

Harvard Fall Tournament
Cambridge, Massachusetts
November 10, 2007

ROUND SIX

TOSSUPS

1. Sculpted figures of cardinals, doges, and donors look down at it from two side galleries. Gold rays of light, emanating from the window above the work, serve as its backdrop, and the exaggerated treatment of drapery identifies this work as baroque. At its left, an angel holds an arrow and clutches the hooded figure's garments. He stands on an outcropping of seemingly uncut marble above the reclining title figure; his purposeful expression contrasts with the latter's open mouth and dangling limbs. FTP, name this statue by Gianlorenzo Bernini.

ANSWER: *The Ecstasy of Saint Teresa*

2. The most accurate description of this quantity uses hyperbolic trigonometric functions, but for less viscous materials, it can be approximated by a second-order differential equation. It can be calculated by an equation attributed to Lord Rayleigh, and types of it include parasitic, lift-induced, wave, and interference. FTP, identify this velocity-dependent force, a special case of friction that opposes the direction of motion for an object in a fluid or gas and is crucial to the functioning of parachutes.

ANSWER: **drag** (accept air **resistance**; prompt on **friction** before it is mentioned)

3. A member of this country's fascist Arrow Cross Movement gained power in Operation Panzerfaust and objected to the Treaty of Trianon, which this country was forced to sign after World War I. Its previous rulers included a king killed by the Mongols at the Battle of Mohi and John Hunyadi. After the Battle of Zenta, the Treaty of Karlowitz transferred it from the Ottomans, who had conquered it at the Battle of Mohacs, to Austria, which in 1868 was forced to give it autonomy under the *ausgleich*, or dual monarchy. FTP, name this country with capital at Budapest.

ANSWER: **Hungary**

4. This man wrote about Jaromir Hladik's race to finish his play before he is executed in a Nazi prison camp in "The Secret Miracle," while a boy who cannot forget is the focus of his story "Funes, the Memorious." The philosophy of George Berkeley plays a major role in his "Tlön, Uqbar, Orbis Tertius." Another story centers on an infinite library, while another describes the murder of Sinologist Dr. Stephen Albert. FTP, identify this Argentine author who included "The Library of Babel" and "The Garden of Forking Paths" in his short story collection *Ficciones*.

ANSWER: Jorge Luis **Borges**

5. His funeral in Heinz Hall was picketed because he had accepted homosexuals, but its attendees saw a performance by Yo-Yo Ma dressed in a red sweater. Chuck Aber met with children before his service, which was attended by his infant grandson, Ian McFeely, whose name recalls a "speedy delivery." One Pittsburgh native said of him, "he is in the heavenly neighborhood after which he modeled his television neighborhood." FTP, identify this cardigan-clad pioneer of children's public television who sang "It's Such a Good Feeling" and "Won't You Be My Neighbor."

ANSWER: Fred "Mister" **Rogers**

6. In differential geometry, this bundle of a sphere must be non-trivial as a result of the hairy ball theorem. The Euler numbers with odd indices have generating function given by this function, and the Maclaurin series of its inverse function gives a series representation for $\pi/4$. Newton's method travels along successive ones of these, and an envelope for a curve is the set of this type of lines. FTP, name this trigonometric function whose square is equal to secant squared minus one and which is equal to sine divided by cosine.

ANSWER: **tangent**

7. Felix Frankfurter described it as a "means to evoke [a] unifying sentiment" in a 1940 decision from which Harlan Fiske Stone dissented. In a 1943 case involving it, Robert Jackson reversed, writing that "no official can prescribe what shall be orthodox." Those cases, *Minersville School District v. Gobitis* and *West Virginia State Board of*

Education v. Barnette, involved Jehovah's Witnesses' bids to be excused from it, but in 2004 the Court dismissed a broader challenge to it by atheist Michael Newdow. FTP, name this patriotic oath commonly recited in school.
ANSWER: **Pledge of Allegiance** (accept the **flag salute**)

8. He described a man who "slew his son and half the seed of Europe one by one" in "The Parable of the Old Man and the Young," and one of his poems asks "what passing bells for these who die as cattle?" His most famous poem discusses "thick green light" that is "dim through the misty panes" and describes the central figures "bent double, like old beggars under sacks" and "gargling from froth-covered lips" after warning, "Gas! Gas! Quick, boys!" FTP, name this British poet of "Anthem for Doomed Youth" who quoted Horace in the title of "Dulce et Decorum Est."
ANSWER: Wilfred **Owen**

