

**Valencia Delta Burke Invitational 2004—Round 1**  
**Questions by CB with science by Raj Dhuwalia and math by Boris**

1. The protagonist of this novel intervenes when townspeople taunt an overworked mule, seeing it as symbolic of the way she thinks black men treat their women. After she is seen kissing Johnny Taylor when she's sixteen, her grandmother Nanny arranges for her to marry Logan Killicks, whom she doesn't love and eventually leaves for Joe Starks, who becomes mayor of Eatonville. She eventually finds true love with Tea Cake, but has to shoot him after he goes mad from a rabies-infected dog bite. So goes, FTP, the story of Janie Crawford in what novel by Zora Neale Hurston?

A. *Their Eyes Were Watching God*

2. In heraldry and early Christian art, this bird is typically depicted pecking its own breast as a symbol of Christ, an image coming from the ancient legend that it fed its young on its own blood. The pesticide endrin has been blamed for endangering it, but changes in spraying policies near salt water habitats have grown the population from 400 nesting pairs to over 6,000, resulting in its removal from the Endangered Species List. The state bird of Louisiana and depicted on its flag, FTP what is this water bird that uses its long bill to scoop up fish?

A. pelican

3. Usually used in a 70% solution in water, this strong acid can appear yellow upon exposure to light. It oxidizes all metals except the "noble" metals, and it is a component of both acid rain and aqua regia. It is synthesized in a multi-step process which begins with combining oxygen and ammonia over a platinum catalyst. FTP, name this acid synthesized by the Ostwald process, with formula  $\text{HNO}_3$ .

Answer: nitric acid

4. It began in the party platform of winning prime minister Daniel Malan in 1948, and the Department of Home Affairs began classification of all citizens into one of three groups. It was strengthened by the 1951 Bantu Authorities Act, which established ethnically or tribally based homelands near population centers. It was weakened in the 1970s by the enactment of the Sullivan Rules, urging non-discriminatory hiring for American businesses, and in the 1980s by mass disinvestment by Western corporations. Repealed completely by 1991, FTP what was this policy of racial segregation in South Africa?

A. apartheid

5. One of the bases for this 1854 papal pronouncement comes from Luke 1:28, which includes the Greek greeting "chaire kecharitomene," meaning "Hail, full of grace," given by the archangel Gabriel. It did not exempt its subject from the "temporal penalties of Adam," i.e. bodily infirmity and eventual death, though it did exempt her from an otherwise universal human birthright. Pronounced by Pius IX in *Ineffabilis Deus*, it allowed Mary to be the right vessel for the birth of Christ. FTP what two-word phrase refers to the Catholic belief that Mary was conceived without original sin?

A. Immaculate Conception

6. The Timacuan called it Welaka, or the river of lakes, though the Spanish renamed it the San Mateo in 1565 when they slaughtered the French at Fort Caroline, which overlooks it. King George III sent John Bartram to explore it in the 1760s, and his son, William, traveled it as far south as Lake Harney. 310 miles long, making it Florida's longest, FTP name this river that flows north through eastern Florida, joining the Atlantic in Jacksonville.

A. St. John's River

7. The first was predicted by amateur English scientist Jeremiah Horrocks in 1639. Attempts to use the 1761 instance to determine the measurements of Earth's distance from various objects were ruined by bad weather, but in 1769 worldwide efforts were coordinated by England's Royal Academy and included James Cook's establishment of an observatory in Tahiti and Jeremiah Mason and Charles Dixon's work in South Africa. Occurring in pairs eight years apart with 120 years in between, the most recent took place on June 8, 2004. FTP what is this passing of the second planet in our solar system between the Earth and the Sun?

A. Transit of Venus (don't prompt on just "Venus")

8. James Joyce's first published work was an essay in *The Fortnightly Review* on this author's last work. That play, about the sculptor Rubek and his wife and their eventual death in an avalanche, was called *When We Dead Awaken*. Earlier works include *Brand*, *Pillars of Society*, and *Peer Gynt*. FTP name this author better known for *The Enemy of the People*, *The Wild Duck* and *Hedda Gabler*.

A. Hendrik Ibsen

9. This man's ideal city design, described in his book *Urbanism*, involved huge skyscrapers distant from one another in a park-like landscape featuring wide boulevards and separate zones for work, residence and leisure, a concept he called The Radiant City. He got a chance to put the theory to work in his design of the planned city of Chandigarh in India. Better known for his buildings in France, like Notre Dame du Haut, FTP who was this Swiss-born architect, born Charles-Edouard Jeanneret, who called his residences "machines for living in"?

