Valencia Fall Invitational 2001

Playoff Round 1–Questions by Raj Dhuwalia

1. After destroying this vessel, a German U-boat captain noted in his log, “Shots hit starboard side right behind bridge. An usually heavy detonation follows.” Noted for its speed, it ignored warnings to avoid the area and to travel in a zigzag pattern. It was within sight of Ireland when it sunk in just 18 minutes, killing nearly 1200 of the 1,924 people aboard. FTP, name this sister ship of the *Mauritania*, whose sinking on May 7, 1915, failed to immediately bring the U.S. into World War I.

Ans: \_Lusitania\_

2. In Q.E.D. theory, it is the exchange boson which carries the electromagnetic force. It has a spin of one and a mass of zero. One is emitted from an atom when an electron falls from a higher orbital to a lower one, and according to quantum theory, its energy is equal to its frequency times Planck’s constant. FTP, name this elementary particle, the quantum of light.

Ans: \_Photon\_

3. He was envious of the skill of his nephew, Perdix, and tried to push him off a tower. This inventive Athenian, the son of Metion and grandson of Erechtheus, is the patron of artists’ and craftsmen’s guilds. He landed safely in Sicily after escaping his own construction, the labyrinth of King Minos, and his name was later used by James Joyce for the surname of an artist. FTP, name this mythical architect who fashioned wax wings for himself and for his son, Icarus.

Ans: \_Daedalus\_ (do not accept “Stephen Dedalus”)

4. In this novel, the last of the line is killed by ants, while the first dies tied to a tree. The gypsy Melquiades brings such wonders as magnets, ice, and flying carpets to the village of twenty adobe houses, fascinating Jose Arcadio. Six generations of descendants of Ursula and Jose Arcadio Buendia also appear in this novel, set in the town of Macondo. FTP, name this 1967 novel by Gabriel Garcia-Marquez.

Ans: \_One Hundred Years of Solitude\_ or \_Cien Años de Soledad\_

5. Discovered by Edmund Davy in 1836 and used in early gas lamps, it was produced by the reaction of water and calcium carbide. Its combustion produces more heat than almost any other common fuel source, which explains its most common industrial use. It is also useful in the synthesis of neoprene, and its chemical formula is CHCH. FTP, name this simplest member of the alkyne family, best known for its use in welding torches.

Ans: \_Acetylene\_ or \_Ethyne\_ (accept early C2H2 or CHCH)

6. Supposedly founded by Lacedaemon, it expanded greatly in the 6th century BC under kings like Leon, Ariston, and Cleomenes, largely because of the ideology and training introduced by Lycurgus long before. One of its generals won at Plataea in 479BC, and another held back the Persians for 3 days at Thermopylae. In 457 BC, it won at Tanagra against Athens, before the big war broke out in 431 BC. FTP, name this capital of Laconia which, under such military leaders as Lysander, defeated Athens in the Peloponnesian War.

Ans: \_Sparta\_ (accept “the Spartans”)

7. He began studying mathematics after opening his own school at age 20, in 1835. An 1844 paper on operator calculus won him a gold medal from the Royal Society, and he did important work on differential equations. But he is best known for the 1854 book *An Investigation of the Laws of Thought*, in which he developed a system of symbolic logic, noting the analogy between algebraic symbols and those of logical forms. FTP, name this British mathematician, whose “algebra” is especially useful in working with binary systems.

Ans: George \_Boole\_ (prompt on “Boolean algebra”)

8. It was built in 1880. Sarah Bernhardt moved there in the late 19th century, with the coffin she supposedly slept in. Bob Dylan first sang his Sad-Eyed Lady of the Lowlands there, and Sid Vicious killed Nancy Spungen in one of its rooms. It has attracted such figures as Vladimir Nabokov, Janis Joplin, Arthur Miller, and Dylan Thomas. FTP, name this New York hotel, the subject of a 2001 film directed by Ethan Hawke, which shares its name with the offspring of a former president.

