Valencia Fall Invitational 2001

Playoff Round 2–Questions by Raj Dhuwalia

1. Nils Krogstad faces dismissal, for the position he wants is to be filled by Christine Linde, an old friend of the central character. Doctor Rank is dying, and he leaves a card with a black cross. Torvald is terrified of losing his promotion when he learns of his wife’s forgery, and when the situation is resolved, Torvald is relieved for himself, with little thought of his wife. FTP, these events all occur in what Henrik Ibsen play, whose final scene features Nora Helmer leaving her husband?

Ans: A \_Doll’s House\_ (prompt on early “Ibsen” or “Nora Helmer”)

2. His favorite theorem was the 2 to 3 ratio of the volumes of a sphere and a circumscribed cylinder. Many stories about him are probably apocryphal, like his use of giant lenses to burn Roman ships, but other stories may be true, such as launching a ship with one arm after an army of a hundred had failed, or dashing naked through the streets after discovering the principle of buoyancy. FTP, name this 3rd-century BC mathematician, who died after defending Syracuse against the Romans.

Ans: \_Archimedes\_

3. A founder of the Free Soil party, his proposals to outlaw racial discrimination in public accommodations was way ahead of his time. In the Senate, he protested the Kansas-Nebraska Act and had heated debates with slavery advocates, including Senator Butler. He was in the Senate from 1851 to 1874, except for a 3 ½ year span from 1856-59, when he was recovering. FTP, name this Massachusetts senator who was sitting at his desk when he was attacked with a cane in the Senate.

Ans: Charles \_Sumner\_

4. A black cat sits at the woman’s feet, and a black maid brings flowers from a client. The central figure wears only a bracelet, high-heeled slippers, and the black ribbon around her neck, as she stares straight at the viewer without smiling. She is in a similar pose to nudes painted by Titian, Velasquez, and Goya, but a black outline surrounds her. First exhibited in 1865, FTP, name this Edouard Manet painting which shocked the Parisian art world.

Ans: \_Olympia\_

5. He devised a way of staining a cell and discovered a type of neuron, now named for him, which has short dendrites and connects other neurons. He also found the point at which sensory nerve fibers branch out within a tendon, and he shared the 1906 Nobel Prize in Physiology, but his name is best known today for its attachment to a cell organelle. FTP, name this Italian physician who discovered an organelle which packages large molecules for transport.

Ans: Camillo \_Golgi\_ (accept \_Golgi apparatus\_,\_Golgi cell\_, or \_Golgi bodies\_)

6. He retired from the navy at 27 with a small pension, and he tried working in engineering, real estate, art, and photography. But at age 32, his short story “Life-line” was published by the magazine *Astounding Science Fiction*, starting his new career. His books from the 1940s include *Rocket Ship Galileo* and *Sixth Column*, but he is most famous for later works. FTP, name this author of *The Moon is a Harsh Mistress*, *Starship Troopers*, and *Stranger in a Strange Land*.

Ans: Robert \_Heinlein\_

7. He was bound to a rock by ten chains and tortured by drops of venom from a serpent overhead. A member of the Aesir, his three children are the Midgard Serpent, the Fenris-Wolf, and Hel. He caused the death of Baldur, and at Ragnarok, he and Heimdall will slay each other. FTP, name this son of two Frost Giants, a trickster in Norse mythology.

Ans: \_Loki\_

8. The name of this geologic period comes from a mountain range in France and Switzerland. Ferns, mosses, cycads, and conifers thrived, as did marine invertebrates. Pangaea began to break up into the modern continents. The Archeopteryx [ar-key-op-ter-ix] appeared late in the period, and dinosaurs were dominant. FTP, name this period from 208 to 144 million years ago, preceded by the Triassic and followed by the Cretaceous.

Ans: \_Jurassic\_ Period

9. He fled France in 1791, but later became king. His reign began the Restoration, and was marked by such events as the rise of the Ultraroyalists, the Hundred Days, and two treaties of Paris to close the Napoleonic wars. He gained the throne largely through the efforts of Talleyrand, and he was succeeded by Charles X. FTP, name this Bourbon king whose brother was beheaded in 1793.