A. Le Corbusier (acc. Jeanneret before mentioned)

10. [10 seconds] The growth of a corn stalk could be modeled by a linear equation. Knowing that initially, the plant was 4 inches tall, and that 5 days later it was 25 inches tall, FTP, and given ten seconds, find a possible equation to model the growth of the corn plant where  $h$  represents the height of the stalk in inches and  $t$  represents time in days.

A.  $H = \frac{21}{5}t + 4$  or  $H - 4 = \frac{21}{5}(t - 0)$  or  $H - 25 = \frac{21}{5}(t - 5)$  or equivalents

11. Some of its lesser-known signatories included Moses Fletcher, Digory Priest, and William Brewster. Written "in the presence of God and one another," it was meant to "covenant and combine" the signatories "into a civil body Politick," and its better known signers included William Bradford, John Alden, and Myles Standish. FTP what is this document signed on November 11, 1620, at Cape Cod, the first political constitution written by European settlers in North America and named for the vessel that brought them there?

A. Mayflower Compact

12. In works like "Esthetique du Mal" and "The Comedian as Letter C," this poet explored his oft-covered themes of beauty, form and abstraction. Other difficult, though shorter, poems include "Tea at the Palaz of Hoon," "The Anecdote of the Jar," and "Sunday Morning." FTP name this author of "The Idea of Order at Key West," "Thirteen Ways of Looking at a Blackbird," and "The Emperor of Ice-Cream."

A. Wallace Stevens

13. While in Sicily, this mythical figure was killed by the daughter of King Cocalus, who poured boiling water on him during a bath. A son of Zeus and Europa, he was father to the sons Glaucus and Androgeus; for the killing of the latter in Athens, he exacted a cruel punishment on the Athenians, making them send him seven young men and women every nine years. They were eaten in the labyrinth he forced Daedalus to build to contain his wife's son, the Minotaur. FTP name this legendary king of Crete, after whom ancient Cretan civilization is named.

A. Minos

14. Its sporozoites enter the liver, where they become merozoites and invade the red blood cells, which become sticky with a visible ring-shaped structure inside. The genome of the causative apicomplexan was completed in 2002. It has been called quartan fever because of its periodicity, and is carried by the Anopheles genus of mosquitoes. FTP, name this disease cause by the genus Plasmodium, whose name means "bad air".

A. malaria (accept Plasmodium on early buzz)

15. Its name comes from the sprig of a broom plant that Geoffrey, Count of Anjou, wore on the side of his cap. By the Treaty of Winchester Geoffrey's son ascended to the throne, he was referred to as an Angevin, because of his lineage from Anjou, and he also founded this house. FTP name this royal family of England which later broke into York and Lancastrian factions, and which was begun by Henry II.

A. Plantagenet

16. This graduate of the Arizona State, where he won three individual NCAA championships, plays out of the Grayhawk Golf Club. A 22-time winner on the PGA Tour, he has been particularly successful in the Buick Invitational, which he's won three times. Currently fourth in the World Golf Ratings, he is right handed in everything he does besides golf. Finally shedding the "best golfer never to have won a major" label in 2004, FTP name this "Lefty" who won this year's Masters.

A. Phil Mickelson

17. In Bob Dylan's song "Desolation Row," he sings that this character is "an old maid" at 22, though she's more likely between 15 and 18. In conversation with her beloved, she wonders aloud whether "beauty [could] have better commerce than with honesty," while in an earlier scene she advises her brother not "show [her] the steep and thorny way to heaven/Whilst . . . not [recking] his own read." Her eventual madness comes clear during her speech in Act IV about gathering flowers near the bank of the river in which she will soon drown herself. FTP name this daughter of Polonius and forlorn love of Hamlet.

A. Ophelia

18. The Second Treaty of Fort Stanwix marked the official end of it, though its dissolution had truly begun years earlier. It had a written constitution, which called for a ruling council of 50 sachems, or chiefs, with prescribed numbers representing each of its original five groups; that number had to change when the Tuscarora entered later. FTP name this alliance of five Eastern American Tribal groups, which included the Seneca, Onandaga, Oneida, Cayuga and Mohawk peoples.

A. Iroquois League (or Confederation or Alliance)

19. A fundamental aspect of his teachings is ren, translated as kindness and/or love. Another is yi, or righteousness, which can be opposed by li, or desire for advantage or profit. This leads to his famous saying, "The gentleman understands yi; the little man understands li." This saying and others were compiled by his followers in the Analects. FTP name this 6th-century BCE Chinese philosopher.