9. This political unit boasts the archaeological site of Sanxingdui and the Buddhist holy site of Emei Mountain. It is bordered by Gansu, Guizhou, and Yunnan, and its mountainous terrain is known as the last habitat for the giant panda, who lived on its steep, fog-draped hills. China's most populous province, it lost 30 million people when the Chongqing municipality split off from it, but it still contains its capital, Chengdu. Location of the controversial Three Gorges Dam, this is, FTP, what Chinese province famous for its spicy cuisine?
ANSWER: **Sichuan** (accept **Szechuan**)

10. The Valiant Sixty were early leaders within this movement, and they included James Naylor and Margaret Fell, the wife of its founder. It was later wracked by schisms, with factions including the Hicksites and Wilburites. Members of this faith generally accept testimonies of simplicity, equality, and integrity, and in 1947 it became the only religious movement to win the Nobel Peace Prize. FTP, name this religious group, founded by George Fox, whose members refuse to swear oaths or fight wars and are officially known as the Religious Society of Friends.
ANSWER: **Quakers** (accept Religious Society of **Friends** before it is mentioned)

11. This disease is believed to be transmissible through fruit bats, making it a subtly dangerous member of the thread-like negative-sense RNA filovirus family. It begins with a sudden fever, headache, or sore throat, but, within two weeks, symptoms progress to diarrhea and vomiting and possibly culminate in multiple organ failure or hypovolemic shock leading to death. FTP, name this disease related to Marburg fever, named after a river in the Democratic Republic of the Congo and noted for the copious external bleeding it may cause.
ANSWER: **ebol**

12. When all the cards the protagonist turns over reveal death, the protagonist sings the trio "Melôns, coupons!" with Frasquita and Mercedes. The male lead sings "Parle-moi de ma mere" upon receiving a letter from his mother, who is later revealed to be dying by his erstwhile girlfriend Micaela. He pledges his love to the protagonist in "La fleur que tu m'avais jetée," but she questions his love when he refuses to join her band of smugglers. FTP, name this opera featuring a Habanera in which Don Jose murders the title character at a bullfight, a work of Georges Bizet.
ANSWER: **Carmen**

13. It was founded by Salah al-Din al-Bitar and Michel 'Aflaq, who united with Akram al-Hawrani to give it a socialist flavor before it achieved power in 1963. Religious opposition to its secularism climaxed in the massacre of the Muslim Brotherhood in Hama in 1982, while the dangers of its pan-Arabist ideology are encapsulated in gas attacks on Kurdish minorities. American forces banned its members from joining the Iraqi government in 2003, but Bashar al-Asad still leads its Syrian branch. FTP, identify this political party most often associated with Saddam Hussein.
ANSWER: Arab Socialist **Ba'th** Party (accept hizb al-**ba'th** al-'arabi al-ishtiraki)

14. The conceit of this novel was the result of a crowbar thrown by a man named Hercules, which struck the head of a superintendent in a firearms factory. That man, the title character, escapes the stake after predicting a solar eclipse. He then starts up a patent office and puts advertisements on the backs of knights, whom he later slaughters in a battle in which he leads a troop of indoctrinated teenagers wielding anachronistic Gatling guns before Merlin sends him home. FTP, identify this novel about time travel from New England to medieval England by Mark Twain.
ANSWER: *A **Connecticut Yankee in King Arthur's Court***

15. His opponents in his struggle for the crown included the Guise family, his uncle Charles, and the Infanta Isabella of Spain, and he met his death when stabbed by François Ravallac. His 1572 marriage to Marguerite de Valois sparked the killing of Huguenots in the St. Bartholomew's Day Massacre, but in 1593 he agreed that "Paris is worth a mass," converted to Catholicism, and left his homeland of Navarre. FTP, identify this first Bourbon king of France known for his victory in the Wars of Religion and for his promulgation of the Edict of Nantes.

ANSWER: **Henry IV** (accept **Henry III of Navarre** before the word "Navarre")

16. One character compares another to a statue of Silenus, while another character says he learned life lessons from Diotima of Mantinea. Eryximachus talks about the governance over the temperatures of hot and cold, while Pausanias discusses the legality of pedophilia. Aristophanes explains why people feel "whole" when they find true love, and Agathon hosts the title event at which Socrates gives a much-applauded speech. FTP, name this Platonic dialogue consisting of seven speeches made at the titular dinner party.