Ans: \_Louis XVIII\_ (Louis the 18th)

10. Pencil and paper ready. The first team will get ten seconds to buzz in on this tossup, with the usual five seconds for the second team. FTP, find the determinant of a 3 by 3 matrix whose elements are as follows: 10, 0, 0; [pause] 7, 4, 5; [pause] 8, 3, 4.

Ans: \_10\_

11. The first part was addressed to the author’s son, the governor of New Jersey. Its four sections were not printed together until 1868, and the account cuts off at 1758. Famous parts include the list of 13 Virtues, and a 24-hour chart which includes the Morning Question, “What Good shall I do this day?” It recounts the author’s self-education, his entry into the printing industry, his travels to Philadelphia, his authorship of a famous periodical, and his rise to social prominence. FTP, name this influential book, which mentions the author’s 1742 invention of a stove, his work on electricity, and his Albany Plan.

Ans: The \_Autobiography of Benjamin Franklin\_ (accept variants)

12. Gully. Deep extra cover. Fine leg. Third man. Silly mid-off. First-slip. Deep square leg. Deep backward point. Mid-wicket. Bowler. Wicket-keeper. FTP, these are all field positions in what sport, very popular in such places as India, Australia, the West Indies, and England?

Ans: \_Cricket\_

13. Her image is known from a portrait bust at Tell el-Amarna. She may have been an Asian princess from Mitanni, and two of her six daughters became queens of Egypt. She appears with her husband in reliefs at Tell el-Amarna, and she followed the cult of Aton. FTP, name this 14th-century BC Egyptian queen, the wife of Akhenaton.

Ans: \_Nefertiti\_

14. Its 177-acre main site is at the foot of the San Gabriel mountains, near where founders Frank Malina and Theodore von Karman did their early rocket tests. Early in the Cold War, it was the center of American rocket development, and it launched the first US space mission before being transferred from the Army to NASA in 1958. Today it manages the Deep Space Network, and it is NASA’s lead center for robotic exploration of the solar system. FTP, name this Pasadena laboratory managed by Cal Tech, usually known by the initials JPL.

Ans: \_Jet Propulsion Laboratory\_ (accept \_JPL\_ before it is read) (also accept “Jet Propulsion Lab(s)”)

15. He missed many classes at Cambridge despite earning his degree in three years, and historians believe his absences were due to spying. All his famous blank verse dramas were written in a span of under a decade, including *The Massacre at Paris* and *Tamburlaine the Great*. He died at age 29 under mysterious circumstances, though the official story was that he died in a bar fight. FTP, name this English playwright, whose tragedies include *Edward II* and *Doctor Faustus*.

Ans: Christopher \_Marlowe\_

16. To enter it, you must show your passport at La Linea, and you can drive down Europa Road to Europa Point, where you are within sight of another continent. Sites to see include the Apes’ Den, the Great Siege Road, a Moorish castle from the 8th century, and Catalan Bay. Captured in 711 by the Moors, this 2-square-mile site was obtained by the British in the Treaty of Utrecht a thousand years later. FTP, name this site of one of the Pillars of Hercules, a place whose name is a corruption of “the Rock of Tariq,” or Jebel Tariq.

Ans: \_Gibraltar\_

17. The 5th Brandenburg Concerto features a cadenza for this instrument. When used for accompaniment, parts for it were often written in figured bass notation. Because spring-loaded mechanisms pluck the strings, a note has the same volume regardless of how hard one presses a key. A leading instrument from 1600 to about 1790, famous players include William Byrd, Francois Couperin, J.S. Bach, and the Scarlattis. Also known as the cembalo, FTP, name this stringed instrument featured in Baroque music which was slowly replaced by the piano.

Ans: \_Harpsichord\_ (accept early \_Cembalo\_)

18. They produce a deep magenta solution when dissolved in benzene. They are easily produced by vaporizing graphite rods in a helium atmosphere, using a high-current electric arc. They can function as lubricants and superconductors, and a variation of these molecules is the nanotube, the strongest material ever discovered. Their cagelike structure may also allow them to transport medicines one molecule at a time. FTP, name this allotrope of carbon discovered in the 1980s, most commonly having the form C-60.

