

Harvard Fall Tournament VII

Round 13

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Tossups

1. This author placed himself in a work in which he is chastised for his attachment to worldly possessions by St. Augustine. This author also wrote a travel guide to the Holy Land, and two of his letters entitled “The Ascent of Mount Ventoux” and “The Letter to Posterity” are often published along with his most famous work. This poet wrote an unfinished epic about Scipio’s defeat of Carthage, along with a collection generally divided into works written before the death of the dedicatee, whom the poet encountered in Avignon on Good Friday. For 10 points, name this Italian poet, the namesake of a type of sonnet, who dedicated poems to Laura in his *Il Canzoniere*.

ANSWER: **Petrarch** [Accept Francesco **Petrarca**.]

2. The *Marcha da Maconha* was a series of demonstrations advocating this action in Brazil, and the 2005 Supreme Court case *Gonzales v. Raich* came in response to Proposition 215, which did this action. Tom Tancredo recently endorsed one piece of legislation that did this, Amendment 64, and Part Five of another piece of recent legislation that did this set a DUI limit of 5 nanograms per milliliter of THC. That piece of legislation was Initiative 502. For 10 points, name this action, which the 2012 election saw Massachusetts do for medicinal use and Colorado as well as Washington do for recreational use of a certain plant.

ANSWER: **legalization of marijuana** [Accept equivalents, including ones substituting **cannabis** for marijuana.]

3. A Roman naval victory took place off the coast of this region when Lucius Manlius Longus and Marcus Regulus won the Battle of Cape Ecnomus. Roger of Lauria won the Battle of the Counts during a war fought over this region, and that war began when rebels here massacred French residents in revolt against Charles of Anjou. Operation Husky was the codename for the invasion of this island during World War II, and that invasion was followed up by the Battles of Anzio and Monte Cassino as part of the Italian Campaign. For 10 points, name this Italian island, fought over in the First Punic War, which was home to the Tyrants of Syracuse and the original Mafia.

ANSWER: **Sicily** [Accept **Sicilia**.]

4. A coefficient associated with this force is equal to one when stagnation pressure builds up over an entire surface. Potential flow solutions to the Euler equation indicate that this force should be zero in direct opposition to observation in a paradox named after Jean d'Alembert. The power needed to overcome this force is proportional to the third power of velocity and at very low Reynolds numbers, this force for spherical objects is proportional to the fluid velocity, according to Stokes’ Law. This force leads to an object reaching terminal velocity and counteracts thrust. For 10 points, name this force which opposes an object's motion through fluid, including air.

ANSWER: **drag** [Accept air **drag**. Prompt on “air resistance.”]

5. While in Tasmania, Alexander Maconochie created a system used in these entities that was later reused in the Elmira System. Along with George Beaumont, Alexis de Tocqueville wrote about these entities before penning *Democracy in America*. The Presidio Modelo one in Cuba was based off one that implemented an “unequal gaze,” and was designed by Jeremy Bentham. Michel Foucault also borrowed the idea of the Panopticon, one of these in which all inhabitants can be observed from one place, in his *Discipline and Punish*. For 10 points, name these institutions that currently house Jerry Sandusky and Bernie Madoff, places where society locks up criminals.

ANSWER: **prisons** [Accept equivalents, including **jails** and **penal colonies**.]

6. One character in this novel, Dr. Peabody, is blamed by a young boy for killing another character, and that boy accidentally bores two holes in that dead character's face. Another character in this novel receives ten dollars from the farmer Lafe to receive an abortion, but ends up seduced by a pharmacist. One chapter in this work consists entirely of the words, "My mother is a fish." The patriarch of the central family takes a horse from Jewel and money from Cash to pay for the central trip to bury his wife. For 10 points, name this novel in which Dewey Dell, Darl, Vardaman, and their father Anse try to bury the deceased Addie Bundren, written by William Faulkner.

