## Valencia Fall Invitational 2002

Champeenship Round
Questions mostly by CB, with science help from Raj Dhuwalia

1) Its purpose is "to provide a medium of expression for the world-view and mental habits proper to the devotees of Ingsoc (ing-sok), but to make all other modes of thought impossible." It consists of an A, B, and C vocabulary, of which the B includes political terms like "joycamp," "goodthink," and "thoughtcrime." FTP name this language created in the novel 1984 to replace Oldspeak.
A. Newspeak
2) It's not entirely clear whether its formulator meant this term to refer to an idea or to an actual person. Though every culture has its own distinct goals, a single, universal goal exists. Man must commit himself entirely to this apogee of existence, even sacrificing his life to achieve it. Out of the destruction of those attempting to achieve this will arise these perfect men. FTP, this describes what concept of Nietzsche, misapplied by Hitler to his Aryan ideal.
A. Ubermensch
3) A direct corollary of the Kelvin-Planck form of this law is that no engine operating between two heat reservoirs can be more efficient than a Carnot engine. Formulated by Clausius in 1850, it explains why a refrigerator cannot be operated without some work input. FTP, name this physical law which says that in every nonreversible process, the entropy of the universe increases.
A. Second Law of Thermodynamics
4) The Clash song "Red Angel Dragnet" quotes from this $1975^{6}$ film, with a screenplay by Paul Schrader, including the classic line "Some day a real rain will come and wash all the scum off the streets." The protagonist makes the faux pas of taking his date to a porn film in Times Square, and later becomes enamored of a prostitute named Iris, whose pimp he eventually kills. FTP name this Martin Scorsese film in which Travis Bickle eventually wears a mohawk and goes on a shooting spree.

## A. Taxi Driver

5) The arrangement of the figures in this late $18^{\text {th }}$ century painting is purposely reminiscent of many renaissance depictions of the deposition of Christ. The dying central figure, wearing his red uniform, is surrounded by twelve colleagues, while a thirteenth mourner, a native wearing no shirt or pants, crouches and looks at him. FTP name this Benjamin West painting depicting the death of a British general at the Battle of Quebec.
A. The Death of Wolfe
6) This Western city is home to the Richtofen Castle, built by a Prussian aristocrat in 1887, as well as the $19^{\text {th }}$-century Tivoli Brewery. Its neighborhoods include Cherry Creek and Washington Park, where Mark Twain briefly stayed on his way west. Usually boastful of its high-altitude sunny weather, locals have been vexed by a severe drought since the beginning of 2002. FTP name this city whose elevation really is exactly 5,280 feet and which boasts five pro sports franchises, including the Avalanche and Rockies.

## A. Denver

7) The soil found in this biome is usually acidic and infertile, not allowing for much agricultural use. There is a short growing season of 3-5 months, in which larches, birches, and similar plant life thrive.