Ans: \_Fullerenes\_ or \_Buckminsterfullerenes\_ or \_Buckyballs\_ (accept early \_C-60\_)

19. Book Four deals with systems of political economy, such as mercantilism. Book Three discusses the different progress of opulence in different countries. Book One addresses the division of labor, the profits of stock, and the wages of labor. Book Five, which discusses the revenue of the sovereign or commonwealth, supposedly had great influence on Lord North’s budget in 1777. FTP, name this work first published in 1776, a seminal work in classical economics.

Ans: An Inquiry Into the Nature and Causes of the \_Wealth of Nations\_

20. Background characters in the novel include Frances Clyne, Bill Gorton, and Mike Campbell. The proprietor Montoya notes that the narrator has “aficion,” as the group of expatriates meets for the festival of San Fermin. The central characters are a young war widow, a former Princeton boxer, a young bullfighter, and a man who suffered an unfortunate injury in World War I. Set mostly in Paris and Pamplona, FTP, name this 1926 novel, the first major novel by Ernest Hemingway.

Ans: \_The Sun Also Rises\_

21. During this U.S. president’s administration, the GATT agreement was signed by the major world powers, Tom Clark and Fred Vinson were appointed to the Supreme Court, the Philippines gained their independence, the 11-month Berlin airlift took place, NATO was formed, the Taft-Hartley Act passed, and the Marshall Plan was instituted. FTP, name this president whose term began just over 3 months before the dropping of two atomic bombs.

Ans: Harry S. \_Truman\_

22. Alfred got lost in western Australia in the 1870s. James and Eleanor were prominent psychologists. Josh may have been the greatest home run hitter who didn’t play in the major leagues, and Bob had a 1.12 ERA for the Cardinals in 1968. William wrote *The Difference Engine*. Althea was the first black tennis player to win Wimbledon. FTP, give the common surname, also shared by the director of *Braveheart*, Mel.

Ans: \_Gibson\_

Valencia Fall Invitational 2001–Playoff Round 2 Boni

1. Identify the element fitting the following description, FTP each.

A. A component of Freon and Teflon, it has an electronegativity of 4.0.

Ans: \_Fluorine\_

B. A transition element, its isotope with mass 60 is used in cancer treatment. Found in Vitamin B-12, it is also used in the coloring of blue ceramics.

Ans: \_Cobalt\_

C. This alkali metal has the largest atomic radius of any element, and it was the first element discovered by spectroscopy. Its oscillation period has also been used to define the second.

Ans: \_Cesium\_

2. 30-20-10, name the year in which these events occurred.

30 – The Oneida community is founded, Thackeray’s *Vanity Fair* is published, and Alfred Wallace and Henry Bates travel to the Amazon.

20 – Prince von Metternich resigns his post, the reign of Louis Philippe ends, Vienna puts down a revolution, and Lewis Cass nearly becomes president.

10 – Revolutions sweep Europe, the Seneca Falls conference is held, gold is discovered at Sutter’s Mill, and Zachary Taylor wins election to the White House.

Ans: \_1848\_

3. FTP each, identify the literary movement or group that these writers were part of.

A. Margaret Fuller, Bronson Alcott, and Henry David Thoreau

Ans: \_Transcendentalism\_

B. Countee Cullen and Claude McKay

Ans: \_Harlem Renaissance\_

C. E.M. Forster, Lytton Strachey, and Virginia Woolf

Ans: \_Bloomsbury\_ Group or Circle

4. Answer these linked math questions, FTSNOP.

A. [5] Which regular polygon is the fundamental unit of a honeycomb?

Ans: \_Hexagon\_

B. [10] In degrees, what is the sum of the measures of the interior angles from the polygon in part A?

Ans: \_720\_

C. [5] The answer to part B is equal to the factorial of what number?

Ans: \_6\_

D. [10] The answer to part C was a perfect number, the sum of whose factors equals the number itself. What is the next largest perfect number?

