

BERKELEY QUESTIONS by Gaius Stern (9), \_\_/\_\_/95

1. If any small closed curve is drawn in the electric field so that the displacement across it is equal to unity, and lines of forces are drawn at each point on the curve, the tubular space so obtained will be one of these. If this tube begins or ends on a conductor, the charge on the surface enclosed by the tube is equal to unity. FTP, what is this tube of electric displacement called?

\Unit FARADAY Tube\

2. It is a municipal borough in northern England on the East coast in the North Riding of Yorkshire, 40 miles north of Hull. The most popular of the Yorkshire holiday resorts, it boasts the ruins of a Norman castle in which George Fox, founder of the Quakers was imprisoned from 1665-66. However its fame relies most of all on two American songwriters. FTP, what is this site, mentioned in a song by Simon and Garfunkle?

\SCARBOROUGH\

3. This Wonder of the Ancient World, designed by Pythius and adorned by sculptures of Scopas and Praxiteles lies in modern day Turkey. It was built in 353 BC for the local tyrant -- from whom it receives its name - by his widow. Her name was Artemesia, though she was not the famous Artemesia mentioned in Herodotus. FTP, what was this "funeral structure, like the Taj Mehal, an eternal symbol of devotion.

\MAUSOLEUM at Halicarnassus\

4. In 1872, a historic meeting of three emperors took place in Berlin. Czar Alexander II represented Russia and Kaiser Wilhelm I hosted. The conference forged the so-called "Three Emperor's League" between Russia, Germany, and Austria Hungary which was ultimately scrapped in favor of the Triple Alliance with Italy. FTP, what long-lived Kaiser represented Austria Hungary at this conference and later backed Wilhelm II against the Russians?

\FRANZ-JOSEPH I\

5. This poet was born to a rich father who ensured a fine education for him. Befriended by one of George III's physicians, he was introduced to Enlightenment writers, such as his future father-in-law, William Godwin. Expelled from Oxford for his pamphlet, The Necessity of Atheism, he eloped with Harriet Westbrook, to his father's rage. After the success of his Queen Mab, he continued to lead a wild life. FTP, what poet married to the Mary Wollstonecraft also wrote "Adonias" ?

\PERCY Bysshe SHELLEY\

6. Take a plane cubic curve defined by drawing a circle of radius  $a$  tangent to the  $X$  axis at the origin, then draw a line through the origin and form a right triangle with its hypotenuse on this line and one leg parallel to the  $x$  axis, the other leg parallel to the  $y$  axis, passing respectively through the points of intersection of this line with the circle and the line  $y = 2a$ . The locus of the intersection of the legs of all such triangles is called THIS. Its equation in rectangular coordinates is  $x^2 + y^2 = 4a^2$ . What mathematical term have I described, named for Donna Maria Gaetana Agnesi who discussed the curve?

\WITCH or WITCH OF AGNESI\

7. Because of her bickering with the rival centralist party, this Prime Minister suffered a severe loss of face in national elections when the Islamic Fundamentalists edged out the two leading pro-West parties by less than 1% of the vote. Once hailed as the Benazir Bhutto of her nation, her government has continued to repress the Kurds and torture political prisoners. FTP, who is this semi-enlightened despotic leader of Turkey?

\Tansu CILLER\

8. It was first sighted in 877 by Gunnbjorn Ulfsson who was blown off course from Norway. A little over a century later in 978, the first attempt to colonize it failed when the colonists divided and fell to blows among themselves. Three years after that in 981, Eric the Red sailed there and spent his exile fishing and chasing polar bears. For ten points, name this island from which Leif Ericson launched his legendary voyage to Vinland in 1000.

\GREENLAND\

9. Born in 1452, this friar was meant for a career in medicine, but turned to theology. A Dominican, he was sent to Florence in 1482 to serve as reader at San Marco, and later spoke out against Pope Alexander VI. He helped influence Florence away from church domination and was present for the 1497 bonfire of the vanities, which set him at odds with Rome and led to his downfall. Tried for heresy, he and his followers were tortured for their enlightened attitudes. FTP, who was this important martyr of the Renaissance whose career shortly preceded Martin Luther?

