

## TOSSUPS – ROUND ELEVEN

DENNIS HASKINS OPEN MARCH 2005 (UTC/CWRU)

Besides the usual suspects, questions by Stanford's Eric Smith et al., Polk Comm. College's Aaron Layton, and John Mathews of Central Florida C.C.

1. QUOTE: "Wherever God erects a house of prayer, The Devil always builds a chapel there; And 't will be found, upon examination, The latter has the largest congregation." So wrote this author in his first major poem, *The True-Born Englishman*. His works got him imprisoned twice, once for *The Shortest Way with the Dissenters*. Other works include the novels *Colonel Jack*, *Roxana*, and *Moll Flanders*. FTP name the prolific author of *Robinson Crusoe*.

Answer: Daniel Defoe [Accept early buzz with "The True-Born Englishman" before "this author"]

2. 60 years ago this month, a 35-day battle for fought here resulted in the death of 6,821 Americans and more than 20,000 enemy forces. Its tunnel network was so extensive that its last two defenders did not surrender until 1949, more than four years after the end of the war. FTP, what is this eight-square mile volcanic island and site of the bloodiest Marine battle of the Pacific, symbolized by the famous photo of the flag-raising on Mt. Suribachi?

Answer: Iwo Jima

3. Located 431 light years from Earth, it is a Cepheid variable star, showing regular changes in luminosity. It now appears 15 percent brighter than it did in 1900, but is only the 51<sup>st</sup> brightest star in the sky. Known to the Greeks as *Cynosura*, or "tail of the dog," it will gradually give it most noted claim to fame over to Vega. The star on the tail end of the Little Dipper, name, FTP, this star that currently acts as the North Star.

Answer: Polaris or Alpha Ursae Minorus

4. The man on the left is moving a basket of rocks. On the right, a man in a straw hat holds a hammer poised for the downswing. Painted in 1849, this realist work was destroyed in 1945 by the Allied firebombing of Dresden. FTP, name this painting by Gustave Courbet.

Answer: The Stonebreakers

5. In a fictional depiction, Sueleen Gay missed her chance to become a star when Kenny Fraiser shot Barbara Jean at this city's Parthenon. Kenneth Schermerhorn leads its symphony orchestra, but it's better known for the Ryman Auditorium, home of the radio show Grand Ole Opry until 1974. Consolidating with Davidson County in 1963, it's home to Fisk and Vanderbilt Universities, NHL's Predators and NFL's Titans. FTP name the capital of Tennessee, "Music City USA."

Answer: Nashville

6. He planned to invade Richmond, attack the city armory, and arm his cohorts. By August 1800, thousands of slaves had enlisted to serve in his rebel army, and he had mustered an armory of weapons, including guns. The Virginia state militia attacked the rebels, capturing and hanging them. For ten points, name this twenty-four year old slave, instigator and namesake of the first major slave revolt in the southern United States.

Answer: Gabriel Prosser

7. They are low in reactivity, and their carbon-carbon bonds share electrons equally. These organic compounds include one or more planar rings of atoms. The phenyl group is the aryl group of benzene, and benzene is the parent compound of this class. FTP, this class of compounds was first isolated from coal tar and distinguished by its strong odor.

Answer: aromatic compounds Accept: aromaticity

8. It is said that the female characters represent the four cardinal virtues and the three theological virtues while the men represent the traditional Greek tripartite of the soul. These ten characters, escaping from the Bubonic Plague, are locked up and tell 100 stories over ten nights. This forms, FTP, the frame narrative of what collection of novellas published in 1353 by Boccaccio?

Answer: The Decameron

9. Born in 1703, he was the only boy out of eleven siblings. He went on to enter Yale at the tender age of thirteen and went on to be a tutor there. In 1727 he was ordained minister at Northampton and set to work explaining the spiritual shortcomings of the parishioners there, sometimes by name. They didn't take kindly to this, and he eventually found himself as a missionary to local Native Americans instead. However, we are unsure of whether or not he did any 'crossing over.' FTP, name this Puritan preacher who began the Great Awakening, famous for his "Sinners in the Hands of an Angry God" sermon.

Answer: Jonathan **Edwards**

10. It is recorded that Artemisia advised against this battle and performed admirably during it, but her role may have been exaggerated since she was queen of Halicarnassus. Outnumbered, the Corinthians retreated and the Persians pursued them into the straits. Here Xerxes's fleet had no room to maneuver, and the rest of the Greek fleet under Themistocles attacked, losing only forty ships to the Persian three hundred. For ten points, name this decisive 480 B. C. naval battle of the Persian war.

