

**Valencia Delta Burke Invitational 2004—Round 12**  
**Questions by University of Illinois w/Edits by CB**

1. According to Xenophon, this man developed the first postal system. His namesake cylinder, inscribed in cuneiform, proclaimed his defense of basic human rights. He maintained order throughout his huge empire by designating locals as satraps, or provincial mayors. Succeeded by his son Cambyses, FTP who was this founder of the Achaemenid Empire, a great Persian ruler?

Answer: Cyrus the Great

2. A fixture at the court of Anjou in Naples, in 1334 he first saw Maria d'Acquino, the daughter of King Robert, who became the inspiration for many of his earlier works, like Ameto and Filocolo. More importantly, she served as the basis for his character Fiametta, who besides appearing in a work of that name, is one of the characters who tells a story a day for ten days in his most famous work. FTP name this author of The Decameron.

Answer. Giovanni Boccaccio

3. During much of the 1990s, its president was cardiologist Sali Berisha, who resigned in 1997 following riots over pyramid schemes. An Ottoman possession for over 400 years, it gained independence in 1912. Its national hero is Skanderbeg, and from 1925-39, it was ruled by King Zog, and for nearly forty years after World War II, it was a Communist autocracy headed by Enver Hoxha. FTP identify this nation on the Adriatic with capital at Tirana.

Answer: Republic of Albania

4. Undrafted in 1996, this man spent three seasons with the Washington Wizards, during the last of which he averaged 8.3 rebounds and 1.96 blocks per game. This former criminology major at Virginia Union then spent one season with the Orlando Magic, after which he and Chucky Atkins were traded for Grant Hill. The 2003 NBA Defensive Player of the Year, FTP name this Detroit Pistons center almost as famous for his afro as for his basketball prowess.

Answer: Ben Wallace

5. Every space with this operation is a Banach space since this operation defines the norm or "length" of vectors, and these are generalized to integrals in Hilbert spaces, or vector spaces of functions. In a Euclidian vector space, it is the sum over two vectors of the products of their like components. For ten points, name the multiplication operation that, for two vectors **a** and **b**, is equal to the magnitude of **a** times the magnitude of **b** times the cosine of the angle between them.

Answer: dot product (or scalar or inner product; accept norm before it's mentioned)

6. At the age of 16, this man was cast out of the house of his father, a horse trainer, due to his homosexuality. This artist depicted the ravages of drug abuse in *Lying Figure with Hypodermic Syringe* and made his first impact with 1945's *Three Studies for Figures at the Base of a Crucifixion*, but drew from Eisenstein's *Potemkin* for inspiration for his most famous works. FTP name the Irish painter best known for transforming Velázquez's *Portrait of Pope Innocent X* into his series of *Screaming Popes* and who shares his name with an English philosopher.

Answer: Francis Bacon

7. The generalized form of this is, along with position, one of the variables determining the motion in Hamiltonian mechanics, and the quantum mechanical operator for it is generally conjugate with that for position. FTP name the property of a body in motion whose time derivative is equal to the force on that particle according to Newton's 1<sup>st</sup> law, and which is classically equal to particle mass times velocity.

Answer: momentum

8. This writer refused an offer of knighthood from Ramsay MacDonald, which he earned for novels like *Youth*, *Chance*, and *Victory*. He collaborated with Ford Madox Ford on *The Nature of a Crime* and *The Inheritors*, after having gained fame with works like *Almayer's Folly* and *Lord Jim*. Born with the last name Korzeniowski, his many sea voyages provided inspiration for novels about his recurring character, Marlow. FTP name the Anglo-Polish author of *Heart of Darkness*.

Answer: Joseph **Conrad**

9. This process occurs in North American and Eurasian brown algae rather than zygotic or gametic meiosis. This scheme's combination of the archegonium and antheridium results in syngamy for the sporophyte generation, which is in contrast to the meiosis-induced simpler gametophyte portion of the namesake process. For ten points, name this repeated switching of haploid and diploid life cycles, a characteristic of organisms in the plant kingdom.