ANSWER: **Symposium**

17. One of these figures, Anne Neville, tells a titular ruler to "despair and die" before the battle at Bosworth Field. Another one, a title character, appears in a tent at Sardis and confronts Brutus. In another play, one of these, the father of Fleance, takes the king's seat at a banquet at Dunsinane Castle. The most prominent Shakespearean one appears to Bernardo, Marcellus, and Horatio but is invisible to Gertrude. Richard III's victims, Julius Caesar, Banquo, and Hamlet's father all make posthumous appearances as, FTP, what type of supernatural beings?

ANSWER: **ghosts**

18. Functions described by this adjective include the Weierstrass P function and are doubly-periodic complex-differentiable functions on the complex plane. The integrals named by it arise in the study of pendulum motion, but also in computing arc lengths of a namesake conic section. FTP, give this adjective, which, according to Kepler's First Law, also describes the shapes of the orbits of the planets.

ANSWER: **elliptic**

19. This battle, the first in which John Pershing saw action, began when an assault on an American observation balloon in Hell's Pocket forced Joe Wheeler's division to take cover in front of the namesake geographic feature. When no orders came, impatient soldiers took the initiative and charged at Kettle Hill, which they captured from soldiers under Arsenio Linares. After this battle, American soldiers surrounded Santiago. FTP, identify this battle that saw the Roughriders, led by Teddy Roosevelt, capture the namesake Cuban hill during the Spanish American War.

ANSWER: Battle of **San Juan Hill**

20. Inspired by Abegg's rule, it does not apply to nitric oxide, phosphorus pentachloride, or any of the transition metals. Originally formulated by Gilbert Lewis to support his cubical atom theory, it is also violated by compounds with boron as the central atom, such as boron trifluoride, which only has six electrons in the valence shell. FTP, name this simple chemical rule of thumb that states that atoms tend to combine in such a way that they each have eight electrons to their valence shells.

ANSWER: the **octet** rule

BONUSES

1. Name these geologic periods or epochs from the history of Earth for ten points each.

(10) Lasting from 199 to 145 million years ago, this period saw the rise of dinosaurs like Brachiosaurus, Allosaurus, and Stegosaurus, as well as early birds like Archaeopteryx.

ANSWER: **Jurassic**

(10) Lasting from 416 to 359 million years ago, this period saw the evolution of the first amphibians, but life was dominated by fish, particularly large armored fish.

ANSWER: **Devonian**

(10) This tournament takes place in this epoch, which began 11,500 years ago and is part of the Quaternary period.

ANSWER: **Holocene**

2. It was centered in Tunis from 1979 until 1989 and its current secretary general is Amr Moussa. For ten points each –

(10) Identify this international organization of countries from the Middle East.

ANSWER: **Arab League** (accept al-**jami'ah** al-**'arabiyya**)

(10) The Arab League's headquarters moved to Tunis after this country's membership was suspended in 1979 for normalizing relations with Israel.

ANSWER: **Egypt**

(10) The most recent addition to the Arab League is this island country in the Mozambique Channel, which joined in 1993.

ANSWER: **Comoros**

3. This work suggested that Ireland's poverty could be alleviated by using poor infants for food. For ten points each –

(10) Name this satirical work.

ANSWER: *A **Modest Proposal***

(10) This man wrote *A Modest Proposal* but is better known for *Gulliver's Travels*.

ANSWER: Jonathan **Swift**

(10) In this religious satire by Swift, the brothers Jack, Martin, and Peter represent the three major branches of Christianity.

ANSWER: *A **Tale of a Tub***

4. Identify these students of Peter Behrens for ten points each.

(10) This Swiss architect designed the Carpenter Center at Harvard in addition to the Villa Savoye and the pilgrimage chapel at Notre-Dame-du-Haut, in Ronchamp, France.

ANSWER: **Le Corbusier** (accept Charles-Edouard **Jeanneret**)

(10) This future Harvard professor, who married the widow of Gustav Mahler, served as first director of the Bauhaus.

ANSWER: Walter **Gropius**

(10) This man, who had nothing to do with Harvard, designed Farnsworth House and the Seagram Building. He is also famous for saying "less is more."

ANSWER: Ludwig **Mies** van der Rohe

5. He was appointed by Andrew Jackson and served from 1836 to 1864. For ten points each –

(10) Identify this Chief Justice of the Supreme Court who succeeded John Marshall.

ANSWER: Roger Brooke **Taney**

(10) Roger Taney is perhaps best known for authoring the majority opinion in this 1856 case that said African-Americans could never be citizens.