Bogs form in depressions due to the shallow permafrost layer. FTP this describes what subarctic biome consisting mostly of evergreen trees.
A. taiga (acc. coniferous forest)
8) After his forces were defeated by the Earl of Pembroke in 1306 near Perth, this leader retreated to a cave where he saw a spider continue to re-spin a web after it kept falling apart; he claimed that this inspired him to continue fighting for his people's independence. In 1314 20,000 soldiers under Edward II moved north to challenge him, only to be routed by his forces at Bannockburn. FTP name this Scottish hero and monarch.
A. Robert the Bruce (acc. Robert I)
9) The title character=s surname is Meeber, and when she makes it to Chicago she becomes the mistress of Charles Drouet (drew-it). Showing her gold-digger soul, she leaves Drouet for George Hurstwood, who is richer. After Hurstwood becomes a failure, she leaves him for a modest career on the stage, after which he kills himself. This is, FTP, the plot of what 1900 novel by Theodore Dreiser?
A. Sister Carrie
10) As World War II approached, the mammoth aluminum plants in Alcoa began producing more and more, and the Dept. of War decided to place its top-secret military testing facility in Oak Ridge. This led to a great need for more electrical power, which was then provided by the building of a massive dam at Fontana on the Little Tennessee River. All this development in eastern Tennessee and western North Carolina was administered by, FTP, what New Deal organization?
A. Tennessee Valley Authority (acc. TVA)
11) The legendary story of its creation comes from the dubious Letter of Aristeas, which suggests that all the work was done on the island of Pharos in 72 days around 250 BCE. The Letter is accurate, however, in saying that the work was commissioned by Ptolemy II Philadelphus, who like most Egyptians, couldn't read Hebrew. Named for the apocryphal 72 Jewish scholars who supposedly did the translation, name this first Greek version of the Old Testament.
A. Septuagint
12) Comprising approximately 5,000 species, the creatures in this phylum separated from other metazoan lines in the precambrian period. It is subdivided into three groups, including the Hexactinellida and the Calcarea, the latter of which can bore into bivalves to feed carnivorously. Most however, feed on bacteria drawn in by water flow conducted by tiny flagella. FTP name this phylum of benthic creatures, commonly called sponges.
A. porifera (prompt on "sponges")
13) Along with Bellini and Rossini, this composer was one of the three great masters of the Bel Canto style, involving florid and flashy vocals. He achieved international fame with the production of his Anna Bolena in 1830, and two other still-performed comedies followed soon after: Don Pasquale and The Elixir of Love. FTP name this Italian composer perhaps best known for The Daughter of the Regiment and Lucia di Lammermoor.
A. Gaetano Donizetti
14) As a high school senior, he so disliked his principal that he got himself elected to the school board and got the man fired. He had a brief television series on the Bravo network called "The Awful Truth," in which he pulled stunts like having an actor dress in a humanized handgun costume hand out ammunition
to schoolchildren. His populist, anti-corporate rhetoric can also be found in books like "Downsize This." FTP name this author of the recent bestseller"Stupid White Men" and director of the documentary "Roger and Me."
A. Michael Moore
15) Tennyson mentions this figure as a member of the Round Table, and he figures prominently in Thomas Love Peacock=s The Misfortunes of Elphin. If he really existed, he lived around 550 C.E., and is said to have composed in Cardiganshire in Wales. The $14^{\text {th }}$ century collection of his poetry is not all his work, however. FTP who is this Welsh bard, namesake of two homes built by Frank Lloyd Wright?
A. Taliesin
16) As director of some Caribbean colonies for the Dutch West India Company, he lost his leg while fighting the Portuguese in 1644, thereafter wearing a wooden prosthesis. In 1645 he took over the Company's interests in North America, and by 1650 had dislodged the Swedes from their settlement on the Delaware and had made peace with local tribes. FTP name this leader of New Amsterdam, who did gain possession of Manhattan island for the Dutch.
A. Peter Stuyvesant
17) Its atoms are generally arranged hexagonally in sheets which are spaced 3.5 angstroms apart. A good conductor, it has a high melting point and it used in electrodes in the production of aluminum. The loose bonding between sheets explains why it is so much softer than its more expensive allotrope, diamond. FTP, name this form of carbon which is used in pencils.
A. graphite
18) The first American example was the U.S.S. Akron, built in 1918 but completed too late for entry into WWI. The first ever was the Giffard, which debuted in France in 1852. The largest ever was 804 feet long and required seven million cubic feet of hydrogen, leading to its ultimate destruction. FTP name this type of craft which has rigid construction and is steerable, the most famous example of which was the Hindenburg.
A. dirigible (acc. Zeppelin; prompt on "blimp"as those are not rigid)
19) For ten yummy math points, evaluate $\log _{9} 27$ (log base nine of 27).
A. $3 / 2$ or 1 and $1 / 2$
20) His wife, Emilia, is an innocent intermediary in his schemes, and is one of many characters to comment on his virtue and honesty. Ironically, he famously says of honor that "he that filches from me my good name/Robs me of that which not enriches him," while he "Who steals my purse steals trash." Using Roderigo to help in his schemes to bring down Cassio, Desdemona and the title character, FTP this is what manipulative Shakespeare character from Othello?
A. Iago

1) Answer the following about Wuthering Heights FSNOP. ( 5 pts.) Who wrote it?

## A. Emily Bronte

(10 pts.) What's the full name of the woman loved by Heathcliff who marries Edgar?
A. Catherine Earnshaw
( 15 pts.) What is the name of the estate owned by the Linton family?

