

BERKELEY QUESTIONS by Katy Suttorp (3), ____\95

1. A British physicist and mathematician, his successful investigation of the motions of Saturn's rings placed him in the forefront of research workers in the second half of the nineteenth century. Some feel that his most brilliant work was in his contribution to the kinetic theory of gases but he is most well-known for his discovery of the laws of electromagnetism. FTP, name this man who formulated the equations which form the foundation of all electrical and radio science.

\James Clerk MAXWELL\

2. During the French Revolution, he participated in a government uprising which resulted in the confiscation of his family's property, his imprisonment and a near escape of execution. He went on to become a business man and ultimately a social philosopher who conceived of a new social order in which no job would be undertaken for which there was not a passionate stimulus. FTP, name this man who conceived the "phalanstery" type of social organization.

\Charles FOURIER\

3. It is something that generally can not be visualized but mathematicians find it a useful concept because it allows them to think of nongeometrical problems in geometrical terms. The simplest example of it is one in which four mutually perpendicular lines pass through a single point and in which four coordinates would be required to locate a point. However, most non-mathematicians know it better for its involvement with the "space-time" of relativity. FTP, name this concept.

\FOURTH DIMENSIONAL SPACE\

4. It is stemless and has ovate leaves and large flowers, varying from whitish to purple in color. Its roots are thick and forked and sometimes resemble a human body. Because of the peculiar root shape, superstitions arose about its magical qualities and many still survive. FTP, name this poisonous herb of the nightshade family.

\MANDRAKE\

5. It rises 8,400 feet and was dormant for 137 years before its most recent eruption. In its most recent eruption, it blew 1,280 feet of the mountain top, sending more than 4 billion tons in the air, burying nearby Spirit Lake and spreading ash over parts of four states from its location in southwest Washington. FTP, name this peak of the Cascades which erupted in 1980.

\MT. ST. HELENS\

6. Generally acknowledged to be the greatest Italian keyboard composer of his time, he remained under the strong personal and musical influence of his father until his father's death. He went on to compose harpsichord sonatas and in 1709, met and competed against Handel in a competition in which Handel was declared the superior organist but both were declared equally masterful with the harpsichord. FTP, name this man, composer of the thirty Essercizi sonatas.

\Domenico SCARLATTI\

7. While remaining within the Catholic Church, it adopted principles similar to those of John Calvin. The movement had great appeal among the urban middle classes, the county clergy and some monastic orders but its greatest strength came from the hostility towards the Jesuits. FTP, name this movement which emphasized predestination and inner grace rather than free will and good works.

\JANSENISTS\

8. It began badly for the British: they did not have enough troops immediately available to put down an opposition who had been brought up in outdoor life and who were fighting on their own ground. In addition, Western opinion, including the United States', was with the underdog. But the British quickly prevailed and by 1902 had negotiated the Treaty of Vereeniging, establishing British rule but promising ultimate self-government. FTP, name this war which ultimately led to the creation of the Union of South Africa.

\BOER WAR\

9. It is very narrow and has steep sides about 500 feet high. During the early period American westward expansion, approximately 200,000 people passed through it. And during the civil war, there was considerable activity surrounding it, as both sides sought to hold this strategic pass through the Valley of Virginia. FTP, name this early colonial route to the West, believed to have been pioneered by Daniel Boone.

\CUMBERLAND GAP\

10. "Cloudy", "The Big Bright Green Pleasure Machine", "Patterns", "The Dangling Conversation", "Flowers Never Bend With the Rainfall", "A Simple Desultory Philippic (Or How I Was Robert McNamara'd Into Submission)", "The 59th Street Bridge Song" and "Homeward Bound" can all be found on a Simon and Garfunkel album which derives its name from Scarborough Fair, also found on it. FTP, name it.