Answer: battle of **Salamis**

11. The prevalence of this genetic disorder increases exponentially with the age of the mother. Children born with this disorder rarely have an IQ above 60, and may be at a higher risk of developing Alzheimer's disease. FTP, name this genetic disorder, in which 95% of all cases are due to a 3<sup>rd</sup> copy of chromosome 21.

Answer: **Down's Syndrome** (accept **trisomy-21** before 3<sup>rd</sup> copy)

12. Its three formulations--those of Universal Law, Humanity, and the Kingdom of Ends--appeared in *Groundwork of the Metaphysics of Morals*. Central to the moral philosophy of its creator, it can be expressed either in terms of universalizable maxims or in terms of treating human beings not as means but as ends. Representing an absolute moral law that must be followed--in every case, not just hypothetically--this is, for ten points, what concept from Immanuel Kant?

Answer: **categorical imperative**

13. Other than the town of Calama, this region is very sparsely populated, though there are two major observatories and several archaeological sites of note. With the possible exception of Antarctica's McMurdo Dry Valleys, it is the second driest region in the world. Rich in copper and nitrate, it's colder than most deserts, with an average temperature range from 0 to 25 degrees Celsius. For ten points, name this desert in northern Chile.

Answer: **Atacama Desert**

14. It is the only one of the Modern Library's list of the top 100 English-language novels of the 20th century that was not written in English. The author, a former Communist, used the Stalin show trials of the 1930's as a backdrop. The protagonist uses a letter code to communicate with his neighbor, Number 402, an unrepentant monarchist in, for ten points, what novel with a paradoxical title, a work by Arthur Koestler?

Answer: **Darkness at Noon**

15. Heir to the Tanzimat reformers of the 19th century, he pushed for replacing traditional Arabic script with the Roman alphabet, outlawed the fez, and drafted a set of secular laws to replace Sharia. Reputedly linked to the assassination of Sultan Abdul Hamid II, FTP name this leader of the Young Turks and first president of the Turkish Republic.

Answer: Mustafa Kemal **Ataturk**

16. It was developed beginning in 1991 as part of the Green Project, by James Gosling and a team of other engineers. The project was spun off from the parent company into the subsidiary FirstPerson, Inc., which not long after was reabsorbed by said parent company. For ten points, name this multi-platform programming language created by Sun Microsystems after engineer Patrick Naughton became frustrated with the limitations of C++.

Answer: **Java**

17. In 1931, Paul Dirac first suggested its existence, as even one in the universe would explain the observed quantization of electrical charge. Currently, although Grand Unified Theories and superstring theory both predict its existence, none have been found so far. For ten points, identify this hypothetical concept where a particle has a net magnetic charge as opposed to a dipole.

Answer: magnetic **monopole**

18. The line "Pretty good time in Dallas" was changed to "time in Vegas" when JFK was shot prior to its release. The central crisis began in 1946 when fluoridation of water began, leading to loss of essence. Bat Guano is suspicious of a mutiny of preverts led by group captain Lionel Mandrake, who discovered Peace On Earth, or Purity of Essence. FTP name this Stanley Kubrick film featuring Peter Sellers as the title character.

Answer: **Dr. Strangelove**; or *How I learned to stop worrying and love the bomb*

19. Based on a drama by Antonio García Gutiérrez, its libretto was completed by Leone Emanuele Bardare after the death of principal author Salvatore Cammarano. Most audiences are confused by its three intertwining subplots revolving around the Count di Luna, his rival the gypsy rebel Manrico, and Leonora, the object of both men's affection. It's stayed in the modern repertoire mostly thanks to the popularity of one famous passage, the Anvil Chorus. FTP name this opera by Giuseppe Verdi.

Answer: **Il Trovatore** or **The Troubador**

20. He was born in Garnet, Kansas, in 1869 and worked as a lawyer for thirty years, as his father did not encourage his literary aspirations. Although he had published poetry before with works such as *A Book of Verses* and *Maximilian*, his most famous work came in 1915, which was inspired by people he had known from a nearby village. For ten points, identify this member of the so-called Chicago renaissance, the author of the *Spoon River Anthology*.

