

1996 Georgia Tech MLK Tossups by Florida B

1. In order to explain the photoelectric effect, Einstein boldly proposed that light, which had long been considered a wave phenomena, also had particlelike properties. This dual nature of light, odd as it may seem, proved to be a successful theory, and it was for this work that Einstein won his Noble Prize. But, FTP, name the French scientist that first suggested that small particles may display wavelike properties -- an idea that made possible the electron microscope and, in 1929, earned him a Noble Prize.

Answer: Louise de Broglie

2. He saved his father's life in the Battle of the Ticinus River in 218 B.C. As military tribune, he rallied the Roman remnant following the disastrous defeat at Cannae in 216 B.C. In 210, he went to Spain as proconsul where he soon captured Cartagena, the chief Carthaginian base. FTP, identify this man who in 205 became consul of Sicily from which he launched his 204 invasion of north Africa and who later defeated Hannibal at Zama.

Answer: Scipio Africanus Major

3. The first story, "Was," is considered a comic masterpiece and opens with a raucous fox chase that suggests the theme and action of the story. Other stories in this collection of tales about Beauchamps and McCaslins include "The Fire and the Hearth" and "Pantaloon in Black." FTP, identify this collection of seven stories by William Faulkner which features like McCaslin's confrontations with nature in "The Bear."

Answer: Go Down, Moses

4. His father, an architect and city planner, built the Helsinki railway. He decided to follow in those footsteps and established his reputation while with the General Motors Technical Center. He designed the "Gateway Arch to the West" in St. Louis, and also the Trans World Airlines Terminal in New York City. But he is, perhaps, best known for the circular chapel and concrete-dome auditorium at the M.I.T. FTP, name this Finnish-American architect.

Answer: Eero Saارينen

5. He was born in 1782 in Hillsborough, North Carolina and settled in Tennessee. During the War of 1812, he served on the staff of General Andrew Jackson and after the war established a newspaper in St. Louis. FTP, identify this determined opponent of nullification who supported Andrew Jackson's campaign against the Bank of the United States as Senator from Missouri from 1821 to 1851.

Answer: Thomas Hart Benton

6. The three major divisions of this branch of mathematics are point-set, combinatorial, and algebraic. It is concerned with properties of geometric figures that remain the same under continuous transformations, such as bending, stretching, and twisting. FTP, identify this area of mathematics sometimes referred to as "rubber-sheet geometry."

Answer: Topology

7. One of the earliest movements in psychology, it developed in the early nineteenth century. Its followers created elaborate maps of the human skull and used them to construct personality profiles, because they believed that traits, like intelligence, were localized in the brain, such that the size of the bump on the skull just over the brain area associated with a particular trait would reflect how much the trait was developed. FTP, name this movement.

Answer: Phrenology

8. He was distracted from his music by the writing of autobiographical novels such as Die Davidsbündler, in which he introduced the characters of Eusebius and Florestan, whom he later used in his critical essay on Chopin's La ci darem variations. He worked primarily on piano music until 1840 when he began to write orchestral music and songs, in which he achieved a fusion of vocal melody and piano accompaniment. FTP, identify this composer whose works include Abegg Variations, Carnival Jest from Vienna, Papillons, incidental music to Byron's Manfred, and the Spring Symphony.

Answer: Robert Schumann

9. The way was opened for German entry into the League of Nations following the reaffirmation of the demilitarization of the Rhineland. Principally negotiated by the British, French, and German foreign ministers, this series of agreements was regarded as a diplomatic triumph and indeed, earned the French and German Foreign ministers Nobel Prizes. FTP, what is this group of treaties sign in Switzerland in 1925, an attempt to settle security problems left unresolved at the end of World War I.

Answer: Locarno Pact

10. In Norse literature they are sometimes called "disir," and their names translate literally as "debt," "becoming," and "destiny." They lived at a well under the world tree Yggdrasil and because of their frequent attendance at births were associated with midwifery. FTP, what is this group comprised of Urd, Skuld, and Verdandi, the fates of Norse myth?