Ans: The \_Chelsea\_ Hotel

9. The outer one is tough and thick, the middle delicate and spiderlike, and the inner one is highly vascularized. Cerebrospinal fluid circulates between the inner and middle ones. Inflammation of these due to bacterial or viral infection can cause headache, stiff neck, fever, convulsions, and delirium, and is of great concern in schools. FTP, give the collective name for these tissue membranes, which are individually called the dura mater, arachnoid, and pia mater.

Ans: \_Meninges\_ (also accept early “Pia mater, arachnoid, dura mater” in any order) (do NOT accept “Meningitis”)

10. Lines from this opera were sung by Stanley in *Magnolia*, and an updated version was done in 1982 by Jean-Luc Godard. The librettists Meilhac and Halevy added the role of Micaela, greatly expanded Escamillo’s role, and eliminated the murders by Don Jose except for one – the killing of the title character. First played by Celestine Galli-Marie in 1875, the title character sings the famous *habanera* and *seguedilla* arias. FTP, name this opera adapted from a novel from Prosper Merimee, the most famous work of Georges Bizet.

Ans: \_Carmen\_

11. His literary career began when his wife challenged him to write a better book than the one he was reading. Though *Precaution* did not sell well, his second novel, *The Spy*, allowed him to quit farming. At age 34 he published the first American sea tale, *The Pilot*, and the first of his most famous series of novels about the American wilderness and pioneer life. FTP, name this author of *The Pioneers*, *The Prairie*, *The Pathfinder*, and *The Last of the Mohicans*.

Ans: James Fenimore \_Cooper\_

12. A modern discussion of this concept appears in John Rawls’s *Theory of Justice*, while classical discussions are found in Plato and Lucretius. Hobbes argued for a version that gives rulers absolute power, in return for protecting people from their natural state of warfare. Locke argued that moral principles and obligations existed before the creation of the state, so men could change the state if it failed to uphold these principles. Rousseau argued that government must rest on the general will of the governed, which influenced the American and French revolutions. FTP, name this term for an actual or hypothetical compact between the ruled and their rulers.

Ans: \_Social Contract\_

13. It was eventually extended across Illinois to Vandalia, within 100 miles of St. Louis, while its eastern end was linked to Baltimore. Begun in 1811, its western terminus was in Wheeling, and it was widely used by easterners heading west. Authorized in 1806, FTP, name this road from Maryland to the west, the first American road built with federal funds.

Ans: The \_Cumberland Road\_ (NOT the “Cumberland Gap”)

14. The pH of these solutions can be determined by using the Henderson-Hasselbalch equation, assuming the proportions of weak acid and conjugate base are roughly equal. Common examples include baking soda, commercial antacids, the bicarbonate system in human blood, and an aqueous mixture of acetic acid and sodium acetate. FTP, name this type of solution which resists a change in pH.

Ans: \_Buffer\_

15. His first large work was an 1857 portrait made in Florence of the Bellelli family. His expanding use of color is visible in *The Orchestra at the Opera* and *At the Races, In Front of the Stands*, in the late 1860s. Japanese influence can be seen in *The Dance Class*, from 1876. Pastel works dominated his later years, such as *The Blue Dancers*, *Green Dancers*, *Woman in a Tub*, and *Two Dancers on a Bench*. FTP, name this French Impressionist painter.

Ans: Edgar \_Degas\_

16. The second one began after the boarding of the British ship *Arrow*. The first resulted from the British desire to offset a negative currency flow to a nation which accepted only currency in most trades. In 1840, in response to the actions of Lin Zexu, 16 British warships sailed to the Pei Ho river and attacked Canton. The second ended with the Treaty of Tianjin, while the first ended with the Treaty of Nanking, which gave Hong Kong to the British. FTP, identify these wars, named for the material the British exported into China to offset the currency flow.

Ans: \_Opium War(s)\_

17. Architectural surveys have found that it is in danger of collapse because too little steel was used in its concrete slabs. Built using local craftsmen, its sandstone was quarried from the site itself. Designed as a summer house for a Pennsylvania department store owner, it has been visited by over 2.4 million people since opened to the public in 1964. FTP, name this masterpiece of organic architecture in Bear Run, Pennsylvania, one of the most famous works of Frank Lloyd Wright.