ANSWER: *As I Lay Dying*

7. This man's life was chronicled by Ali Yazdi, and he won one engagement by setting fire to hay on the backs of camels, terrifying the opposing side's elephants. In addition to defeating Tokhtamysh at the Battle of the Terek River, this man was victorious at the Battle of Ankara against Bayezid I. This ruler died following an attempted winter attack on the Ming Empire, and he earlier made his capital at Samarkand. This man became known for his brutality due to such incidents as his stacking of giant pyramids of his enemies' skulls following his capture of Baghdad and Deli. For 10 points, name this ruler whose name derived from the fact that he was crippled.

ANSWER: Timur the Lame [Accept Tamerlane and Timur-i Lang.]

8. A naval assault on this location ordered by Rear Admiral John Dahlgren resulted in complete failure. Two years earlier, the ship *Star of the West* was prevented from bringing supplies to it prior to an engagement that saw Abner Doubleday fire the first shot to leave this location. That battle saw this location defended by forces under Major Robert Anderson, and the residents of the neighboring city, including victorious General P. G. T. Beauregard, watched the fighting from balconies overlooking Charleston Harbor. For 10 points, name this South Carolina fort that withstood 34 hours of continuous bombardment before surrendering in the first battle of the American Civil War.

ANSWER: Fort Sumter

9. This man used Cepheid variables to determine that Andromeda and Triangulum were not part of the Milky Way. A value named for this man can be represented as the derivative of the scale factor divided by the scale factor. One discovery by this man led Einstein to reconsider his addition of the cosmological constant to general relativity. This man is credited with an equation that gives a linear relationship between velocity and the distance of galaxies. That relation uses the aforementioned value, currently given to be about 70 kilometers per second per Megaparsec. For 10 points, name this American astronomer, the namesake of a famous Space Telescope.

ANSWER: Edwin Powell Hubble

10. Yogacara posits "storehouse consciousness," consisting of seeds that ripen into a person's experience, to explain this concept. In Jainism, both vasudevas and prativasudevas acquire one variety of this while baladevas acquire comparatively less. Some traditions hold that different colors of this concept taint a person's soul. Bhakti, or devotion, and knowledge are alternative paths to this concept in the *Bhagavad Gita*, while arhats and bodhisattvas, like buddhas, are not affected by this. For 10 points, name this concept prevalent in Hinduism and Buddhism, the idea that actions committed in previous lifetimes influence one's prospects for rebirth.

ANSWER: karma [Accept kamma.]

11. One opera by this man features an object inscribed with the letters "FV," and in that work Antonio sends a message from prison to Pippo. That opera includes the aria "Deh, tu reggi in tal memento," sung by the servant of Fabrizio Vingradito, and centers around Ninetta, who is accused of stealing a silver spoon. Another opera by this composer of *The Thieving Magpie* includes the aria "Una voce poco fa," about a man called Lindoro. The music teacher Basilio appears in that work, which sees the marriage of Rosina and Count Almaviva. "Largo al factotum" is sung by Figaro in the beginning of that work. For 10 points, identify this composer of *The Barber of Seville*.

ANSWER: Gioachino (Antonio) Rossini

12. Heracles was rewarded with the opportunity to sleep with King Thespius' fifty daughters after ridding his lands of one of these creatures. Atalanta and Hippomenes were transformed into these creatures for making love in the temple of Cybele, while another of these creatures became associated with Sir Yvain after he rescued it from a serpent. During her murderous rampage as Sekhmet, Hathor took this form that also formed the head of the Chimera. Their best known example had skin that could not be pierced by any weapon, forcing Heracles to strangle it for his first labor, after which he wore its skin. For 10 points, name these large cats, one of which lived in Nemea.
ANSWER: lions

13. In one novel by this author, a retired judge adopts a teenage orphan who later tries to commit suicide by drinking methanol. In another work by this author, Shinji Kubo manages to safely return a shipping vessel through a storm, which permits him to marry the pearl-diver Hatsue. This author of *Decay of the Angel* created a character who uses his clubfeet to pick up women, while his friend discusses the story of Nansen and the kitten with Father Dosen. That friend later burns the titular building after the outbreak of the Korean War. For 10 points, name this Japanese author of *The Temple of the Golden Pavilion* who committed seppuku on television after staging a failed coup.
ANSWER: Yukio Mishima [Accept Kimitake Hiraoka.]