Answer: **alternation of generations**

10. This work's second book contains the story of Gyges of Lydia, who became king using a ring of invisibility. This work ends with a story of a man who briefly dies and visits the Underworld, called "The Myth of Er." Book I contains Thrasymachus's view that "justice is [...] the advantage of the stronger," although the most famous section has Socrates instructing Glaucon on the theory of the forms using "The Allegory of the Cave." For ten points, identify this long Platonic dialogue concerning the construction of an ideal state.

Answer: *The* **Republic**

11. [Note to moderator: read, for example, (1,2,3) as "one, two, three." Make sure a pause is noticeable between each component.]

[Computation - 15 seconds] In the form of an ordered triple of integers in the same basis as the vectors given, compute the vector product of (-1,1,0) and (2,-4,2).

Answer: **(2,2,2)** ("two, two, two")

12. This author of the poems "On Monsieur's Departure" and "The Doubt of Future Foes" was herself the subject of Walter Scott's novel *Kenilworth*. Major legislation passed during her rule included The Statute of Apprentices and a series of acts regarded as the foundation of the Old Poor Laws. William Cecil advised her throughout her reign, the end of which was marred by the revolt of the Earl of Sussex in 1601. FTP name the successor of Mary I and daughter of Anne Boleyn, the English monarch whose forces defeated the Spanish Armada.

Answer: Queen **Elizabeth I** of England

13. This man's efforts led to his country's adopting the metric system, and he was the first to rigorously enunciate the law of conservation of mass. His wife translated his work into English, and it was for her that he became a tax collector and gunpowder commissioner, for which he was guillotined during the French Revolution. Perhaps most famous for debunking the phlogiston theory, he also coined the name "oxygen" and also wrote the first general chemistry textbook. For ten points, name this Frenchman, considered the "father of modern chemistry."

Answer: Antoine-Laurent **Lavoisier**

14. Although this man never won the Putnam competition, he did write the book *Real Algebraic Manifolds*, and was inspired by the work of von Neumann and Morganstern. Winning a fellowship to Princeton allowed him to write his thesis, "Non-Cooperative Games," which described his namesake equilibrium, for which he won the 1994 Nobel Prize in Economics. For ten points, name this schizophrenic mathematician and subject of Sylvia Nasar's *A Beautiful Mind*, played on the screen by Russell Crowe.

Answer: John Forbes **Nash**, Jr.

15. Near the site of this modern city lies an ancient Roman fortress called Babylon. It was founded near Al-Fustat by Gawhar in 969 CE. It was captured by the Seljuk general Shirkoh, whose nephew Saladin built the imposing Citadel on a spur of the Muqattan Hills. It was then taken by the Ottomans in 1517, and by Napoleon in 1798, and it is the city in which the remaining Mamelūks were massacred by Mohamed Ali in 1811. For ten points identify this home of the Arab League; the largest city in Africa and capital of Egypt.

Answer: **Cairo** (or **Al-Qahira** or **Al-Mansureya**)

16. The breaking of the racehorse Frou-Frou's back foreshadows this work's unhappy end. Minor characters in it include Betsy Tverskaya and Stiva, and it begins, "All happy families are alike, but each unhappy family is unhappy in its own way." A peasant who tells Levin to serve not himself but God, causing him to return to his wife, Kitty, expresses its author's devout Christian faith. The title character is impregnated by the military hero Vronsky, after which she tragically throws herself under a train. For ten points, name this novel by Leo Tolstoy.

Answer: **Anna Karenina**

17. This son of Jord has, as his mistress the giantess Jarnsaxa, but he lives with Sif at Bilskirnir. This deity's mortal foe is Jörmungand and his possessions include Megingjard, a strength-doubling belt, and Mjollnir, a hammer good for smashing serpent skulls. For ten points, name the red-bearded, lightning-eyed Norse god of thunder.

Answer: **Thor** (accept **Thunor** or **Thonar** or **Donar**)

18. This building is currently known as Santa Maria Rotunda, and the frieze above its portico has the name of its attributed designer, "M. Agrippa," while the inner chamber contains such inscriptions as "Dominum in sanctis eius." This building was designed as a unison cylinder with a 44-meter diameter base, and its coffered dome is a hemisphere featuring an oculus. FTP name this temple to seven planetary deities of ancient Rome

Answer: The **Pantheon**

19. Having a temperature variation of over 150 degrees Fahrenheit, this region has two commonly used Chinese alternate names: Shamo and Han-Hal. Geographers have recently begun to consider its westernmost region as a separate desert called Taklamakan. A favorite of paleontologists and the site of the only finds of intact dinosaur eggs, FTP name this Asian desert that comprises much of western China and southern Mongolia.