ANSWER: ***Dred Scott** v. **Sandford***

(10) Roger Taney also authored the opinion in this 1837 case involving state contracts and a certain way of crossing rivers in Massachusetts.

ANSWER: ***Charles River Bridge** v. **Warren Bridge***

6. Identify these Ibsen plays for ten points each.

(10) The title character of this play commits suicide by shooting herself with her father's pistol after Judge Brack threatens to blackmail her.

ANSWER: ***Hedda Gabler***

(10) In this play, the title character, Dr. Stockman, discovers that the town baths are contaminated, but the town refuses to admit it because it could hurt tourism.

ANSWER: *An **Enemy of the People*** (accept *En **folkefiende***)

(10) The ambitious Halvard Solness, the title character of this Ibsen play, ultimately falls to his death from the newly constructed tower of his house.

ANSWER: *The **Master Builder*** (accept ***Bygmester Solness***)

7. For ten points each, name these figures from the Harlem Renaissance.

(10) This man wrote the lyrics to Kurt Weill's opera *Street Scene*, but he is better known for his poems "A Dream Deferred" and "A Negro Speaks of Rivers."

ANSWER: Langston **Hughes**

(10) This Harlem Renaissance author wrote *Their Eyes Were Watching God*.

ANSWER: Zora Neale **Hurston**

(10) This man used African-American sermons as the basis for his collection *God's Trombones*. He also penned *The Autobiography of an Ex-Colored Man*.

ANSWER: James Weldon **Johnson**

8. Oreste Baratieri advanced right into Emperor Menelik's troops and was routed. For ten points each –

(10) Identify this 1896 battle that preserved the independence of the Solomonid Dynasty.

ANSWER: Battle of **Adwa** (accept **Adawa**)

(10) Identify the modern-day country in which the Battle of Adwa was fought.

ANSWER: **Ethiopia**

(10) Identify the European country whose forces failed to capture Ethiopia until 1936.

ANSWER: **Italy**

9. Its population is just over one million, but swells to five million once a year. For ten points each –

(10) Identify this holy city in Saudi Arabia.

ANSWER: **Mecca**

(10) Mecca is located 50 miles inland from this sea.

ANSWER: **Red Sea**

(10) Mecca, like Medina, is located in this historic province whose name means “the barrier” in Arabic.

ANSWER: **Hejaz**

10. This country's King Michael abdicated in 1947 when it became a communist republic. For ten points each –

(10) Name this Eastern European country on the Black Sea.

ANSWER: **Romania**

(10) This communist dictator ruled Romania from 1967 until 1989, when he was toppled and executed.

ANSWER: Nicolae **Ceausescu** (be lenient with pronunciation)

(10) Ceausescu famously claimed that reform would come when these grew on apple trees; during the beginning of the December 1989 revolution, students hung them on apple trees themselves.

ANSWER: **pears**

11. Although not completed until 1842, his Scottish Symphony may have been conceived during his 1829 trip to Scotland. For ten points each –

(10) Name this German composer who wrote five symphonies.

ANSWER: Felix **Mendelssohn**-Bartholdy

(10) He may have conceived this overture on that same. It takes its name from an archipelago off the coast of Scotland.

ANSWER: **Hebrides Overture** (accept **Fingal's Cave**)

(10) Mendelssohn's incidental music to this Shakespeare play contains a famous wedding march.

ANSWER: *A **Midsummer Night's Dream***

12. On February 27, 2007, he was elected to a sixth consecutive term. For ten points each –

(10) Identify this man who will soon surpass his father's record for longest tenure as Chicago's mayor.

ANSWER: Richard M. **Daley** (do not accept Richard J. Daley)

(10) Daley is a member of the recently formed Mayors Against Illegal Guns Coalition, a group co-chaired by this mayor of New York City.

ANSWER: Michael **Bloomberg**

(10) The group's other co-chair is Thomas Menino, the mayor of this city.

ANSWER: **Boston**

13. Identify these classic Chinese novels for ten points each.

(10) This 14th-century epic focuses on the eponymous epoch at the end of the Han Dynasty and is attributed to Luo Guanzhong.

ANSWER: *Romance of the **Three Kingdoms*** (accept **San Guo Yan Yi**)

(10) Cao Xueqin wrote this novel about the Jia clan during the Qing Dynasty.

ANSWER: ***Dream of the Red Chamber*** (accept **Hong Lou Meng**; accept *A **Dream of Red Mansions***; accept *The **Story of the Stone***)

(10) Shi Nai'an probably wrote this novel about 108 Song Dynasty outlaws.