14. Hugo Grotius' theory of the natural right of individuals was a precursor to this philosophical concept. Proudhon proposed an anarchist version of this concept, which another philosopher described in a work that explains how every individual's opinion in isolation will together produce the best decision for the state, otherwise known as the "general will." That work argues that voluntarily entering into a state of slavery is illogical and begins "man is born free but everywhere he is in chains." For 10 points, name this philosophical concept in which individuals improve upon the state of nature by surrendering certain rights, the title of a work by Jean-Jacques Rousseau.
ANSWER: the social contract

15. The artist of this work painted a similar one titled for Joan Deyman. The central subject in this painting was acquired following an armed robbery and a subsequent strangling. The artist's signature and the date "1632" appears on a faint poster at the back wall of this work, in front of which a man leans forward with a list of notes in his hand. A large book is propped up in the lower right corner of this painting, whose title figure wears a wide black hat and holds a pair of forceps in his right hand, peeling apart the arm of a corpse lying on a table. For 10 points, name this Rembrandt work in which Dr. Nicolaes Tulp lectures about the human body.
ANSWER: *The Anatomy Lesson of Dr. Nicolaes Tulp*

16. Kiliani-Fischer synthesis can be used to form this compound, along with mannose, through the reaction of arabinose with hydrogen cyanide, followed by cyanohydrin hydrolysis and reduction. Reduction of this compound by two electrons yields the widespread artificial sweetener sorbitol. Emil Fischer won the Nobel Prize in 1902 partly for discovering a projection that accurately demonstrated the chirality of carbon atoms in this aldose. This molecule is the monomer building block of glycogen and amylose. It is also the monomer of the most abundant macromolecule on Earth, cellulose. For 10 points, name this six carbon abundant organic sugar, the main energy source for most life.
ANSWER: glucose [Accept dextrose.]

17. It's not Hungary, but Franz Liszt wrote a virtuosic piano rhapsody named after this country. A violin concerto by Edouard Lalo contains themes from its music, while *Fantasia for a Gentleman* is a work by a composer from here. A work for guitar and orchestra inspired by royal gardens, the *Concierto of Aranjuez*, was composed by a man from this country, Joaquin Rodrigo. An opera that occurs in this country featuring Zuniga contains Escamillo's toreador song, and Don Jose kills the title character of that opera. For 10 points, name this European country that is the setting for *Carmen* and inspired Isaac Albeniz' *Iberia*.
ANSWER: Kingdom of Spain [Accept Reino de Espana.]

18. One section of this work borrows from Ovid, with the story of a man whose white crow alerts him of his wife's infidelity, to which that man responds by turning the crow black. In another section of this work, the clerk Absolon kisses two other characters' bottoms, and Nicholas and Alison enjoy a night together while Alison's husband prepares for a great flood. The first story from this work sees Arcite and Palamon compete for the hand of Emily, while in another part Sir Salvio must learn what women want most in the world. For 10 points, name this work in which lots of people tell stories on their way to the shrine of Thomas a Becket, written by Geoffrey Chaucer.

ANSWER: *The Canterbury Tales*

19. After his greatest defeat, this man went into self-exile and led Seleucid forces belonging to Antiochus III at the Eurymedon River. This man's siege of Saguntum resulted in his most famous war, during which he faced scorched-earth tactics that resulted in Fabius Maximus' nickname, "the Delayer." This general pinned the army of Flaminius against Lake Trasimene in one victory and was assisted by his brother Mago in wiping out forces under the consuls Paullus and Varro at the Battle of Cannae. The invasion of Scipio Africanus recalled this man to his home city. For 10 points, name this Carthaginian general of the Second Punic War who led elephants across the Alps.