Answer: **Gobi** Desert

20. This literary character wrote a schedule for self-improvement at his home in Minnesota. Owl Eyes and his father both attend his funeral, which symbolizes the end of both his and the American dream. An associate of Meyer Wolfsheim, he calls everyone "old sport" and attempts to woo Daisy Buchanan before the husband of Myrtle Wilson shoots him in his swimming pool. For ten points, name this next-door neighbor of Nick Carraway, the title character of an F. Scott Fitzgerald novel.

Answer: Jay **Gatsby** (accept Jay **Gatz** or The **Great Gatsby**)

## Valencia Delta Burke Invitational 2004—Round 12 Bonuses

1. Identify these books of the Old Testament from clues for ten points each.

1. Mostly concerned with laws and rites, this work includes a description of the five main offerings, information on clean and unclean foods, and the tale of the induction into priesthood of Aaron and his sons.

Answer: The Book of Leviticus

2. This book tells of Ehud's defeat of Moab, Deborah's defeat of the Canaanites, and Delilah's betrayal of Samson.

Answer: The Book of Judges

3. This prophetic book written by a contemporary of Hosea and Jonah is divided into three main parts: The Oracles Against the Nations, The Oracles Against Israel and a series of five prophecies of God's punishment.

Answer: The Book of Amos (or The Book of Ams)

2. Identify the following about a European War for ten points each.

1. This was begun with the defenestration of Prague and the Battle of White Mountain. It was ended with a Peace of Westphalia and saw the Catholic Hapsburgs fighting various coalitions of Protestant forces.

Answer: Thirty Years War

2. This Swedish king entered the war on the Protestant side in 1629 and won victories at Breitenfeld and Lutzen, where he was killed in battle.

Answer: Gustavus II Adolphus of Sweden (accept Gustavus II Adolphus of Sweden)

3. This man was the most notable commander of Holy Roman Emperor Ferdinand II's forces. He was the loser at Lutzen and was eventually implicated in treasonous activities and assassinated.

Answer: Albrecht Wenzel Eusebius von Wallenstein

3. Identify these amino acids, for ten points each.

1. Symbolized G, this is the simplest amino acid, having only a hydrogen atom as its aliphatic side chain.

Answer: glycine

2. Making up the majority of disulfide bridges, this sulfur-containing amino acid is basically a sulfhydryl-substituted alanine.

Answer: cysteine

3. This heterocyclic amino acid is an indole-substituted alanine and is found in large quantities in turkey and other delicious meats.

Answer: tryptophan

4. Name each of the following about two artists with a somewhat obscure connection for ten points.

1. This proto-surrealist is known for very busy paintings such as *The Temptation of St. Anthony*, *The Ship of Fools*, and the triptych *The Garden of Earthly Delights*.

Answer: Hiëronymus Bosch (or Jerome Van Aeken)

2. The works of this 19<sup>th</sup> century British landscapist are the beautiful to Turner's sublime and include *Gillingham Mill*, *Hadleigh Castle*, and a series of paintings set in Deadham Vale.

Answer: John Constable

3. Both Constable and Bosch created works with this title. Bosch's is a demonic allegory about human greed and the center panel of a triptych of the same name, while Constable's is a pastoral scene and probably his most famous work.

Answer: *The* Haywain (or *The* Hay-Wain)

5. For ten points each Answer each of the following about the Korean War:

1. When North Korean forces invaded South Korea, this name was given to the U.S. Task Force initially moved in from Japan.

Answer: Task Force **Smith**

2. President Truman did not seek a Declaration of War from the U.S. Congress. What term did he and his administration use to officially describe the Korean Conflict?

Answer: **Police Action**

3. What American 5-Star General led all UN forces on the Korean Peninsula before his somewhat unceremonious April 11, 1951 removal from command?

Answer: Douglas **McArthur**

6. Name these National Security Advisors for 10 points each.

1. This fellow of Stanford's Hoover Institute is the current National Security Advisor.

Answer: Condoleezza **Rice**

2. Co-Winner of the 1973 Nobel Peace Prize with Le Duc Tho, this controversial National Security Advisor, then Secretary of State under Richard Nixon, is also famous for his extremely deep and distinctive voice.