A. Confucius (acc. Kong Fu-tzu)

20. The interior of the Orion Nebula is named for him, and he discovered both the moon Titan and the rings of Saturn in 1655. He invented a cycloidal pendulum, which he used to make a clock with an error of less than 10 seconds per day. He argued for the wave nature of light, in opposition to Newton. FTP name this Dutch scientist whose namesake principle says that every point on a primary wavefront may be treated as a source of secondary spherical wavelets.

Answer: Christian Huygens

## Valencia Delta Burke Invitational—Round 1 Bonuses

1. Electrochemistry stuff, FTSNOP:

A. F5P per answer, in an electrochemical cell, give the names for the two electrodes where oxidation and reduction occur.

Answer: anode and cathode [accept either order]

B. FTP, the basic laws of electrolysis are named for this Scotsman, and the charge of one mole of electrons is also named for him.

Answer: Michael Faraday

C. Named for the formulator of the third law of thermodynamics, this equation describes the dependence of cell voltage on concentration of reactants and products.

Answer: Nernst equation

2. Given a song listed on the American Film Institute List of 100 Best Movie Songs, name the film in which it appeared FFPE and a bonus five for getting them all.

A. "Over the Rainbow"

A. The Wizard of Oz

B. "As Time Goes By"

A. Casablanca

C. "Diamonds Are a Girl's Best Friend"

A. Gentlemen Prefer Blondes

D. "Fight the Power"

A. Do the Right Thing

E. "Some Enchanted Evening"

A. South Pacific

3. Name these London landmarks and tourist magnets FTPE.

A. This area dominated by the 185-foot Nelson column is the confluence of some of London's most congested streets; despite the name, it's really more of a circle.

A. Trafalgar Square

B. Sitting on the Western edge of congested Parliament Square is this religious building in which all monarchs from Henry III to George II are buried.

A. Westminster Abbey

C. This area of upscale shops and restaurants northeast of Trafalgar Square is home to the Royal Opera House, which is often referred to by the same name.

A. Covent Garden

4. Answer the following about the partition of India and Pakistan FTPE.

A. The partition occurred on August 14 and 15 of what year?

A. 1948

B. Who was the first leader of India following partition?

A. Jawaharlal Nehru

C. What man became the first leader of independent Pakistan following partition?

A. Muhammad Ali Jinnah

5. Stuff about an author and his works FTPE.

A. This poet, the pre-eminent voice of the Harlem Renaissance, co-wrote the play *Mule Bone* with Zora Hurston as well as the poem "Harlem."

A. Langston Hughes

B. This Hughes' poem features a piano player doing a "lazy sway" on Lenox Avenue while playing the titular music about his fatigue with life.

A. "The Weary Blues"

C. Hughes wrote this poem about the Congo, Nile and Mississippi in the year after graduation from high school.

A. "The Negro Speaks of Rivers"



6. Stuff about the founding of a certain religion FTPE.

A. Though it began as a movement within the Church of England, in 1784 the first of these churches emphasizing "justification by faith" and "new birth" was chartered.

A. Methodist (acc. Methodism)

B. The Methodist church was founded by this man and his younger brother Charles.

A. John Wesley

C. Wesley split with another early Methodist, George Whitefield, when Wesley chose to follow strictures laid down by this Protestant sect named for a Central European region.

A. Moravian(s)

7. Answer the following about an early Southern champion of states' rights FTPE.

A. This South Carolinian was vice-president to both JQ Adams and Andrew Jackson despite the great animosity between those two men.

A. John C. Calhoun

B. Calhoun today is the best known proponent of this concept, which argues that individual states had the right to void federal laws with which they didn't agree.

A. nullification

C. Calhoun most forcefully made the case for nullification in this pamphlet.

A. South Carolina Exposition and Protest

8. Sure you've heard of it, but do you really know *Car'men*? 5-10-15:

A. (5 pts.) What Frenchman who died at 36, the age of your Tournament Director(!), composed it?

A. Georges Bizet

B. (10 pts.) This aria celebrating a bullfighter and sung by a baritone is featured in Act II, though you may know it better from The Bad News Bears.

A. "Toreador Song"

C. (15 pts.) Almost as well known as the Toreador Song is this song from Act I, the name of which comes from the rhythm of the Cuban dance with which it shares its name.