ANSWER: Hannibal Barca

20. Bacteria might utilize FtsZ for this process, while plants necessitate the formation of a phragmoplast during it. In this process, GTPase RhoA is responsible for directing myosin II activation and actin formation to produce a contractile ring. One exceptional form of this process occurs in oogenesis, when the polar bodies get very little cytoplasm and organelles compared to the ovum. This process generally produces a cleavage furrow, resulting in two cells with equal amounts of material, and it takes place after telophase in mitosis. For 10 points, name this process which in which a cell's cytoplasm is divided to form two daughter cells.

ANSWER: cytokinesis

Bonuses

1. Saigo Takamori, a man killed at the Battle of Shiroyama during the Satsuma Rebellion, has been called the last true one of this class of people. For 10 points each:

[10] Identify these noble warriors of Feudal Japan often depicted in armor and holding katanas. They sometimes committed suicide in a ritual called seppuku.

ANSWER: samurai

[10] Seppuku is part of this code of the samurai. It was defined by the seven virtues and dealt with honor and loyalty, meaning samurai who did not follow it had to commit seppuku.

ANSWER: bushido

[10] This battle saw forces under Oda Nobunaga and Tokugawa Ieyasu that included samurai with arquebuses defeat the mounted samurai of Takeda Katsuyori, marking a transition in Japanese tactics.

ANSWER: Battle of Nagashino

2. Strong versions of these events often occur at Wadati-Benioff Zones, while those that occur at divergent boundaries are usually weaker. For 10 points each:

[10] Name these natural disasters which cause the ground to shake and cause seismic waves.

ANSWER: earthquakes

[10] This is the name for the location on the surface of the Earth that is directly above the focus of an earthquake.

ANSWER: epicenter

[10] Earthquakes generate Rayleigh and love waves, which are these types of oscillations that travel at the boundary between two media.

ANSWER: surface waves

3. This author wrote about a composer named “D” who talks to Aghwee the Sky Monster in one work. For 10 points each:

[10] Name this Japanese author whose works, which include *A Personal Matter* and *The Pinch Runner Memorandum*, often feature characters with mental handicaps.

ANSWER: Kenzaburo **Oe**

[10] This other Oe work sees the brothers Takashi and Mitsusaboro travel to Shikoku and confront their family history. It also sees Takashi begin an uprising against a Korean store owner called the Emperor.

ANSWER: *The **Silent Cry*** [Accept **Man'en Gannen no Futtoboru.**]

[10] At the end of *The Silent Cry*, Takashi undertakes this action. Edna Pontellier dies through this action at the end of *The Awakening* and Romeo and Juliet do this through poison at the end of a Shakespeare play.

ANSWER: committing **suicide** [Accept equivalents, including **killing himself** and **shooting himself.**]

4. It was precipitated by a discovery made by James W. Marshall at Sutter’s Mill. For 10 points each:

[10] Name this influx of opportunistic “forty-niners” after the discovery of a precious mineral. Much of a certain state’s current population originated from miners trying to strike it rich during this event.

ANSWER: **California Gold Rush** [Prompt on “Gold Rush.”]

[10] This “Great Pathfinder” and first Republican nominee for President was one of the first U.S. Senators from California. He had earlier helped instigate the Bear Flag Revolt.

ANSWER: John C(harles) **Fremont**

[10] This man served as military governor of California and died of yellow fever a year before the Gold Rush. More famously, he led the Army of the West to victory at the Battle of San Pasqual during the Mexican-American War.

ANSWER: Stephen W(atts) **Kearny**

5. An early piano work by this man was titled *The Cat and the Mouse*, but he may be better known for his *El Salon Mexico*. For 10 points each:

[10] Name this American composer of *Fanfare for the Common Man* and ballets such as *Billy the Kid* and one that contains a “Hoe-Down,” entitled *Rodeo*.