ANSWER: **Water Margin** (accept **Shui Hu Zhuan**; accept **Outlaws of the Marsh**; accept **All Men Are Brothers**)

14. Answer these questions about Scottish authors for ten points each.

(10) This author of *Ibsen's Ghost*, a parody of *Ghosts*, is more famous for his play with the characters based on the Llewelyn Davies boys, *Peter Pan*.

ANSWER: J. M. **Barrie**

(10) This Scottish poet's work inspired the titles of both *Catcher in the Rye* and *Of Mice and Men*. His poems include "A Red, Red Rose" and "To a Mouse."

ANSWER: Robert **Burns**

(10) Commodore Trunnion raises the title character in his novel *Peregrine Pickle* and Hugh Strap befriends Roderick Random in another of his novels.

ANSWER: Tobias **Smollett**

15. For ten points each, identify the plastics given their recycling number and a short clue.

(10) 2. The most-often recycled plastic, it's made into plastic bags, Tupperware, and even vehicular fuel tanks; its density is about 15 to 25 milligrams per cubic centimeter greater than that of a related recyclable plastic.

ANSWER: **HDPE (high-density polyethylene)**

(10) 3. Greenpeace hopes to phase out this plastic as dioxin, a toxic substance, is released as a by-product in both its manufacture and its incineration. You might know it best for its namesake kind of pipe.

ANSWER: **PVC (polyvinyl chloride)**

(10) 7. This highly durable thermoplastic polymer is used to manufacture CDs and DVDs as well as the cases of Apple MacBooks and iMacs.

ANSWER: **PC (polycarbonate)**

16. It takes place in chloroplasts and produces ATP. For ten points each –

(10) First, name this process used by plants to store energy from sunlight.

ANSWER: **photosynthesis**

(10) After the light reactions of photosynthesis create high-energy molecules, this other process incorporates airborne carbon dioxide into organic molecules.

ANSWER: **Calvin-Benson cycle** (prompt on **dark** reactions)

(10) This enzyme fixes atmospheric carbon during the Calvin cycle and may be the most abundant protein on earth.

ANSWER: **Rubisco** (accept **Ribulose-1,5-bisphosphate carboxylase/oxygenase**)

17. There aren't a whole lot of bonuses on Danish philosophers. Maybe that's because there's only one you need to know. For ten points each –

(10) Name this philosopher, a 19th-century existentialist known for works like *The Sickness Unto Death* and *Philosophical Fragments*.

ANSWER: Søren **Kierkegaard**

(10) This 1843 Kierkegaard work proposes the concept of the "Knight of faith" and examines the biblical story of Abraham's sacrifice of Isaac.

ANSWER: **Fear and Trembling**

(10) Written in 1842, this two-part work includes sections called "Crop Rotation" and "Diary of a Seducer," as well as a series of letters by Judge William.

ANSWER: **Either/Or**

18. Answer these questions about particles related to the KamLAND experiment for ten points each.

(10) The main goal of the experiment was to detect these particles that were previously thought to be massless and that interact only via the weak force.

ANSWER: **neutrino**

(10) The outside detector of KamLAND detects this other type of particle that is a lepton but is not an electron or a tau, the namesake of a type of a type of neutrino.

ANSWER: **muon**

(10) KamLAND detects electron anti-neutrinos via the inverse of this type of decay that releases an electron and a proton from a neutron.

ANSWER: **beta** decay

19. Identify these Supreme Court about the litigious state of Georgia for ten points each.

(10) This 1793 decision held that the Court ruled that states do not have sovereign immunity from the federal government; it led to the passing of the 11th Amendment.

ANSWER: **Chisom v. Georgia**

(10) This 1972 case put limits on application of the death penalty.

ANSWER: **Furman v. Georgia**

(10) This 1832 decision about Cherokee rights in Georgia prompted Andrew Jackson to declare, “John Marshall has made his decision; now let him enforce it!”

ANSWER: **Worcester v. Georgia**

10. Aaron says of it, “This is your god, O Israel.” For ten points each –

(10) Identify this false idol created while Moses was on Mt. Sinai.

ANSWER: the **golden calf**

(10) The golden calf does not speak, unlike this animal who is being punished for standing still when it reproaches its owner.

ANSWER: **Balaam’s ass**

(10) This is the only other speaking animal in the Bible.

ANSWER: the **serpent** in the Garden of Eden (accept clear knowledge equivalents)