Answer: Norns

11. First published in 1909, it is divided into eight books with such titles as "The Beginnings," "The Ancient Times," "Trinco," "Modern Times," and "Future Times." It begins when the elderly Monk, Mael, gets caught in a storm, is blown to an icy region, and accidentally baptizes the entire population of an atoll of flightless birds. FTP, identify this novel called "the world's wittiest satire," written by Nobel laureate Anatole France.

Answer: Penguin Island

12. For all species, it has a high degree of similarity in secondary structure. It contains three "arms" at the end of which are loops, two of which are characterized by the presence of variants of uracil and the third bearing the anticodon which binds to messenger RNA. FTP, identify this type of RNA that activates amino acids for protein synthesis.

Answer: tRNA or transfer RNA

13. This Civil War battle began when Stonewall Jackson was attacked by Union General John Pope. Luckily for the South, General James Longstreet was just arriving with reinforcements. Jackson and Longstreet were able to repulse Pope, who eventually withdrew to Washington. FTP, identify this battle named after the small stream in Virginia where it occurred.

Answer: Second Battle of Bull Run or 2nd Manassas

14. They are composed mainly of metamorphic and igneous rock, among the oldest in the world. Sometimes erroneously included in the Appalachian system, they are geologically related to the Canadian Shield and are generally considered a southern extension of it. FTP, identify this group of mountains in northeastern New York on the border with Canada.

Answer: Adirondacks

15. In his 1936, *The Allegory of Love*, which deals with the courtly love tradition in medieval and Renaissance literature, he elaborates on "romantic love" theory and shows its relationship to Christianity. FTP, identify this author better known for a trilogy including *Perelandra* and *That Hideous Strength*, who is perhaps best remembered for his seven-volume children's series, *The Chronicles of Narnia*.

Answer: C. S. Lewis

16. During World War I he served as a pilot in the Army Air Corps and later designed aircraft before moving to Hollywood. As a director, he worked in all possible genres producing such Westerns as *Rio Bravo*, the screwball comedy *Bringing up Baby*, the musical *Gentlemen Prefer Blondes*, and gangster films such as *Scarface*. FTP, identify this director perhaps best known for his film noir masterpiece, *The Big Sleep*.

Answer: Howard Hawks

17. He believed that "the paint has a life of its own," and indeed his work continues to be controversial long after his death in an auto accident in 1956. In 1974 the Gallery of Australia paid a then-record amount for an American work when it paid \$2 million for his 1952 work "Blue Poles." FTP, name this founder of Abstract Expressionism.

Answer: Jackson Pollock

18. Born in Cordoba, he was instructed in Muslim jurisprudence by his father, a judge in his native city. There he also studied theology, philosophy and mathematics under the Arab philosopher Ibn Tufayl and medicine under the Arab physician Avenzoar. FTP, identify this man who later served as judge in Seville and Cordoba before becoming chief physician to Abu Yaqub Yosef, the Almohad caliph of Morocco and Muslim Spain.

Answer: Averroes

19. His studies of the three basic forms of phosphoric acid led to the concept of polybasic acids. For the separation of crystalloids from colloids, he developed the process of dialysis and established the study of colloid chemistry. FTP, identify this chemist whose law states that the relative diffusion rates of gases are inversely proportional to the square root of their density.

Answer: Thomas Graham

20. Following World War II, she befriended many a young American serviceman overseas, which she wrote about in "Brewsie and Willie." After studying at Radcliffe and at Johns Hopkins Medical School, she went to Europe where she lived with her brother Leo, an art critic. FTP, identify this originator of the term "Lost Generation," who told her life story as "The Autobiography of Alice B. Toklas."

Answer: Gertrude Stein

21. A center of revolt against Spanish rule in the Low Countries it was nearly reduced by a long siege when it was saved by William the Silent who opened the dikes and flooded the surrounding countryside. The home of the oldest university in the Netherlands it is the birthplace of Rembrandt and Jan Steen. FTP, identify this Dutch city whose name has become associated with an early capacitor, a "jar" which stored electric charge.

Answer: Leiden or Leyden