Answer: Edgar Lee **Masters**

21. It still seeks to have the Kuril Islands restored to its control, though Russia has governed them since the end of World War II. Its lowest point is 4 meters below sea level, and its highest point, a very well-known mountain, is only 3,776 meters high. It has about 1,500 seismic occurrences a year. For ten points, name this Asian country consisting mainly of the islands of Shikoku, Kyushu, Hokkaido, and Honshu.

Answer: **Japan**

22. Weighing 99 kilograms, it was a hermetically sealed container. On landing in 1966, it sent the first images ever taken from the surface of another celestial body other than Earth. For ten points, identify this Soviet unmanned space mission, the first to soft land on the moon.

Answer: **Luna 9**

23. Beginning in the Operations Research literature, Edmonds first captured its essence by telling the story of any assistant trying to convince her supervisor. Formally introduced by Levin in a paper on universal search problems, its usefulness was demonstrated by Karp. Timetable, independent set, and knapsack are discussed in a catalog by Garey and Johnson. FTP name this class of problems polynomially reducible to SAT.

Answer: **nondeterministic polynomial complete**; prompt to give more on NP

**BONI – ROUND ELEVEN**

**DENNIS HASKINS OPEN MARCH 2005 (UTC/CWRU)**

1. Answer the following questions concerning laws that Gustave Kirchhoff developed for ten points each.

a) Kirchhoff's 1<sup>st</sup> law states that the sum of this entering a node is equal to the sum of it exiting a node in an electrical circuit.

Answer: **current**

b) Kirchhoff's second law states that the directed sum of the electrical potential differences around a circuit must sum to zero, which is in accordance with this law of thermodynamics.

Answer: **First Law of Thermodynamics**, or law of **conservation of energy**

c) Unrelated to circuits, Kirchhoff's law of this states that at thermal equilibrium, the emissivity of a body equals its absorptivity.

Answer: Kirchhoff's law of **Thermal Radiation**

2. Name the winners of these NFL Awards for the 2004 season FTPE:

[10] This Colts quarterback won his 2<sup>nd</sup> straight league MVP Award, this time not shared with anyone else.

Answer: **Peyton Manning**

[10] This Pittsburgh quarterback was named Offensive Rookie of the Year.

Answer: Ben **Roethlisberger**

[10] This linebacker, also from Pittsburgh, was named Defensive Player of the Year.

Answer: James **Farrior**

3. Thornton Wilder stuff FTPE.

[10] Wilder won his first Pulitzer in 1928 for what novel about the lives of those who died in an accident in Peru?

Answer: **The Bridge of San Luis Rey**

[10] Wilder's play *Our Town* is set in which U.S. state?

Answer: **New Hampshire**

[10] Wilder's play, *The Matchmaker*, was turned into what musical?

Answer: **Hello Dolly**

4. FTPE name the artist from works found at the Art Institute of Chicago:

[10] "American Gothic"

Answer: Grant **Wood**

[10] "Nighthawks"

Answer: Edward **Hopper**

[10] "Sunday Afternoon on the Island of La Grande Jatte"

Answer: Georges-Pierre **Seurat**

5. Name these people associated with ridiculously long creek names in American history.

A. Chappaquiddick Creek was the site of this politician's car-crash that resulted in the death of his passenger, much to the embarrassment of his famous family.

Answer: **Ted Kennedy**

B. Pottawatomie Creek, Kansas, saw this ardent abolitionist and his sons slay five pro-slavery settlers with broadswords.

Answer: **John Brown**

C. Okay, so it's actually a river, but this man was known as Tippecanoe for his defeat of Tecumseh near it before going on to be president.

Answer: William Henry **Harrison**

6. Biblical scholars divide the New Testament into 4 Gospels, 1 History, 21 Epistles, and 1 Apocalypse. FTPE identify which of the following belongs to which group:

[10] I John [Read: "First John"]

