

Valencia Fall Invitational 2001

Championship Round

Questions mostly by CB, with science help from R. Dhuwalia and math by J. Lee

1) Roman Consuls had twelve of them, while Praetors had six. They were carried by Lictors, who held them in the left hand balanced on the left shoulder. They represented the magistrate's power to punish or execute criminals. FTP what were these bundles of rods bound by a thong around an axe, the name of which was adopted by Mussolini for his political party?

A. **fascies** (do NOT accept "fascism")

2) The second kind extracts heat from air or the oceans and converts it into mechanical energy. The first kind supplies an endless output of work without any input of fuel or any other input of energy. However, both types are merely hypothetical, since they violate the first law of thermodynamics. FTP name this type of machine which occasioned Homer Simpson to admonish Lisa, "Young lady, we obey the law of thermodynamics in this house!"

A. **perpetual motion machine** (acc. obvious equivalents)

3) In 1992 this author collaborated with a host of others to create *Agrippa (A Book of the Dead)*, an electronic text which scrolls automatically and erases itself when finished. His more traditional science fiction includes *Count Zero* and *Mona Lisa Overdrive*, which complete a trilogy with his first and most famous novel, which introduced the term "cyberspace." FTP name this author of *Neuromancer*.

A. William **Gibson**

4) After taking his new position on September 21 of this year, he was replaced in his former elected office by Mark Schweiker. President Bush strongly considered this moderate Republican for his running mate in 2000, but turned him down due to this then-governor's support of reproductive freedom. The newest member of the president's cabinet, FTP name this former governor of Pennsylvania who is now in charge of "homeland security."

A. Tom **Ridge**

5) He set the University of Florida single-game record for assists with 17 against Duquesne in 1997, though his playing career as a Gator was short due to grades and suspensions. A high school teammate of Randy Moss, he entered the NBA in 1998 and made the All-Rookie team, finishing fourth in the league in three-pointers made. FTP, traded to the Grizzlies for Henry Bibby, who is this hot-dog point guard nicknamed "White Chocolate"?

A. **Jason Williams**

6) His first literary appearance came in the Tirso de Molina drama *The Libertine of Seville and the Stone Guest*. Moliere's play about him introduced his wronged wife, Elvire. The scene where he is dragged into hell by a statue is included in Shaw's *Man and Superman*. FTP name this subject of a Mozart opera, a legendary profligate and lover.

A. **Don Juan**

7) Karl Schwartzchild predicted their existence as a consequence of general relativity, and John Wheeler named them. Supermassive ones may be at the center of quasars and other galaxies, including our own. FTP name these objects, whose gravitational field is so strong that even light can't escape.

A. **black hole**

8) For ten juicy math points, find the sum of the roots of the equation $x^2=3x+5$.

A. **-3**

9) The brewery that Bob and Doug McKenzie visit in Strange Brew has this name. The more famous literary one is based on Kronberg Castle which sits on the island of Zealand in the Danish city with a similar name. Home to Claudius and Gertrude, FTP what is this castle in which much of the action of *Hamlet* takes place?

A. **Elsinore**

10) Their name comes from an early chieftan when they wandered the Kyrgyz (keer-giz) steppes in the Transoxiana region around the tenth century. His grandson, Tughril, led the tribe west, taking Baghdad in 1055, then moving north into Asia Minor. Here they won the Battle of Manzikert, secluding the Byzantines in Constantinople. FTP what name is given to these rulers of Asia Minor before the Ottomans?

A. **Seljuk** Turks

11) The clock on the far wall reads 12:10 a.m., and the proprietor of the title place looks out at the viewer from the right of a billiards table. A few sad-looking customers populate the tables at the left and right of the painting, which features a garish red on the walls enhanced by the vividly yellow floor. FTP name this Van Gogh work which depicts a place where he and Gauguin often drank together.

A. **The Night Café**

12) Currently under Pakistani administration, it lies partly in China and partly in Jammu and Kashmir. Part of the Karakoram Range, it stands on a tributary of the Baltoro Glacier, the third largest in the world. With an alternate name coming from the fact it was the second Karakoram peak measured, FTP what is this second highest peak on Earth?