\PARSLEY, SAGE, ROSEMARY, AND THYME\

11. Influenced by Marcel Duchamp, he attempted to transform common objects into art by placing them in an art context. he based his painting technique on the informal brushwork and texture of abstract expressionism, attaching literal objects such as rulers and brooms to the canvas and he also derived the subjects of his bronze castings from common objects. FTP, name this American artist whose flags and target images heralded the pop art movement in the 1950s.

\Jasper JOHNS\

12. In the late 17th and 18th centuries, it became a center of the arts and an outstanding showplace of baroque and rococo architecture. In the late 18th and 19th century, it was a leading center of the Romantic movement and a center of German opera in the late 19th and early 20th centuries. And before it was severely damaged by British and U.S. bombing during World War II, it was considered one of the world's most beautiful cities. FTP, name this city whose attack was the focus of Slaughterhouse Five.

\DRESDEN\

13. Having spent three years working on the atomic bomb, he went on to teach at Cornell and at the California Institute of Technology where he became professor of theoretical physics. In 1949, he proposed a diagram which showed the track of a particle in space and in 1957, he and Murray Gell-Mann proposed the theory of the weak nuclear force. Also with Gell-Mann, he hypothesized the existence of a more fundamental type of an elementary particle than those then known. FTP, name this man who shared the 1965 Nobel Prize in Physics and who co-hypothesized the existence of the quark.

\Richard Phillip FEYNMAN\

14. It originated in the Middle East and was adapted in Europe in the middle Ages. Its popularity continued in Western Europe until the 17th century when it sharply declined, despite the advent of an enlarged version of it, the pantaleon, in the early 18th century. But in modern times, it is a popular instrument in gypsy bands in Eastern Europe. FTP, name this relative to the modern zither.

\DULCIMER\

15. Also known as Rigil Kent or Rigil Kentaurus, it is a yellow main-sequence star of the same spectral class as the sun and of about the same size and mass. It is the third brightest star in the sky and is a triple star, consisting of three components A, B, and C, with the C component being 4.28 light-years from the earth. FTP, name this star whose component C is the closest star to the earth, other than the sun.

ALPHA CENTAURI

16. Educated by the Jesuits, he rejected a career in law to pursue his own studies and writing. In his lifetime he was a novelist, satirist, and dramatist as well as a philosopher of materialism and critic of art and literature. His influence was great, both on his immediate successors Holbach and Helvetius, and on the writers and thinkers of France, Germany, and England, but without the patronage of Catherine II of Russia, he would have fallen on hard times. FTP, name this French encyclopediast, editor of Encyclopedie.

Denis DIDEROT

17. One of the great experimental scientists of the nineteenth century, his research began in his youth when he invented an electromagnetic engine. He made valuable contributions to the fields of heat, electricity and thermodynamics by establishing the mechanical theory of heat and determining the relationship between heat energy and mechanical energy. FTP, name this discoverer of the first law of thermodynamics for whom the electrical unit of work is named.

James Prescott JOULE

18. An innovator and pioneer in expressionism, she had little success in the United States when she first created dances based on Greek classical art. But in Europe and later in New York City, she had the triumphs that made her name. Through her many tours, her schools in Berlin, Paris, Moscow, and London, and her daring and dynamic personality, she had a great influence on modern dance. FTP, name this dancer, author of The Art of Dance.

Isadora DUNCAN

19. The names are the same: One was a political leader in the American Revolution who signed the Declaration of Independence, and was a member of the Pennsylvania Assembly, the Stamp Act Congress, and the Continental Congress. The other was an English prelate and statesman who became the principal counselor of Henry VII and was made archbishop of Canterbury in 1486. FTP, give the name these men share.

JOHN MORTON

20. It refers to several species of mouse-like rodents related to the voles who inhabit tundra or open meadow, nesting in underground burrows. They are collectively known by the Scandinavian species which undergoes a population explosion, requiring the members to travel over land and sea for search of food with those who reach the oceans sometimes drowning. FTP, name these animals whose behavior has given rise to the folklore of their acts of "mass suicide".

LEMMINGS