Answer: **Epistle(s)**

[10] John

Answer: **Gospel(s)**

[10] Hebrews

Answer: **Epistle(s)**

7. Answer the following questions about hemorrhagic fevers FTPE
- This virus, named after a tributary of the Congo River, has five strains. The Zaire and Sudan have mortality rates of 90% and 50%, respectively.  
Answer: **Ebola Virus**
  - This virus was first discovered in its namesake German town in 1967 when animal handlers contracted the disease from Green Monkeys. It is endemic to Western Kenya and Uganda.  
Answer: **Marburg Virus**
  - This fever was first noted in a Nigerian city in the Yeserdam River Valley in 1969. Its fatality rate is about 15-20% and kills about 5,000 people annually. Unlike Marburg and Ebola, it is treatable with ribavirin.  
Answer: **Lassa Fever**
8. FTSNOP, answer the following about one of your question writer's favorite people, Napoleon Bonaparte.
- [5] Who defeated Napoleon at the Battle of Waterloo?  
Answer: Arthur **Wellesley** or **Duke of Wellington** (either is acceptable)
- [10] On which island was Napoleon born?  
Answer: **Corsica**
- [5/15] Napoleon was twice exiled to distant islands. For 5 for 1 or 15 for both, name them.  
Answers: **Elba** and **St. Helena**
9. *Book* magazine published a list of what they considered the top 100 literary characters of the 20<sup>th</sup> century. FTPE:
- Only this novel had three different characters on the list – Atticus Finch, his daughter Scout, and Arthur “Boo” Radley.  
Answer: **To Kill a Mockingbird**
  - There were a handful of non-human characters on the list, but I can't give you an exact count because I'm not sure how to classify Gregor Samsa from this Franz Kafka work.  
Answer: The **Metamorphosis**
  - The only sentient spider on the list is the title character of this classic children's book by E.B. White.  
Answer: **Charlotte's Web**
10. Rivers for five points each.
- (15 points) Name the three rivers that meet at Three Forks, Montana, to form the Missouri River for five points each.  
Answer: **Jefferson, Madison, Gallatin**
  - (15 points) Name the two rivers that meet to form the Ohio River and the city in which they meet for five points each.  
Answer: **Allegheny, Monongahela, Pittsburgh** Pennsylvania
11. Given the name of a molecule, identify its shape according to the VSEPR model for ten points each.
- water  
Answer: **bent**
  - methane  
Answer: **tetrahedral**
  - PF<sub>5</sub>  
Answer: **trigonal bipyramidal**
12. Although Ira Levin has only written seven novels, three of them have titles that have entered the vernacular. For ten points each, answer these questions about them.
- An especially devilish child might be referred to by the title of this 1967 Levin book, which was turned into a popular film the following year.  
Answer: **Rosemary's Baby**
  - This term for scarily obedient spouses appeared in the title of a 1972 Levin work.  
Answer: **Stepford wives**; accept **Stepford wife**
  - Opponents of human cloning often invoke the specter of an army of "boys from" this country, after the title of a 1976 Levin novel about an effort to produce a clone of Adolf Hitler.  
Answer: **Brazil**



13. Name the architect from works, FTPE.

(10) Kaufmann House "Falling Water."

Answer: Frank Lloyd **Wright**

(10) The Bauhaus building.

Answer: Walter **Gropius**

(10) Rock and Roll Hall of Fame.

Answer: I. M. **Pei**

14. Identify these rebel groups from descriptions for ten points each.

1. Formed in 1962 to oppose the regime of Anastasio Somoza, this Nicaraguan group is named for a guerilla leader.

Answer: **Sandinistas**

2. It claims to be a harmless spiritual movement with influences from Buddhism and Taoism, but the Chinese Government calls it a manipulative cult.

Answer: **Falun Gong**; or **Falun Dafa**

3. Che Guevara was a member of this movement, led by Fidel Castro to seize Cuban power in 1959. It is named for the date of an earlier military action.

Answer: **26th of July** movement; or **Movimiento 26 De Julio**

15. Given a short description, name the work by Isabel Allende FTPE.

a) This verbose novel follows several generations of the del Valle women from Rosa's poisoning and Clara's decision to become a mute to Blanca's forced marriage and Alba's rape. Name this work deeply rooted in Magical Realism.

Answer: The **House of the Spirits** (La Casa de los espíritus)

b) Allende wrote this work after her young daughter fell into a coma, hoping that someday she would awaken and read this history of her family.

Answer: **Paula**

c) In what many consider her greatest work; Allende's fictionalized character narrates her own story of triumphing death by assuming numerous identities, representing the plight of Latin American women as a whole. The titular character must put perspective on her relationships with Rolf Carle and Riad Halabi in order to maintain her independent feminism.