Answer: Henry Alfred **Kissinger**

3. This man was NSA in 1987 and 1988, when he was appointed Secretary of Defense. Colin Powell served as his deputy.

Answer: Frank Charles **Carlucci**

7. Answer these questions about an author and his work, for ten points each.

1. Born Henri Marie Beyle, this staunch supporter of Napoleon wrote such novels as *Armance* and *Memoirs of an Egotist*, along with two novels that would make him famous.

Answer: **Stendhal**

2. The subject of this novel is the young priest Julien Sorel, whose attempt to rise in the world results in his almost-marriage to Mathilde, before he shoots Mme. de Renal and is executed.

Answer: *The **Red and the Black*** (or *Le **rouge et le noir***)

3. In this work, Fabrizio del Dongo fights for Napoleon at Waterloo, and thereafter returns to his hometown, where he has an affair with Clélia Conti and eventually dies a poor, plain monk in the title establishment.

Answer: *The **Charterhouse of Parma*** (or *La **chatreuse de Parme***)

8. Answer each of the following germane to music about the Faust legend for ten points.

1. This German romantic wrote 1853's *Scenes from Goethe's Faust*, as well as the *Spring* and *Rhenish* symphonies.

Answer: Robert Alexander **Schumann**

2. Perhaps the most famous musical setting of the Faust legend is this 1846 "dramatic legend" by Hector Berlioz.

Answer: *The **Damnation of Faust***

3. This 19<sup>th</sup> century French composer is remembered for operas like *Philémon et Baucis*, *La Colombe*, and especially 1859's *Faust*.

Answer: Charles-françois **Gounod**

9. Answer each of the following about a certain conflict for ten points.

1. This 1936-39 conflict on the Iberian peninsula saw bloody conflict between Nationalist and Republican sects.

Answer: **Spanish Civil War**

2. The Condor Legion, a relatively powerful detachment of warplanes and soldiers, was clandestinely sent to aid the Nationalists by this belligerent country.

Answer: **Germany**

3. This fascist party, founded by José Antonio Primo de Rivera, was one of the groups comprising the Nationalist sect. It has the Spanish name of an ancient military formation.

Answer: **Falange Española Tradicionalista Y De Las Juntas De Ofensiva Nacional-sindicalista** (or Spanish Traditionalist **Phalanx**...)

10. Name each of the following nuclear processes for ten points.

1. This common nuclear process is the basis of current nuclear power plants and is the neutron-mediated exothermic decomposition of large nuclei, like  $U^{235}$  ["uranium two thirty-five"] and  $Pu^{239}$  ["plutonium two thirty-nine"].

Answer: nuclear **fission**

2. This synthetic nuclear process underlies the Sun and other stars. Development of an Earth-based reactor that can confine this process would allow the high-efficiency generation of electrical power from readily available isotopes of light gasses, like deuterium and tritium, without significant pollution or radiation.

Answer: thermonuclear **fusion**

3. A particle that strikes a nucleus but does not induce fission or fusion often undergoes a collisional process of this type, which can be elastic or inelastic. Types of this include Compton and Raman.

Answer: **scattering**

11. Name these characters from *Lord of the Flies*, for ten points each.

1. This twelve-year-old boy finds the conch that provides order for a time, and attempts to build a civilization on the island where the boys are marooned.

Answer: **Ralph**

2. A whiny, intellectual boy with glasses, he is Ralph's "lieutenant." He is killed at the end when he is chased off a cliff.

Answer: **Piggy**

3. Known originally as some of the "bigguns", these two twins are allied with Ralph at the beginning, but eventually fall victim to Jack's manipulation by the end.

Answer: **Samneric** (accept **Sam** and **Eric**)

12. Answer these questions about a sociologist and his work, for ten points each.

1. This French son of a rabbi wrote *Rules of the Sociological Method* and *The Elementary Forms of Religious Life*, in which he developed the concepts of the sacred and totemism.

Answer: Émile **Durkheim**

2. Robert K. Merton's work built on Durkheim's theory of this phenomenon, which is instability resulting from a breakdown in standards or values or a lack of purpose.