A. **K2 or Godwin Austen**

13) As surfactants, or wetting agents, they are very compatible with aqueous ions and are resistant to both acids and alkalis. In the middle pH ranges, they become molecules with two ionic groups of opposite charge, called Zwitterions. Water fits the definition, because it can donate or accept a proton. FTP what are these substances which can act as either an acid or a base?

A. **amphoteric** (acc. amphoprotic)

14) A necklace of skulls, earrings of corpses, and a girdle of serpents are among her accouterments. The object of the human sacrifices made by the Thugs, she has red eyes, four arms, and a protruding tongue dripping with blood. FTP who is this Hindu goddess of destruction, the wife of Shiva?

A. **Kali**

15) The first act opens in an attic apartment on Christmas Eve in the 1830s. After all but one of the male characters leave for a café, a female neighbor enters to find a match to relight her candle, leading the remaining male lead to sing the aria *Che gelida manina*, or the "tiny hand is frozen." Unfortunately, she's tubercular, and the rest of the Parisian characters are poor poets and musicians. So goes, FTP, the plot of what Puccini opera about the love of Mimi and Rudolfo, the basis for the musical *Rent*.

A. **La Boheme**

16) At the end of his life, long after his capture, he was somewhat sadly displayed at the Pan-American Exposition in Buffalo and the St. Louis World's Fair in 1904. His Chiricahua (chee-ri-kaw-hwa) name was Goyathlay, and he led a band of Apache into Mexico when members of his tribe were slaughtered by U.S. troops. From there he led successful raids on and escapes from troops until Nelson Miles got him to surrender in 1886. FTP name this Apache leader who probably never yelled his own name jumping off a cliff.

A. **Geronimo**

17) Based on the real-life story of the Lost Woman of San Nicolas, this novel has a lesser-known sequel, *Zia*, in which the protagonist's niece tries to rescue her. The natives of the title place board ships to escape Aleutian seal hunters, but Karana goes back to the island to find her brother, only to find he's been eaten by dogs, so she has to fend for herself. This describes, FTP, what Newberry-medal winning novel by Scott O'Dell?

A. ***Island of the Blue Dolphins***

18) It functions as both an exocrine and endocrine gland, and its alpha cells produce glucagon to help blood sugar levels stay normal. It consists of a head, body, and tail, and is a flattened organ located behind and below the stomach. Its endocrine tissue is called the islets of Langerhans. FTP what is this organ which is responsible for producing insulin?

A. **pancreas**

19) This fruit, native to the area from Iran to northern India, has a rich red interior and has been grown around the Mediterranean since Classical times. The bodyguard of Cyrus the Great were identified by a golden one on their spears. Because Persephone ate a single seed from one of these, she was forced to spend four months of every year in Hades. FTP what is this fruit whose botanical name is *punica granatum*?

A. **pomegranate**

20) This city's oldest gathering area, Marion Square, a site of revolutionary war battlements, is undergoing renovation. In 2000, the NAACP's boycott of its state led some artists to avoid the city's annual classical music festival Spoleto, founded by Gian Carlo Menotti. FTP name this southern city which is drawing new tourists to look at the remains of the Confederate sub Hunley, the largest city in South Carolina.

A. **Charleston**

21) It is the name of the evil character who kills the half-wit Tommy and rapes Temple Drake in Faulkner's novel *Sanctuary*. It is also the nickname of the legendary New York narcotics officer Jimmy Doyle, portrayed by Gene Hackman in the French Connection. FTP what is this name shared by the enemy of Bluto, the spinach-eatin' sailor man?

A. **Popeye**

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1) Well, here it finally is: the bonus on today's date, November 10, in history. Identify these persons or events connected to today's date FSNOP.

(5 pts.) This actress, famous for her winsome and delicate characters in movies like *Edward Scissorhands* and *Girl, Interrupted*, was born in 1970.

A. Winona **Ryder**

(5 pts.) This man was made emperor of Japan in 1928.

A. (Showa Tenno) **Hirohito**

(5 pts.) This branch of the military, meant to be the landing force of the Navy, was formed by a bill sponsored by John Adams in 1775.

A. **Marines**

(15 pts.) Playwright Ken Saro-Wiwa was executed on orders of General Sani Abacha for protesting the exploitation of the people of this nation by Shell Oil.