Ans: The \_Kaufmann House\_ or \_Fallingwater\_

18. Its tributaries include the Sieg, the Moselle, and the Main, and smaller cities along its course include St. Goar, Kaub, and Koblenz. It served as the barbarian frontier in Roman days, and it is home to the Lorelei. Originating in the Bodensee, or Lake Constance, it passes through Basel and travels briefly along the French-German border. Its most famous stretch is from Mainz to Köln. FTP, name this river, which also passes through Bonn before reaching the North Sea.

Ans: The \_Rhine\_

19. Its middle section has a ‘low-velocity’ zone which may be partially molten. Consisting of silicate materials such as olivine, it lies between the Gutenberg and Moho discontinuities, and it makes up 82% of the Earth’s volume. Extending to about 1800 miles below the Earth’s surface, FTP, name this region of Earth between the core and the crust.

Ans: \_Mantle\_

20. MacGowan. Samson. Tull. Peabody. Cora. Dewey Dell. Whitfield. Addie. Anse. Cash. Jewel. Vardaman. Darl. These are most of the 15 narrators, FTP, of what William Faulkner novel, about the long journey of the Bundren family to bury Addie?

Ans: \_As I Lay Dying\_

21. After 1, it is the smallest number to be both a perfect square and a Fibonacci number. It is divisible by 7 of the first 9 counting numbers, with 5 and 7 being the exceptions, and it is the degree measure which is equivalent to four-fifths pi. FTP, identify this 3-digit number, which also equals the number of square inches in a square foot, or the number of items in a gross.

Ans: \_144\_

22. William Whitehead, Henry James Pye, Alfred Austin, Thomas Shadwell, Cecil Day Lewis, Colley Cibber, Sir William Davenant, Sir John Betjeman, Robert Southey, John Dryden, Ted Hughes, Tennyson, and William Wordsworth. FTP, these people all held what post, whose earlier holders include Skelton, Spenser, and Chaucer?

Ans: \_Poet Laureate\_ of England

Valencia Fall Invitational 2001–Playoff Round 1 Boni

1. Name these parts of the human eye, FTP each.

A. The light-sensitive “screen” at the back of the eye, containing millions of rods and cones, connected to the brain by the optic nerve.

Ans: \_Retina\_

B. The tiny region of the retina where most of the cones are concentrated; it provides detailed vision and colour vision.

Ans: \_Fovea\_

C. Either of the two types of “humour” in the eye; one is between the cornea and lens, while the other is between the lens and retina.

Ans: \_Aqueous\_ OR \_Vitreous\_ humour

2. Identify these Shakespearean tragedies, FTSNOP.

A. [5] One of the four great tragedies, it centers on a king who divides his lands among his three daughters.

Ans: \_King Lear\_

B. [10] The title character is slain midway through the play, and after a famous eulogy, the closing act features the Battle of Philippi.

Ans: \_Julius Caesar\_

C. [15] The title character is a generous host and patron of the arts who falls on hard times. He finds a buried treasure of gold in a cave, finances an expedition by Alcibiades, and dies in his cave.

