Albert Einstein 2 Essay, Research Paper

Albert Einstein was born in Ulm, Germany on March 14,1878.Einstein moved to Munich when He was just an infant. The family business was the manufacturing of electrical parts. Around 1886 Albert Einstein began his school career in Munich. As well as his violin lessons, which he had from, age six to age thirteen, He also had religious education at home where he was taught Judaism. Two years later he entered the Luitpold Gymnasium and after this his religious education he was sent to school. He studied mathematics, in particular the calculus,The Beginning at 1891. In 1894 Einstein’s family moved to Milan, But Einstein remained in Munich. In 1895 Einstein failed an examination that would have allowed him to study for a diploma as an electrical engineer at the Eidgenossische Technische Hochschule in Zurich. Einstein renounced German citizenship in 1896 and he was to be stateless for a number of years. He did not even apply for Swiss Citizenship until 1899, His citizenship was granted in 1901. Following the failing of the entrance exam to the E.T.H., Einstein attended secondary school at Aarau planning to use this route to enter the E.T.H. in Zurich. While at Aarau he wrote an essay for which was only given a little above half marks in which he wrote of his plans for the future, He was to have the good fortune to pass his examinations, He would go to Zurich. Einstein would stay there for four years in order to study mathematics and physics. He imagined himself becoming a teacher in those Branches of the natural sciences, He choose the theoretical part of them. Here are the reasons, which lead him to this plan. Above all, it is his disposition for abstract and mathematical thought, and his lack of imagination and practical ability. But Einstein succeeded with his plan graduating in 1900 as a teacher of mathematics and physics. One of his friends at E.T.H. was Marcel Grossmann, who was in the same class as Einstein. Einstein tried to get a post writing to Hurwitz who held out some hope of a job, But nothing came of it. Three of Einstein’s fellow students, including Grossmann, were appointed assistants at E.T.H. in Zurich. But clearly Einstein had not impressed enough people and still in 1901 he was writing to universities in the hope of obtaining a job, but without success. He did manage to avoid Swiss military services on the grounds that he had flat feet and varicose veins. By mid 1901 he had a temporary job as a teacher, teaching mathematics at the Technical High School in Winterthur. Around this time he wrote I have given up his dream become a university teacher. He got a temporary job teaching in a private school in Schaffhausen. Then Grossmann’s father tried to help. Einstein got a job by recommending himself to the director of the patent office in Bern. Einstein was appointed as a technical expert third class. Einstein worked in this patent office from 1902 to 1909, He had a temporary post when he was first given the job, But in 1904 his job became permanent and in 1906 he was promoted to technical expert second class. While in the Bern patent office he completed an astonishing range of theoretical physics publications, That he wrote in his spare time without close contact with scientific colleagues. Einstein earned a doctorate from the University of Zurich in 1905 for a thesis on a new determination of molecular dimensions. He dedicated the thesis to Grossmann. In the first of three papers, all written in 1905, Einstein examined the phenomenon discovered by Max Planck. The electromagnetic energy seemed to be emitted from radiating objects in discrete quantities. The energy of these quanta was directly proportional to the frequency of the radiation. This seemed to contradict classical electromagnetic theory, based on Maxwell’s equations and the laws of thermodynamics, which were that electromagnetic energy consisted of waves which could contain any small amount of energy. Einstein used Planck’s quantum hypothesis to describe the electromagnetic radiation of light. Einstein’s second paper in 1905 was what is today called the special theory of relativity. He based his new theory on a reinterpretation of the classical principle of relativity, namely that the laws of physics had to have the same form in any frame of reference. As a second fundamental hypothesis, Einstein assumed that the speed of light remained constant in all frames of reference, as required by Maxwell’s theory. Later in 1905 Einstein showed how mass and energy were the same. Einstein was not the first to say all the components of special theory of relativity. His contribution is unifying important parts of classical mechanics and Maxwell’s electrodynamics. The third of Einstein’s papers of 1905 concerned statistical mechanics, a field of that had been studied by Ludwig Boltzmann and Josiah Gibbs. After 1905 Einstein continued working in the areas described above. He made important work done by him to quantum theory, but he wanted to extend the special theory of relativity to phenomena involving acceleration. The key appeared in 1907 with the principle of equivalence, in which gravitational acceleration was held to be indistinguishable from acceleration caused by mechanical forces. Gravitational mass was therefore identical with inertial mass. In 1908 Einstein became a lecturer professer at the University of Bern after giving in his Habilitation thesis Consequences for the constitution of radiation following from the energy distribution law of black bodies. The next year he become a professor of physics at the University of Zurich, He had resigned his lectureship at Bern and his job in the patent office in Bern. By 1909 Einstein was recognized as a leading scientific thinker and in that year he resigned from the patent office. He was appointed a full professor at the Karl-Ferdinand University in Prague in 1911