\Girolamo SAVONAROLA\

10. This dance, originally performed by men as a victory dance is now more popularly performed by women. With the right arm far out from the body, the dancer jigs and skips about to the tune of a bagpipe. FTP, name this national dance of Scotland.

\The HIGHLAND FLING\

11. This Italian actress was a screen rival of sorts for Sophia Loren. Fluent in French and English, she has recently dubbed almost all of her films in her own voice in all three languages. Many of her roles depict her as a fiery tempered but vivacious and stunningly beautiful blond bombshell. FTP, who is this now-retired actress who starred in Buona Sera Mrs Campbell?

\Gina LOLOBRIDGIDA\

12. This one-time governor of Kansas was hailed as the only rising star of his party in the dismal era of the Depression because he had resisted an opposition landslide to win election to his state White House. The father of a current US Senator, he was nominated for president but won only two states, Vermont and Maine, ushering in the sarcastic statement, "as goes Maine, so goes the nation." FTP, who was the 1936 Republican nominee against FDR?

\Alf LANDON\

13. This word can be an adjective used to describe a lion in Heraldry whose paw is outstretched. Similarly, it is an adverb meaning "dangerously running loose," often applied to crime or other malevolent features. FTP, name this uncommon word.

\RAMPANT\

14. Compounds formed by this means decompose on application of heat, have relatively low boiling and melting points, and are the substances from which all life forms are composed. No electrons are transferred, nor is there any excess or deficiency of them, and the result is an electrically neutral molecule. FTP, what type of bond occurs when the nucleus of two or more atoms share electrons, thus allowing both to reap the benefits of those electrons?

\COVALENT BOND\

15. It is said by Vergil that one of Juno's grievances against the Trojans was the firing of her daughter Hebe as cupbearer to the gods so that this handsome Trojan youth might replace her. This innocent boy was spied by Jupiter on the hill of Mt. Ida and abducted by that god in the form of an eagle. FTP, who was this handsome lad, eternally young and pretty, whose name has been given to one of the larger moons of Jupiter?

\GANYMEDE\

16. This French physicist was the son and grandson of established physicists. Born in 1852, he made contributions to the study of phosphorescence, inventing a phosphoroscope to estimate the duration of the glow after illumination. He also made contributions to the study of magnetism, but he is best known, for his part in the 1896 discovery of radioactivity. FTP, who observed the effect of rays emitted by uranium salts on a photographic plate?

\Antoine Henri BECQUEREL\

17. Portraying the rural life in a fictional locale in Wessex, this novelist eventually abandoned fiction to write poetry and an epic-drama of the Napoleonic Wars, *The Dynasts*. However, his fame today rests on his earlier works, such as *The Trumpet-Major*, *Jude the Obscure*, and *Far from the Madding Crowd*. FTP, what author also wrote *Tess of the D'Urbervilles* and *The Mayor of Casterbridge*?

\Thomas HARDY\

18. Born in 1868, this American astronomer organized and directed Yerkes from 1895-1905 and the Mt Wilson Observatory in Chicago. Along with Pease, he was the first to measure the diameter of a star Alpha Orionis with an interferometer. He also proved the sun's magnetic and geographic poles do not match, and he established a theory of the movement of sun spots. FTP, who was this great astronomer and inventor of the spectroheliograph?

\George HALE\

19. The owner of Draupnir, a golden ring from which every nine nights, identical rings fall, he also owns spear which never misses its mark, Gungnir. He is attended by ravens who roam the world to bring him news while he sits on a high throne that no one else may occupy. FTP, what Allfather god is this who often broods in silence despite his wealth and overwhelming wisdom and power?

\ODIN\

20. Sent on Sept. 6, 1899 to London, Paris, Berlin, and St. Petersburg, it requested that the Great Powers claiming spheres of interest in China should pledge not to close off the ports to one another, nor interfere with any "vested interest" already in their spheres. It also asked that the powers allow the application of the Chinese treaty tariff to the ports under their control without discrimination to nationals of other countries, nor levy higher harbor tolls against nationals of other countries. For 10 points, what was this note or policy, ever after associated with US Secretary of State John Hay?

\OPEN DOOR\