## A. Thrushcross Grange

2) Name these rules or laws used in circuits, FTP each:
A. This law has the form $\mathrm{V}=\mathrm{IR}$, where V is voltage, I is current, and R is resistance.
A. Ohm's Law
B. His second namesake rule says that the sum of EMFs and potential drops in a loop is zero, and his first rule says that current entering a node equals the current which leaves the node.
A. Kirchhoff's rules
C. This law says that if a closed surface encloses charge Q , then the flux through the surface is Q over epsilon-naught.
A. Gauss's Law
3) Identify these leaders of Mexico FTPE.
A. In 1862 this Austrian was installed as emperor of Mexico.
A. Maximilian
B. This man led an 1876 revolt that concluded with him as president, lasting until 1911.
A. Porfirio Diaz
C. This man ended the stranglehold of the PRI on the Mexican presidency and is currently the country's leader.
A. Vicente Fox
4) Time for the inaugural Boris Nguyen Fan Club bonus. Answer the following about Vietnam, France, and math FTPE.
A. First, Boris's parents' homeland, Vietnam, was divided into a communist North and American-backed South in 1954 at what parallel?
A. $17^{\text {th }}$
B. Though I'm not sure if Boris has ever swum in it, what is the large bay that lies at the near-right angle between Northern Spain and Western France?

## A. Bay of Biscay

C. Boris would have no trouble solving the differential equation $y d y+x d x=0$. Can you?

$$
\text { A. } x^{2}+y^{2}=C
$$

5) Identify the Frenchies who painted the following FFPE and a five-point bonus for getting them all.
A. Embarkation for Cythera
A. Eugene Watteau
B. The Swing (1765)
A. Jean Honore Fragonard
C. The Japanese Footbridge
A. Claude Monet
D. The Gleaners
A. Jean Francois Millet
E. Bar at the Folies-Bergere
A. Edouard Manet
6) Give the shapes of these molecules, according to VSEPR theory:
A. F5P, methane.

Answer: tetrahedral
B. FTP, sulfur hexafluoride

Answer: octohedral
C. FTP, phosphorus pentafluoride

Answer: trigonal bipyramidal
D. F5P, water

Answer: bent
7) Identify these characters from Alice's Adventures in Wonderland FTPE.
A. Always weeping, this character teaches Alice the Lobster Quadrille.
A. Mock Turtle
B. This sleepy character is thrust into a teapot by the Hatter and the March Hare.
A. Dormouse
C. This character is able to vanish at will, with its grin being last to go.
A. Cheshire Cat
8) Answer these questions about an historic legislative agreement from U.S. history FTPE.
A. What agreement, proposed mainly by Henry Clay, admitted California as a free state and enacted a strict fugitive slave law, among other provisions?
A. Compromise of 1850
B. The Compromise of 1850 stated that the territories of New Mexico and Utah would use this principle, a two-word phrase referring to the desire of the citizens, to determine whether they would allow slavery or not.
A. popular sovereignity
C. Finally, what northern congressman delivered a famous speech in defense of the Compromise to Congress, speaking Anot as a Northern man, but an American."
A. Daniel Webster
9) Answer the following about the Aztecs FSNOP.
A. ( 5 pts.) This city, buried beneath Mexico City, was the Aztec capital.
A. Tenochtitlan
B. (5 pts.) The arrival of Cortes was mistaken for the advent of this god, the Afeathered
serpent.@
A. Quetzacoatl
C. $(10 \mathrm{pts}$.$) The protector and chief deity of Tenochtitlan, this god of the sun was$
indicated by a hummingbird.
A. Huitzilpochtli
D. (10 pts.) The god of rain and water, the Aztecs sacrificed babies to appease him, and the more they cried, the more water he would ostensibly produce.