Ans: \_28\_

5. Answer these questions about milestones in air travel, FTP each.

A. Name the pair of French brothers who perfected the hot-air balloon in 1783.

Ans: The \_Montgolfier\_ brothers (Joseph and Etienne)

B. In 1929, this dirigible which is not the Hindenburg became the first airship to fly around the world, doing so in just over 3 weeks.

Ans: The \_Graf\_ Zeppelin

C. It won’t get you 2.18 million dollars, but name the man who invented the first practical helicopter, the VS-300, in 1939.

Ans: Igor \_Sikorsky\_

6. Provide these medical terms which begin with the letter “M,” FTP each.

A. The thick, muscular middle layer of the heart wall, composed almost entirely of cardiac muscle.

Ans: \_Myocardium\_

B. The spread of a tumor from its site of origin to distant sites in the body, usually through the bloodstream; the term is most often heard in connection with cancer.

Ans: \_Metastasis\_

C. This is the scientific term for nearsightedness, caused by an elongation of the eyeball.

Ans: \_Myopia\_

7. Name these Dickens novels, FTP each.

A. Dickens was critical of the court system in this novel, featuring Esther Hawdon, Ada Clare, and the Jarndyce vs. Jarndyce suit which lasts for generations.

Ans: \_Bleak House\_

B. In the workhouse, the title character commits the unspeakable crime of asking for more gruel. He is forced to take part in a burglary with Fagin’s gang, which includes Bill Sikes an Jack Dawkins.

Ans: \_Oliver Twist\_

C. Written under the pseudonym Boz, this humorous early work is made up of letters and manuscripts about a club’s activities.

Ans: The \_Pickwick Papers\_ (or The \_Posthumous Papers of the Pickwick Club\_)

8. Name these long-reigning British monarchs, FTSNOP.

A. [5] This granddaughter of George III reigned for over 60 years.

Ans: \_Victoria\_

B. [10] The longest-reigning Stuart monarch of England, his reign from 1660-85 was marked by an increase in the power of Parliament.

Ans: \_Charles II\_

C. [10] Ruler from 1272-1307, he annexed Wales and was at constant war with Scotland. Also known as Longshanks, he’s the main bad guy in Braveheart, if that helps.

Ans: \_Edward I\_

D. [5] The last of the Tudor monarchs, she ruled from 1558-1603.

Ans: \_Elizabeth I\_

9. Identify these types of tall structures, FTP each.

A. In a Muslim mosque, these slender, lofty towers with balconies are often attached.

Ans: \_Minaret(s)\_

B. A tall, tapering, four-sided stone shaft with a pyramidal top, originally erected in pairs at the entrance to ancient Egyptian temples.

Ans: \_Obelisk\_

C. A towerlike, multi-storied structure of stone, brick, or wood, it is usually associated with a Buddhist temple complex and often enshrines sacred relics. It evolved from the Indian stupa, and it typically has upward-curving roofs.

Ans: \_Pagoda\_

10. FTSNOP, tell how many carbon atoms are in each molecule of the following common compounds.

A. [5] Ethane

Ans: \_2\_

B. [10] Tri-Nitro Toluene, or TNT

Ans: \_7\_

C. [10] Acetic Acid

Ans: \_2\_

D. [5] Methyl bromide

Ans: \_1\_

11. FTP each, identify these truly awful films released in 2001. No bonus points for having actually watched any of these in their entirety.

A. Written and directed by Gregory Poirier, it is about a group of friends who bet on which will be the last to get married, and the winner gets $500,000. The funniest scenes involve women being run over by golf carts.

Ans: \_Tomcats\_

B. Also written by Gregory Poirier, this David Arquette film is about a dog which has bitten off a gangster’s testicle and ended up in a witness protection program. The highlight of the film involves Arquette falling in dog poop.

Ans: \_See Spot Run\_

C. Released in April 2001, Gregory Poirier had nothing to do with this film. In Roger Ebert’s words, “The film is a vomitorium consisting of 93 minutes of Tom Green doing things that a geek in a carnival sideshow would turn down.”