Ans: \_Timon of Athens\_

3. Name the directors of the following foreign films, FTSNOP.

A. For 5 points, *La Dolce Vita*.

Ans: Federico \_Fellini\_

B. For 10 points, *The 400 Blows* and *Jules and Jim*

Ans: Francois \_Truffaut\_

C. For 5 points, *Breathless* and *Alphaville*

Ans: Jean-Luc \_Godard\_

D. For 10 points, *Ikiru* and *The Seven Samurai*

Ans: Akira \_Kurosawa\_

4. Identify the chief justice of the U.S. Supreme Court when the following decisions were issued, FTSNOP.

A. [5] The 1966 Miranda decision

Ans: Earl \_Warren\_

B. [5] The 1990 Webster decision

Ans: William \_Rehnquist\_

C. [10] The Dred Scott decision

Ans: Roger B. \_Taney\_

D. [10] The 1925 Gitlow v. New York decision

Ans: William H. \_Taft\_

5. Pencil and paper ready for a math bonus – answer these questions FTP each.

A. A particle’s position is defined by the expression 3t2 + 2t. Find the velocity of the particle at the time t = 3.

Ans: \_20\_

B. Find the total distance covered by the particle from t = 0 to t = 3, using the same position equation.

Ans: \_36\_

C. At what value of t will the particle stop?

Ans: \_-1/3\_

6. Identify these scientific laws named for their developers, FTSNOP.

A. [5] This gas law, stated in 1660, says that pressure and volume are inversely proportional when temperature is held constant.

Ans: \_Boyle’s\_ Law

B. [15] This 17th-century law states that in a fluid at rest in a closed container, a pressure change in one part is transmitted without loss to every part of the fluid and to the walls of the container.

Ans: \_Pascal’s\_ Law or Principle

C. [10] This law says that the volume of one mole of a gas at STP is the same for any gas.

Ans: \_Avogadro’s\_ Law

7. Name these members of the 2001 Atlanta Braves, FTSNOP.

A. [5] A winner of 4 Cy Young awards, he had two straight seasons with an ERA under 1.80.

Ans: Greg \_Maddux\_

B. [10] Winner of the 2000 NL Rookie of the Year award, this 21-year-old shortstop has a powerful arm and runs really fast.

Ans: Rafael \_Furcal\_

C. [10] A longtime first baseman with the Phillies, the Braves signed him as a free agent in December 2000 to replace the departed Andres Galarraga.

Ans: Rico \_Brogna\_ (pronounced “BRON-YA”)

D. [5] He picked up 38 saves in 1999, followed by 24 in 2000. In between, he unfortunately became the most familiar member of the team to non-baseball fans.

Ans: John \_Rocker\_

8. Name the Tennessee Williams plays which include these characters, FTP each:

A. Stanley Kowalski

Ans: A \_Streetcar Named Desire\_

B. “Big Daddy” Pollit, Brick, and Maggie

Ans: \_Cat on a Hot Tin Roof\_

C. Serafina Delle Rose

Ans: The \_Rose Tattoo\_

9. Identify these assorted “Great” things, FTP each.

A. Coined by speechwriter Richard Goodwin for Lyndon Johnson, this two-word phrase became the slogan for a multi-faceted group of liberal, reformist policies from 1964-67.

Ans: \_Great Society\_

B. China attempted to dramatically increase output under this program from 1958-60; the result was a lot of third-rate steel and a famine that killed 30 million people.

Ans: The \_Great Leap Forward\_

C. This old idea, which underlies Pope’s “Essay on Man,” holds that all natural or created things can be arranged in one vertical line, where each ascending link is one degree superior to the former.

Ans: The \_Great Chain of Being\_

10. Identify these directors of music videos, for 15 points each.

A. His string of creative videos includes Weezer’s “Buddy Holly,” the Beastie Boys’s “Sabotage,” Bjork’s “It’s Oh So Quiet,” and Fatboy Slim’s “Praise You” and that one with Christopher Walken dancing. He also directed *Being John Malkovich*.

Ans: Spike \_Jonze\_

B. A well-known fashion photographer, he made his mark in music videos with Madonna’s “Cherish” and Chris Isaak’s “Wicked Game.” In 2001 he directed a Britney Spears video.

Ans: Herb \_Ritts\_

11. Given some taxonomic classes, name the phylum of which they are part, FTP each.

A. Bivalvia and Gastropoda

Ans: \_Mollusca\_ or \_Mollusks\_

B. Agnatha and Chondrichthyes

Ans: \_Chordata\_ or \_Chordates\_

C. Arachnida and Crustacea

Ans: \_Arthropoda\_ or \_Arthropods\_

12. Identify the poem, 30-20-10.

30 – Dedicated to the author’s friend Carl Solomon, lines in its second section repeatedly begin with Moloch.