## A. Tlaloc

10) Name the states represented by the following senators FFPE and a bonus five for getting them all.
A. Joe Biden
B. John Warner
C. Ben Nighthorse Campbell
D. Jim Talent
E. Barbara Mikulski
A. Delaware
A. Virginia
A. Colorado
A. Missouri
A. Maryland
11) Identify the authors of these texts important in economic theory FTPE.
A. The Quantity Theory of Money
A. Milton Friedman
C. The General Theory of Employment, Interest, and Money
A. John Maynard Keynes
D. The Affluent Society
A. John Kenneth Galbraith
12) Identify the following works of literature with avian titles FTPE.
A. This Jerzy Kosinski novel tells of the hardships endured by a Polish boy lost during WWII.
A. The Painted Bird
B. In this Aristophanes work, the title characters try to build a city in the sky called Cloudcuckooland.
A. The Birds
C. The persona of this poem tells the title figure, "Thou wast not born for death, immortal bird!"
A. "Ode to a Nightingale"
13) Name these parts of your heart FTPE.
A. This is the triple-layered sac that surrounds and protects your heart.
A. pericardium
B. Located in the right atrial wall this structure sends impulses that stimulate contractions; that's why it's often referred to as your heart's "pacemaker."
A. sinoatrial node
C. These two valves prevent blood from flowing backward into the heart.
A. semilunar valves
14) Name these nutty popes FTPE.
A. Serving in the $12^{\text {th }}$ century, he's the only Englishman to wear the Fisherman's Ring.
A. Adrian IV
B. This pope's participation in the League of Cambrai in 1509 restored the papal states, but you probably know him better for his patronage of Bramante and Michelangelo.
A. Julius II
C. This pope during World War II has recently come under much historical scrutiny for his unwillingness to condemn the holocaust.
A. Pius XII
15) Identify these silent film directors for 15 points each.
A. This man created the Keystone Kops comedies and directed the young Charlie Chaplin in many of the shorts featuring his little tramp character.
A. Mack Sennett
B. This man revolutionized the cinema with his great works Birth of a Nation and Intolerance.
A. D. W. Griffith
16) Time for an inevitable subject at this tournament; answer the following FTPE.
A. What ditheistic religion, the evil god of which is Ahriman, came into being in the $7^{\text {th }}$ century BCE in Persia?
A. Zoroastrianism (acc. reasonable equivalents)
B. The polar opposite of Ahriman, what name is given to the "good" god of Zoroastrianism?
A. Ahura Mazda
C. What Persian king, whose forces were later defeated at Marathon, was the first of his dynasty to embrace Zoroastrianism?
A. Darius I
17) 30-20-10 Name the scientist.
A. ( 30 pts.) In 1926 he explained the laws, now called his statistics, that govern the behavior of particles not governed by the Pauli Exclusion Principle.
B. (20 pts.) He emigrated to the U.S. in 1938 and took a post at Columbia, where he led a series of experiments in fission that led to the atomic pile and his most famous experiment in 1942.
C. (10 pts.) This Italian conducted the first controlled nuclear chain reaction under Stagg Field at the University of Chicago, leading to the creation of the first atomic bomb.
A. Enrico Fermi
18) 30-20-10 Name the composer from works.
A. ( 30 pts .) Variations on a Fugue and Theme from Handel; Tragic Overture
B. (20 pts.) Variations on a Theme by Paganini; German Requiem
C. ( 10 pts.) Academic Festival Overture
A. Johannes Brahms
19) Answer the following related literature questions 5-10-15.
A. (10 pts.) What Irish poet wrote the poems "The Second Coming" and "Sailing to Byzantium"?
A. William Butler Yeats
B. (5 pts.) What Chinua Achebe novel takes its title from "The Second Coming"?
A. Things Fall Apart
C. (15 pts.) What 2001 Philip Roth novella about David Kepesh takes its name from a line in "Sailing to Byzantium"?
A. The Dying Animal
20) Last bonus of the tournament: if you're here, you can handle this. Identify these well-known groups or unions from Europe's history FTPE.
A. This late medieval association of German towns flourished in the $14^{\text {th }}$ and $15^{\text {th }}$ century as a trading group and fighting power.
A. Hanseatic League (acc. Hansa)
B. This dynastic union of Denmark, Norway and Sweden was formed partly to counter the growing Hanseatic League of Germany. The Swedes broke away in 1523.
A. Kalmar Union
C. Led by John Frederick of Saxony and John the Magnanimous of Hesse, this protestant league of princes dissolved after losing to forces of Holy Roman Emperor Charles V at Muhlenberg in 1547.
A. Schmalkaldic League
C. Jim Fisk and Jay Gould tried to corner the gold market in the scandal named for the day when speculative trading in gold bankrupted many legitimate businessmen.
A. Black Friday
21) I'll name a large American city, and you tell me the name of its largest-circulation newspaper FTPE.
A. St. Louis
A. Post-Dispatch
B. Detroit
A. Free Press
C. Denver
A. Post
22) Identify these catalogues of astronomical objects for fifteen points each.
A. This work inventories 109 nebulae, star clusters and galaxies, each preceded by an ' M ', referring to its French creator.
A. Messier Catalog
B. This work describes over 275,000 stars and is abbreviated HD in deference to its British developer.
A. (Henry) Draper Catalog
23) If you've gotten this far, you deserve a toughie. Name these wars that took place south of here FTPE. A. Fought from 1879-83 with Chile squaring off against Peru and Bolivia, it began over claims to mineral-rich sections of the Atacama.
A. War of the Pacific
B. Bolivia sought to regain access to the ocean which it had lost in the War of the Pacific in this 1932-35 conflict with Paraguay.
A. Gran Chaco War
C. El Salvador and Honduras went to war after simmering tensions came to a boil at a match of the titular game in 1969.
A. Soccer War