ANSWER: Aaron **Copland**

[10] This most famous ballet by Aaron Copland depicts a wedding in Pennsylvania and utilizes the Shaker melody “Simple Gifts.” It was commissioned by Martha Graham.

ANSWER: **Appalachian Spring**

[10] This Copland work, which has been narrated by Neil Armstrong and Bill Clinton, contains passages read from a certain man’s Civil War-era documents, including the Gettysburg Address.

ANSWER: *A **Lincoln Portrait***

6. He wrote about a “Lupus Phobia” in *The Case of Miss R.* and in a more famous work, he detailed the effects of organ dysfunction, pampering, and neglect. For 10 points each:

[10] Name this founder of individual psychology who wrote the *Neurotic Constitution*.

ANSWER: Alfred **Adler**

[10] Adler is most famous for this concept, often conflated with low self-esteem. It features the belief in never being able to compensate for weakness.

ANSWER: **inferiority complex**

[10] Adler emphasized the influence of birth order on personality and stated that a child in this position in birth order is dethroned by the next child and can become authoritarian. Somebody who is one of these people has only younger siblings.

ANSWER: **eldest** child [Accept logical equivalents.]

7. One character in this novel has a failed sexual experience with Annabel in a cove on the beach at age 13, retarding his sexual preferences. For 10 points each:

[10] Name this novel which focuses on the pedophilic Humbert Humbert and his attempt to woo the titular nymphet and then get her back from the pornographer Clare Quilty.

ANSWER: **Lolita**

[10] This author of *Lolita* described the titular Russian professor's comical attempts to speak English in *Pnin* and the incestuous love of Van Veen and the titular girl in *Ada*. He also wrote *Pale Fire*.

ANSWER: Vladimir (Vladimirovich) **Nabokov**

[10] In Nabokov's *Pale Fire*, the deranged Charles Kinbote edits this poet's magnum opus after Gradus shoots him. This poet laments the death of his daughter Hazel, and his work probably doesn't refer to Zembla.

ANSWER: John **Shade**

8. The most commonly inherited form of mental retardation occurs through damage to this chromosome, and Klinefelter's Syndrome results from an extra copy of it. For 10 points each:

[10] Name this sex chromosome found in both males and females.

ANSWER: **X** chromosome

[10] X-inactivation, which results in the phenomenon of the calico cat, is an example of this field of study focusing on non-sequence based inheritance that affects gene expression.

ANSWER: **epigenetics**

[10] One structure of interest in epigenetics are these proteins within nuclei that package DNA into nucleosomes. Their cores are made of H2A, H2B, H3, and H4 subunits, and 147 base pairs of DNA can wrap around each of these structures.

ANSWER: **histones**

9. An uprising led by this man began with his assassination of William Heselrig, after which he led a raid on the city of Scone. For 10 points each:

[10] Name this Scottish nobleman who fought against King Edward I of England and was immortalized as the protagonist of the film *Braveheart*.

ANSWER: William **Wallace**

[10] After the routing of their archers and cavalry at this battle, the Scottish forces under William Wallace arranged themselves in circular formations called schiltrons. The Scottish forces were finally destroyed by English longbow fire.

ANSWER: Battle of **Falkirk**

[10] This later Scottish king helped achieve Scottish independence after being crowned by William de Lamberton at Scone and winning the Battle of Bannockburn against Edward I.

ANSWER: **Robert** the Bruce

10. One of this ruler's lovers supposedly constructed a series of fake villages along the Crimea in order to impress her during her visit of the region. For 10 points each:

[10] Name this tsarina of Russia and lover of Grigory Potemkin who became ruler after staging a coup against her husband Peter III.

ANSWER: **Catherine the Great** [Accept **Catherine II**, prompt on "Catherine."]

[10] Catherine's reign saw a revolt of these peoples led by Yemelyan Pugachev. Most of these people came from an area now occupied by Ukraine and were peasants known for their horsemanship.

