the disease, could induce antibody formation in monkeys.

In 1952, he conducted field tests of his killed-virus vaccine, first on children who had recovered from polio and then on subjects who had not had the disease. The results of both tests showed that the children's antibody levels rose significantly and no subjects contracted polio from the vaccine. His findings were published the following year in the *Journal of the American Medical Association*. In 1954, a mass field trial was held, and the vaccine, injected by needle, was found to safely reduce the incidence of polio. On April 12, 1955, the vaccine was released for use in the United States.

Salk served successively as professor of bacteriology, preventive medicine, and experimental medicine at Pittsburgh, and in 1963, he became fellow and director of the Institute for Biological Studies in San Diego, California, later called the Salk Institute. Among many other honors, he was awarded the Presidential Medal of Freedom in 1977.

1. What is the main idea of the passage ?
  - A. How Jonas Salk trained to be a physician and medical researcher
  - B. How the medical research of Jonas Salk led to the development of the polio vaccine
  - C. How Salk and his colleagues learned to kill viruses
  - D. How Salk was promoted to important positions at the University of Pennsylvania
2. Which of the following is the closest in meaning to the underlined word “**vaccine**” as used in paragraph 1 of the passage ?
  - A. Medicine designed to cure a disease temporarily
  - B. Medicine that cures a disease after the patient gets sick
  - C. Medicine designed to kill viruses that are fatal to children
  - D. Medicine that creates immunity against a disease
3. In the first paragraph, what was Thomas Francis Jr. studying ?
  - A. How to prevent the spread of influenza in Michigan
  - B. How to work with physicians from Manhattan
  - C. How to develop vaccines from killed viruses