Answer: **Eva Luna**

16. Answer these questions about functions with recursive definitions:

(10) This function is written as an exclamation point, and defined for numbers greater than one as the product of its argument, and the result of the function applied to its argument minus one.

Answer: **factorial** function

(10) Each term in this series after the second is equal to the sum of the two preceding terms. The series is named for an Italian mathematician.

Answer: **Fibonacci** series

(10) The i-th of these geometrically named numbers is the sum of the preceding one, and the number i.

Answer: **triangular** numbers [note:  $T(1) = 1$ ,  $T(2) = 3$ ,  $T(3) = 6...$ ]

17. Jupiter's four best known moons, also known as the Galilean moons, are: Callisto, Europa, Io, and Ganymede. On a 5-10-20-30 basis, which of these moons:

a. Is the only one to exhibit active volcanism?

Answer: **Io**

b. Is considered the smoothest object in the solar system, as its surface of water ice is only marred by long, shallow trackways?

Answer: **Europa**

c. Is the largest of the four, also the largest moon in the solar system, bigger even than the planets Mercury and Pluto?

Answer: **Ganymede**

d. Is closest to Jupiter, cutting across the planet's magnetic field, resulting in ions being swept off the planet and into a belt of radiation around it?

Answer: **Io**

18. FTPE, identify which of the 10 Amendments to the U. S. Constitution contains the following freedoms, guarantees, rights, or protections:

[10] The right to petition the government for a redress of grievances.

Answer: 1<sup>st</sup>

[10] Protections against cruel or unusual punishment.

Answer: 8<sup>th</sup>

[10] The right to keep and bear arms

Answer: 2<sup>nd</sup>

19. Name these figures involved in a religion for ten points each.

1. The Gathas, or hymns, of the Avesta are attributed to him. Name this founder of a monotheistic religion.

Answer: Zoroaster; or Zarathustra; or Zartosht

2. The Supreme God of Zoroastrianism, he is revered and worshipped by followers and opposed by Ahriman.

Answer: Ahura Mazda; or Ormuzd; or Spenta Mainyu

3. Born Farrokhs Bulsara and of Parsi descent, this Zoroastrian fronted the band Queen.

Answer: Freddie Mercury

20. For ten points each, identify the classic Chinese novel based on the summary. (NOTE: If the Chinese answer is given, accept reasonable pronunciations.)

a) The monk Tangsan Zhang undertakes a pilgrimage to India to retrieve Buddhist scriptures, with the assistance of a monkey, pig, and fish spirit.

Answer: Journey to the West or Xi You Ji (shee yo jee)

b) At the fall of the Han dynasty, Liu Bei swears brotherhood with two heroes, and together they strive to put down the Yellow Turban rebellion.

Answer: The Romance of the Three Kingdoms or San Guo Yian Yi (yan ee)

c) Set in Beijing, the novel chronicles the downfall of the wealthy Jia family.

Answer: The Dream of the Red Chamber or Hong Lou Meng

21. Identify the following about the process of cloning a gene in bacteria for ten points each.

1. This is the term for the small rings of DNA in the bacteria that carry accessory genes separate from those of the bacterial chromosomes, and into which copies of a gene are inserted.

Answer: plasmids

2. Both the plasmid and the human DNA containing the gene are digested using this general type of enzyme, which can cut pieces of foreign DNA molecules in the bacteria at a limited number of specific locations, allowing copies of the gene to base-pair with the plasmids.

Answer: restriction enzymes; or endonucleases

3. This type of enzyme is then used to covalently bond the gene and plasmid DNA strands, resulting in recombinant DNA strands. It is also used in natural DNA replication.

Answer: DNA ligase

22. Name the following sculptors for ten points each.

1. A large portion of the Tate Gallery in St. Ives, Cornwall, is devoted to this woman, whose works include *Contrapuntal Forms*, *The Unknown Political Prisoner*, and *Three Monoliths*.

Answer: Barbara Hepworth

2. One of Hepworth's classmates at Leeds School of Art, his *Knife Edge Two Piece* now stands outside the Houses of Parliament in London, and his *West Wind* relief can be seen at St. James Park Underground Station. He may be best known for reclining, abstract, often-bloppy human figures.

Answer: Henry Moore

3. This Romanian's sculpture *Bird in Space* was initially refused entry into the United States because it was thought to be not art but a means of avoiding customs duties on metal.

Answer: Constantin Brancusi