A. **Nigeria**

2) Name the creators of these Dada works FTPE.

He painted a mustache and beard on the Mona Lisa and called it *L.H.O.O.Q.*

A. Marcel **Duchamp**

This German created his Merzbilds from found objects, like scraps from magazines and used ticket stubs.

A. Kurt **Schwitters**

This photographer was known for his technique of placing odd objects on photographic paper, creating what he called (blank)ographs—with his pseudonym in the blank.

A. **Man Ray**

3) Given a line or two from a well-know poem, provide the next line FTPE. Your answers must be exact, so be careful.

"Two roads diverged in a wood and I--/I took the one less traveled by,

A. **"And that has made all the difference."**

"My friend, you would not tell with such high zest/ . . . The old lie,

A. **"Dulce et decorum est"** (don't need to say "pro patria mori," but okay)

"Tiger, tiger, burning bright,"

A. **"In the forests of the night"**

4) Answer the following about an accidental scientific breakthrough in 1928 FSNOP.

(5 pts.) When a scientist left a petri dish containing staphylococcus uncovered, he discovered that a mold had halted the bacteria. This antibacterial agent he called what?

A. **penicillin**

(10pts.) What scientist isolated and named penicillin?

A. Alexander **Fleming**

(15pts.) What British scientist shared the 1945 Nobel for Physiology and Medicine with Fleming and Ernst Chain for his work in creating a process to isolate sufficient quantities of penicillin to conduct definitive human trials?

A. Howard **Florey**

5) It's time to find the pope in the pizza! Well, just identify these, FTPE.
Serving from 1154-59, he was the only English pope.

A. **Adrian IV**

This pope's silence about the holocaust during World War II is causing his papacy to be reconsidered.

A. **Pius XII**

This last pope before the John Pauls served from 1963-78.

A. **Paul VI**

6) Time for a fun visual bonus; captain, take a look at the buildings on this sheet, and answer the following about them FTPE.

The two buildings labeled #1 are found in what city?

A. **Kuala Lumpur** (they are the Petronas Towers)

(5 pts. each) Name the building labeled #2 and the architect who designed it.

A. **Guggenheim Museum (New York); Frank Lloyd Wright**

The building labeled #3 is a Guggenheim Museum designed by Frank Gehry; in what European city is it located?

A. **Bilbao, Spain**

7) Answer the following about suspensions FTPE.

A suspension in which particles larger than most molecules don't dissolve but stay suspended in another medium, such as many paints and foams, is called this.

A. **colloid**

This is a type of colloid in which solids or liquids are suspended in a gas or liquid; in common household use they are expelled from a can by a hydrocarbon propellant.

A. **aerosol**

Shining an intense beam of light through a substance leading to a scattering of that light as it hits suspended particles is an example of this effect, which explains the gray-blue color of smoke.

A. **Tyndall effect**

8) Differentiate each of the following equations FTPE.

$\ln(2x)$ (read: natural log of the quantity two x)

A. $1/x$ (one over x)

$\ln(x^2+1)$ (read: natural log of the quantity x squared plus one)

A. x/x^2+1 (x over x squared plus one)

$\ln(\cos 2x)$ (read: natural log of the quantity cosine two x)

A. $-2 \sin(2x)/\cos(2x)$ or $-2 \tan(2x)$

9) Name the composers of these operas on a 10-5 basis.

(10 pts.) A Masked Ball; The Force of Destiny

(5 pts.) Othello; Rigoletto

(10 pts.) Cosi fan Tutte

(5 pts.) The Marriage of Figaro

(10 pts.) The Medium; The Saint of Bleeker Street

(5 pts.) Amahl and the Night Visitors

A. Giuseppe **Verdi**

A. Wolfgang **Mozart**

A. Gian Carlo **Menotti**

10) Arrr, scurvy dogs, name these pirates FTPE.

Born Edward Teach, this pirate based in North Carolina buried silver bars on an island near New Hampshire which have never been found.

A. **Blackbeard**

His base was in Barataria Bay outside New Orleans, and he helped Andrew Jackson defeat the British in 1815.

A. **Jean Lafitte**

Perhaps America's most famous pirate, he obtained a privateer's license to capture Blackbeard, but when he failed, he just became a pirate himself, mostly preying on other pirates.