Ans: \_Freddy Got Fingered\_

12. Name the Robert Frost poems which include these lines, FTP each.

A. “He only says, ‘Good fences make good neighbors.’”

Ans: \_Mending Wall\_

B. “An ant on the tablecloth / Ran into a dormant moth / Of many times his size. / He showed not the least surprise.”

Ans: \_Departmental\_

C. “Oh, I keep the first for another day! / Yet knowing how way leads on to way, / I doubted if I should ever come back.”

Ans: The \_Road Not Taken\_

13. Name these 16th-century religious reformers on a 15-5 basis.

A. 15 – He served as a pastor in Frankfurt and Geneva from 1553-59, while in exile from his native land because of the ascent of a Catholic to the throne.

5 – He is generally considered the founder of Scottish Presbyterianism.

Ans: John \_Knox\_

B. 15 – Educated in Vienna and Basel, he was influenced by Luther and began preaching reformist ideas in 1518. The main points of his *67 Articles* were adopted by most priests in his city.

5 – Under his leadership, Zurich became the center of the Swiss reformation movement.

Ans: Huldrych \_Zwingli\_

14. Answer the following about oscillators, FTP each.

A. A spring is connected to a mass. What law states that the force exerted by the spring on the mass is given by F = -kx, where k is the spring constant?

Ans: \_Hooke’s\_ Law

B. This three-word term refers to the type of movement of a mass coupled to an ideal, massless spring which obeys Hooke’s Law. It is commonly called SHM.

Ans: \_Simple Harmonic Motion\_

C. The angular frequency of the mass in SHM can be determined by solving Hooke’s Law via differential equations. In terms of m and k, what is the angular frequency?

Ans: the \_square root of (k/m)\_ or \_(k/m) to the ½ power\_ or equivalents

15. Identify these Hindu gods, FTSNOP.

A. [20] For 5 points each and a bonus of 5 for all correct, name the three gods of the trimurti in any order; one is the creator, one the preserver, and one the destroyer.

Ans: \_Brahma\_, \_Vishnu\_, and \_Shiva\_

B. [10] In the ancient Vedic religion, he was chief of the gods, armed with lightning bolts. He was reduced to the rain god in later Hinduism, and he was also the father of Arjuna.

Ans: \_Indra\_

16. Identify the type of graph which will be produced by the following polar equations. (Note to moderator:  is “theta”)

A. For 5 points: r = 4

Ans: \_Circle\_

B. For 5 points:  = 0

Ans: Straight \_Line\_

C. For 10 points: r = 3 cos  - 3

Ans: \_Cardioid\_

D. For 10 points: r = 5 sin 2

Ans: \_Four-Leaved Rose\_ (prompt on “Rose” or “Rose Curve”)

17. Name the cities in which you would find these universities, FTSNOP.

A. [5] The Sorbonne

Ans: \_Paris\_

B. [10] Belarusan State University

Ans: \_Minsk\_

C. [10] Marmara University

Ans: \_Istanbul\_

D. [5] The ‘Mozarteum’ University of Music and Dramatic Art

Ans: \_Salzburg\_

18. Name the Romantic composers of the following works, FTP each.

A. *20 Hungarian Rhapsodies* Ans: Franz \_Liszt\_

B. *The Bartered Bride*, and *The Moldau* Ans: Bedrich \_Smetana\_

C. *Rienzi*, and *The Flying Dutchman* Ans: Richard \_Wagner\_

19. FTP each, identify the Cabinet positions from some past holders of the office.

A. Robert Reich, James Davis, and Frances Perkins

Ans: \_Secretary of Labor\_

B. Frank Kellogg, John Quincy Adams, and Henry Kissinger

Ans: \_Secretary of State\_

C. Stewart Udall, James Watt, and Bruce Babbitt

Ans: \_Secretary of the Interior\_

20. Identify these congressional folks who made news in May 2001, FTSNOP.

A. [5] Name the Florida Republican representative who resigned his seat to spend more time with his family.

Ans: Joe \_Scarborough\_

B. [10] Name the US Senator from Vermont who left the Republican party in May 2001, shifting the balance of the Senate.

Ans: James \_Jeffords\_

C. [15] Name the Massachusetts Democratic representative who died of leukemia in May 2001.

Ans: John J. \_Moakley\_