Answer: **anomie**

3. Durkheim conceived of four forms of this self-destructive phenomenon: fatalistic, altruistic, egoistic, and anomie.

Answer: **suicide** (accept equivalents)

13. This term was coined by Hippolyte Taine to describe an extension of literary realism. For ten points each:

1. Name the literary movement that focuses on humanity's interaction with irrational forces completely beyond control which had a delayed blooming in the work of Stephen Crane, Frank Norris, and James T. Farrell.

Answer: **naturalism**

2. One noted naturalist was this author of *Germinal* and *Nana*.

Answer: Emile **Zola**

3. This American Naturalist writer is best known for *An American Tragedy* and *Sister Carrie*.

Answer: Theodore **Dreiser**

14. Name each of the following giants of quantum mechanics for ten points.

1. This Austrian patent clerk gave impetus to qm with his explanation of the photoelectric effect. He later rejected the Copenhagen interpretation of qm and its "dice-playing god" and attempted, with Podolsky and Rosen, to undermine it with a "paradox."

Answer: Albert **Einstein**

2. This Danish namesake of a correspondence principle used qm to create a namesake theory of the atom and the "liquid drop" nuclear model, and was rewarded with the 1922 Nobel Prize in Physics.

Answer: Niels Henrik David **Bohr**

3. This Italian-American is the namesake, with Dirac, of the statistics that govern the behavior of spin-1/2 [spin one half] particles and created the first controlled nuclear chain reaction.

Answer: Enrico **Fermi**

15. Four fair coins are tossed. Compute the following, FTSNOP:

A. F5P, the probability of getting four heads.

Answer: 1/16

B. FTP, the probability of getting exactly three tails.

Answer: 4/16 or 1/4

C. For 15 points, the ODDS of getting exactly two heads.

Answer: 3 to 5 or 6 to 10 or 3:5 or 6:10 (accept nothing else)

16. Give the names of these polyatomic ions, for ten points each.

1.  $\text{Cr}_2\text{O}_7^{2-}$  ["cee arr two oh seven minus two"].

Answer: **dichromate**

2.  $\text{HCO}_3^{-1}$ .

Answer: **bicarbonate**

3.  $\text{CN}^{-1}$ .

Answer: **cyanide**

17. Answer the following about the invasion of Normandy, 10 points each.

1. This is the codename given to the invasion of Normandy.

Answer: Operation **Overlord**

2. This then-disgraced general "commanded" the US First Army Group, a fake Army designed to trick the Germans.

Answer: George Smith **Patton**, Jr.

3. The US First Army Group played a large part in deceiving the Germans into believing that the eventual invasion landing would occur across this narrow water passage, the juncture of the English Channel and North Sea, rather than at Normandy.

Answer: *Pas de* **Calais** (or **Straight of Dover**)

18. Name the African country from major cities in it for ten points each.

1. Messina, Durban, and Cape Town.

Answer: Republic of **South Africa**

2. Buchanan and Monrovia.

Answer: Republic of **Liberia**

3. Oshogbo, Port Harcourt, and Abuja.

Answer: Federal Republic of **Nigeria**

19. Answer each of the following about a novel for ten points.

1. The man signs his letters “Washington Irving” and shows up to a roll call completely naked. He hates having his number of bombing missions raised, but is unable to be mentally disqualified for them due to the titular quagmire in the novel in which he is featured.

Answer: Captain John **Yossarian**

2. This is the 1961 novel that features Captain Yossarian, as well as such colorful characters as Doc Daneeka and Colonel Cathart.

Answer: **Catch-22**

3. This American author wrote *Catch-22* and its sequel, *Closing Time*, among other works.

Answer: Joseph **Heller**

20. Answer each of the following about Hinduism for ten points.

1. *Samsarā*, which is Sanskrit for “running around,” refers to this essential element of Hinduism.

Answer: **reincarnation** (accept **metempsychosis** or other equivalents)

2. This term is Sanskrit for “three forms” and refers to Brahmā, Vishnu, and Shiva, the greatest theological deities of Hinduism.

Answer: **trimurtī**

3. These oldest liturgical works of Hinduism are comprised of four *Samhitās*: *Rig*, *Yajur*, *Sama*, and *Arthava*.

Answer: the **Vedas** (accept the **Sruti**)