A. "Habanera"

9. For the stated number of points, answer the following about the four Galilean moons:

A. For 5 cheap points, which planet do they orbit?

Answer: Jupiter

B. FTP, which one, named for a cupbearer to the gods, is the largest moon in our solar system?

Answer: Ganymede

C. F15P, which one, the third-largest moon in the solar system, is by far the most heavily cratered of the four?

Answer: Callisto

10. Answer the following about that crazy, sun-worshipping Akhenaton FTPE.

A. Akhenaton, after deciding that the solar disc was worth worshiping, built himself this new capital, almost nothing of which has survived.

A. Tel el-Amarna

B. This wife of Akhenaton's was renowned for her beauty.

A. Nefertiti

C. After Akhenaton's death, and following a year of rule by the mysterious Smenkhare, his son Tutenkhamen moved the capital from Amarna back to this Egyptian city, site of present-day Luxor.

A. Thebes

11. Of course, if you were a good confessional poet, you probably committed suicide. Name these exemplars FTPE.

A. The queen of sad, female poets considering suicide, she's best known for the collection *Ariel* and the novel *The Bell Jar*.

A. Sylvia Plath

B. Plath's friend, this poet offed herself after writing the collections *The Awful Rowing Toward God* and *To Bedlam and Part Way Back*.

A. Anne Sexton

C. Showing that men aren't above self extermination, this author best known for his 77 *Dream Songs* killed himself in 1972.

A. John Berryman

12. ID these 20th-century existentialist thinkers FTPE.

A. The man most associated with existentialism is this Frenchie, author of *Being and Nothingness*.

A. Jean-Paul Sartre

B. This German preceded Sartre's big works with his own big one, *Being and Time*.

A. Martin Heidegger

C. An author of more novels than philosophical works, this Frenchman wrote the nonfiction works *The Rebel* and *The Myth of Sisyphus*.

A. Albert Camus

13. ID the "artists" behind these songs in the Billboard Top Ten FFPE and a bonus five for getting 'em all.

A. "She Will Be Loved"

A. Maroon 5

B. "Just Lose It"

A. Eminem

C. "Breathe"

A. Fabulous

D. "Lose My Breath"

A. Destiny's Child

E. "Breakaway"

A. Kelly Clarkson

14. FTP each, name these monosaccharide sugars:

A. Glycogen is a polymer of this sugar with formula C six H twelve O six.

Answer: glucose

B. Found in apples and mangos, this sugar combines with glucose to form sucrose.

Answer: fructose

C. It differs from glucose at the fourth carbon, and it combines with glucose to form lactose.

Answer: galactose

15. Stuff about that liberating fellow, Simon Bolivar, FTPE.

A. Bolivar's name lives on in the name of the currency of this nation, though its weakness is probably not the best compliment.

A. Venezuela

B. This confederate of Bolivar's won led the victorious forces at Chacabuco and is considered the liberator of Argentina and Peru.

A. Jose de San Martin

C. In 1819, Bolivar became the first president of this republic, now broken into Ecuador, Panama, Colombia and Venezuela.

A. Gran Colombia

16. Stuff about a certain Elizabethan playwright FTPE.

A. Almost hanged in 1598 for killing a man in a duel, this guy survived to write plays like *Bartholomew Fair* and *The Alchemist*. The Cavalier Poets liked to call themselves the “sons of” him.

A. Ben Jonson

B. Jonson’s friend Bill Shakespeare was one of the actors in this play, which has characters whose personalities are phlegmatic, bilious, or sanguine.

A. Every Man in His Humor

C. Jonson is probably best known for this play, subtitled “the Fox.”

A. Volpone

17. Name these lands from Norse myth FTPE.

A. This is the abode of the Aesir, and later of the Vanir as well.

A. Asgard

B. This is the term for the realm of men, or Earth.

A. Midgard

C. This is the land of the giants.

A. Jotunheim

18. It was the world’s first billion dollar corporation. FTPE:

A. First, what was this giant trust created in 1901 that built the city of Gary, Indiana, to become its main center of production?

A. U.S. Steel

B. This financier brokered the deal that created U.S. Steel.

A. J. P. Morgan

C. This Scottish-born steel magnate sold his concerns to Morgan and used the money to fund many philanthropic ventures.

A. Andrew Carnegie

19. For the stated number of points, name these elements which have these outermost shells in their ground state. For instance, if I said “5p1,” you’d say “rubidium.”

A. F5P, 1s2.

Answer: helium

B. FTP, 4s1, 3d10. [that’s “3 d ten”]

Answer: copper

C. FTP, 4p1.

Answer: potassium

D. F5P, 3p5.

Answer: chlorine

20. ID the French directors of the following FTPE.

A. Breathless

A. Jean-Luc Godard

B. The 400 Blows

A. Francois Truffaut

C. Orpheus

A. Jean Cocteau