A. William ("Captain") **Kidd**

11) Identify the Shakespearean character who says the following FTPE.

"Methinks the lady doth protest too much."

A. **Gertrude** (in Hamlet)

"I am a man/More sinn'd against than sinning."

A. **King Lear**

"Parting is such sweet sorrow."

A. **Juliet**

12) Captain, answer these questions about the athlete pictured on this sheet FSNOP.

(5 pts.) First, who is he?

A. **Tracy McGrady**

(5pts.) Second, for what team did he play before being traded to the Orlando Magic?

A. **Toronto Raptors** (acc. either answer for ten)

(5 pts.) McGrady played with what cousin of his while he was in Toronto?

A. **Vince Carter**

(15 pts.) Finally, in what small Central Florida town between Orlando and Tampa was McGrady born?

A. **Auburndale**

13) Name these fundamental forces FTPE.

It has infinite range and may be either attractive or repulsive.

A. **electromagnetism** (prompt on "electric" or "magnetic")

Its range is less than a femtometer, and most reactions involving it are radioactive decays.

A. **weak nuclear** (acc. "electroweak")

By far the weakest of the four forces, it appears to be only attractive and not repulsive, and it has infinite range.

A. **gravity** (or equivalents)

14) Show what you know of early Chinese history by answering the following FSNOP.
(15pts.) Sometimes called the "First Emperor," this man created the first unified Chinese empire in 221 BCE.

A. **Shih Huang-ti**

(10pts.) Shih Huang-ti founded this dynasty, which lasted only about 12 years.

A. **Ch'in**

(5 pts.) Shih Huang-ti filled in the gaps in this northern barrier, meant to keep out nomads and Mongols.

A. **Great Wall**

15) Stay gold, Ponyboy, by identifying the following "golden" literary works FTPE.
This Henry James novel concerns Maggie Verver, daughter of a millionaire.

A. The **Golden Bowl**

This satirical romance by Apuleius is narrated by a man turned into a beast.

A. The **Golden Ass**

This monumental 13-volume work of comparative religion greatly influenced literary analysis and anthropology in the early 20th century.

A. The **Golden Bough**

16) Identify these women from the Christian Bible FTPE.

This star of an apocryphal book cut off the head of Holofernes with his own sword.

A. **Judith**

The triumph of this woman against the anti-semitic conspiracy of the Persian advisor Haman is celebrated in the Jewish festival Purim.

A. **Esther**

She is the only woman judge of the Israelites.

A. **Deborah**

17) Give the pH of the following FTPE.

When hydrochloric acid is titrated with sodium hydroxide, this is the pH of the equivalence point.

A. **7.0**

This is the pH of a solution with a pOH of 12.4

A. **1.6**

Within 0.2, this is the average pH of human blood.

A. **7.4** (acc. 7.2 to 7.6)

18) Name the Canadian provinces with these capitals, FTSNOP.

(5 pts.) Toronto

A. Ontario

(5 pts.) Halifax

A. Nova Scotia

(10 pts.) Regina

A. Regina

(10 pts.) Winnipeg

A. Saskatchewan

19) Identify these real-life people who've played parts on The Simpsons for ten; if you need a more conventional clue, you'll get five.

(10 pts.) This artist is seen stuffing food from a buffet into his pockets, and later he steals a canvas Homer is painting.

(5 pts.) This painter is best known for his targets and flags.

A. Jasper **Johns**

(10 pts.) This American novelist ghost wrote Krusty the Clown's autobiography.

(5 pts.) He's better known for his novels about Harry Angstrom, aka Rabbit.

A. John **Updike**

(10 pts.) Homer is invited to have a beer with this president after he supplants George Bush as Homer's across-the-street neighbor.

(5 pts.) He lost to Jimmy Carter in 1976.

A. Gerald **Ford**

20) Answer the following about the English Civil War FTPE.

Because of their closely cropped hair, the opposite of the flowing locks of the Cavaliers, this was the nickname given to the Parliamentarians.

A. **Roundheads**

This was the name given to Oliver Cromwell's army which won decisively at Naseby.

A. **New Model Army**

This was the title Cromwell took for himself as leader of England.

A. **Lord Protector**