20 – The third section repeatedly says to Solomon, “I’m with you in Rockland,” referring to a mental institution. The poem also makes frequent references to the author’s experiences at Columbia in the late 1940s, the author’s visions of William Blake, and to other Beat writers.

10 – First read aloud at the Six Gallery, this 1956 poem is probably the best-known work of Allen Ginsburg.

Ans: \_Howl\_

13. Name these Japanese emperors, FTSNOP.

A. [5] He renounced his divinity over the radio in 1946.

Ans: \_Hirohito\_

B. [10] He has been the emperor since January 1989.

Ans: \_Akihito\_

C. [15] The victor at the battle of Sekigahara, he became the first emperor of the Edo period in 1603.

Ans: \_Tokugawa\_ \_Ieyasu\_ (accept either)

14. Name the Dutch painters of the following works, FTSNOP.

A. [5] The Anatomy Lesson of Dr. Tulp, and The Night Watch

Ans: \_Rembrandt\_ \_van Rijn\_ (accept either)

B. [15] Head of a Girl, and View of Delft

Ans: Jan \_Vermeer\_

C. [10] The Garden of Earthly Delights, and The Temptation of Saint Anthony

Ans: Hieronymus \_Bosch\_

15. Answer these questions about basic circuits, FTP each – you may need pencil and paper.

A. A circuit has a 60-Volt source connected to three 5-ohm resistors, which are in series. Therefore, what is the total current in the circuit, in amperes?

Ans: \_4\_ Amps

B. The three 5-ohm resistors are now connected in parallel to the 60-Volt source. What is the total current in the circuit, in amperes?

Ans: \_36\_ Amps

C. Now, one resistor is removed, leaving two 5-ohm resistors in series. What is the effective resistance of the circuit, in ohms?

Ans: \_2.5\_ Ohms

16. FTP each, identify these types of defense mechanisms.

A. The attribution to others of one’s own ideas, feelings, attitudes, especially blame, guilt, or sense of responsibility.

Ans: \_Projection\_

B. The process by which unacceptable desires or impulses are excluded from consciousness.

Ans: \_Repression\_

C. A mental or emotional response that represents the opposite of what one really feels.

Ans: \_Reaction Formation\_

17. Name the Russian authors of the following works, on a 10-5 basis.

A. 10 – *A Sportsman’s Sketches*

5 – *Fathers and Sons*

Ans: Ivan \_Turgenev\_

B. 10 – *The Red Wheel*, and *The Gulag Archipelago*

5 – *The First Circle*, and *One Day in the Life of Ivan Denisovich*

Ans: Aleksandr \_Solzhenitsyn\_

C. 10 – *Sevastopol Sketches*, and *The Cossacks*

5 – *War and Peace*

Ans: Leo \_Tolstoy\_

18. Name these scientists who happen to be appear consecutively in my almanac, FTP each.

A. A marine biologist, her 1962 book *Silent Spring* generated great interest in environmental problems.

Ans: Rachel \_Carson\_

B. Born in 1862, this American agronomist, nutritionist, and chemist did lots of work with sweet potatoes and peanuts.

Ans: George Washington \_Carver\_

C. A British member of the Manhattan Project, he discovered the neutron in 1932.

Ans: James \_Chadwick\_

19. Answer these probability questions, using a standard 52-card deck, FTP each.

A. One card is drawn. What is the probability that the card either a king or a queen?

Ans: \_8/52\_ or \_4/26\_ or \_2/13\_

B. Two cards are drawn without replacement. What is the probability that both are red?

Ans: \_25/102\_ (accept \_½ times 25/51\_) (or \_650/2652\_)

C. One card is drawn. What is the probability that it is an ace, or a diamond, or both?

Ans: \_16/52\_

20. Name the philosophers who wrote these works, FTSNOP.

A. [5] *Confessions* and *City of God*

Ans: St. \_Augustine\_

B. [10] *I and Thou*

Ans: Martin \_Buber\_

C. [10] *The Seven Storey Mountain*

Ans: Thomas \_Merton\_

D. [5] *Beyond Good and Evil* and *The Birth of Tragedy*

Ans: Friedrich \_Nietzsche\_