ANSWER: **cozzacks**

[10] Another of Catherine's lovers was this count, who assisted in the overthrow of Paul. He gave Catherine a famous diamond and also founded the Free Economic Society.

ANSWER: Count Grigory (Grigoryevich) **Orlov**

11. This term was first coined by Guillame Apollinaire in *The Breasts of Tiresias*, a play in which Theresa turns into a man and watches her breasts fly away as a pair of balloons. For 10 points each:

[10] Name this term that names an artistic and literary movement that included painter Salvador Dali and playwright Antonin Artaud.

ANSWER: **surrealism**

[10] This man defined surrealism as “psychic automatism in its pure state...dictated by the thought, in the absence of any control exercised by reason.” That comes from this man’s *Surrealist Manifesto*.

ANSWER: Andre **Breton**

[10] Artaud attacked the human body in a form he termed the Theater of Cruelty. Ionesco and Stoppard are members of the Theater of *this*, which Camus related to man’s futile search for meaning in *The Myth of Sisyphus*.

ANSWER: the **Absurd**

12. Name these things about Zoroastrianism. For 10 points each:

[10] Zoroastrianism is this kind of religion, whose adherents believe that precisely one god is worthy of worship.

ANSWER: **monotheistic** [Accept word forms,]

[10] As a monotheistic religion, Zoroastrianism centers around worship of this deity, who is a son of Zurvan and battles against Ahriman, or Angra Mainyu.

ANSWER: **Ahura Mazda** [Accept any of the following: **Athura Mazda**, **Aramazd**, **Ohrmazd**, **Hurmuz**, and **Azzandara**.]

[10] Zoroaster claimed that these deities of an older religion delight in war and are thus agents of Angra Mainyu. The Gathas hold these figures as the “wrong gods.”

ANSWER: **daevas**

13. According to the Stefan-Boltzmann Law, the emissive power of one of these is proportional to the fourth power of its temperature. For 10 points each:

[10] Name these objects, which absorb all radiation they receive.

ANSWER: **black bodies**

[10] The constant of proportionality in the Stefan-Boltzmann law is proportional to the inverse cube of this other constant, symbolized h . Photon energy is equal to this constant multiplied by the frequency.

ANSWER: **Planck**’s constant

[10] Considering radiation to be the emission of discrete photons led to the resolution of a catastrophe named for this type of radiation. That issue arose from the Rayleigh-Jeans model for black bodies.

ANSWER: **ultraviolet** [Accept **UV catastrophe**.]

14. Lauretta sings “O mio babbino caro” after her father threatens to separate her from Rinuccio in one opera by this man. For 10 points each:

[10] Name this composer of operas including *Gianni Schicchi* and one in which the protagonist sings an aria about how none will sleep in the castle, “Nessun Dorma.”

ANSWER: Giacomo (Antonio Domenico Michele Secondo Maria) **Puccini**

[10] Puccini composed this opera set in Japan, one of the most performed in the world, in which the title character, Cio-Cio San, is a fifteen-year-old geisha who falls in love with a lieutenant in the American navy.

ANSWER: **Madama Butterfly** [Accept **Madame Butterfly**.]

[10] Cio-Cio San gets married to this lieutenant, who leaves for three years and returns with his American wife Kate.

ANSWER: Lieutenant B. F. **Pinkerton**

15. This party regained the presidency in its country in a July 2012 election. For 10 points each:

[10] This party or one of its predecessors was in power from 1929 to 2000. Notable presidents from this party include Manuel Ávila Camacho and Ernesto Zedillo.

ANSWER: **Institutional Revolutionary Party** or Partido **Revolucionario Institucional** [Accept pronunciations like “**Pri**”]

[10] The PRI is a political party from this country. Other political figures in this nation include Felipe Calderon and Vicente Fox.

ANSWER: United Mexican States or **Mexico**

[10] This man represented the PRD in both the 2006 and 2012 elections. This man protested the result of the 2006 election, which he lost by just 0.58%.

ANSWER: Andrés Manuel López **Obrador** [Accept **AMLO** or **El Pepe**.]

16. The bifurcation of the street onto which the view of this painting opens reflects the recently renovated city design by Baron Haussman. For 10 points each:

[10] Name this painting by Gustave Caillebotte showing many residents of the title city holding umbrellas. It is set at the Place de Dublin near the Gare Saint-Lazare and is bisected by a streetlight.

ANSWER: **Paris Street; Rainy Day** [Accept **Paris: A Rainy Day**.]

[10] Caillebotte was included on the bottom right of this Impressionist painting, which also shows the artist's future wife Aline Charigot among the titular group enjoying a midday meal on the Seine.

ANSWER: **Luncheon of the Boating Party** [*Le déjeuner des canotiers*.]

[10] *Luncheon of the Boating Party* is by this French Impressionist, who also painted *Bal du moulin de la Galette* and *A Girl with a Watering Can*.

ANSWER: Pierre-Auguste **Renoir**

17. This man's first important work begins with the proposition that "the world is all the case." For 10 points each,

[10] Name this philosopher, who wrote a work in which other propositions include "whereof one cannot speak, thereof one must be silent," his *Tractatus Logico-Philosophicus*. He also wrote *Philosophical Investigations*.

ANSWER: Ludwig (Josef Johann) **Wittgenstein**

[10] Wittgenstein taught at this university, which also housed Bertrand Russell, Alfred North Whitehead, and G. E. Moore. It is traditionally paired with Oxford in the top tier of British universities.

ANSWER: University of **Cambridge**

[10] Wittgenstein assembled these collections of notes during his time teaching at Cambridge from 1933 to 1935. They would go on to make up the basis of his *Philosophical Investigations*. Name either.

ANSWER: *The **Blue** and **Brown** Books*

18. All of this god's siblings were swallowed by their father as soon as they were born, so his mother replaced him with a rock. For 10 points each:

[10] Name this king of the Greek gods who overthrew his father Cronus after being raised on the milk of Amalthea on Mount Ida.

ANSWER: **Zeus**

[10] As punishment for distracting Hera from catching Zeus dallying with some nymphs on Mount Helicon, this woman was cursed so she could only repeat what others said. She fell in love with Narcissus but couldn't tell him.

ANSWER: **Echo**

[10] This follower of Artemis was raped by Zeus and gave birth to Arcas, after which Hera turned her into a bear. Arcas nearly killed her but Zeus intervened and put her in the sky as Ursa Major.

ANSWER: **Callisto**

19. This place has no distinct echo, and no matter what one character says, the only sound returned is "Om." For 10 points each:

[10] Name this location, which Mrs. Moore visits with another character who goes off alone, and then claims that Dr. Aziz attempted to rape her in the gloom.

ANSWER: the **Marabar Caves**

[10] The Marabar Caves appear in this novel, in which Adela Quested accuses the aforementioned Dr. Aziz. Most of the action is set in Chandrapore, of which Adela's fiancée Ronnie Heaslop is the magistrate.

ANSWER: A **Passage to India**

[10] *A Passage to India* was written by this British novelist of *A Room with a View* and *Howard's End*.

ANSWER: E(dward) M(organ) **Forster**

20. Answer the following questions about thermodynamics. For 10 points each:

[10] The work done on a system, when added to this quantity, is given as the change in internal energy of a system by the First Law of Thermodynamics. This quantity is the energy passed from object to object via thermal transfer.

ANSWER: **heat**

[10] This name is given to a process where a system does not exchange heat with its surroundings. Thus, similarly named boundaries are impermeable to heat transfer.

ANSWER: **adiabatic**

[10] Given a hot reservoir and a cold reservoir, the heat engine which uses this cycle has the theoretical maximum thermal efficiency. Named for a Frenchman, this cycle involves two adiabatic and two isothermal steps.

ANSWER: **Carnot** cycle