



PACE NSC 2017 - Round 20 - Tossups

1. This quantity is linearly related to a type of enthalpy in the Evans–Polanyi principle. A formula that models the probability of crystal defects replaces this quantity with the vacancy energy. Because deuterium lowers the zero-point energy, it increases this quantity, in the kinetic isotope effect. This quantity is replaced by "delta-G double dagger" in the governing equation for (*) transition state theory. The difference between the forward and reverse forms of this quantity equals the reaction heat. This quantity is usually experimentally calculated as negative *R* times the slope of a line that is formed by plotting the log of rate constant against one-over-temperature on an Arrhenius plot. Catalysts decrease this quantity. For 10 points, name this energy "hump" that a reaction must overcome.

ANSWER: activation energy [or free energy of activation; or activation enthalpy] <Silverman>

2. This man wrote about how he accused electoral opponent Phillip Sharp of planning to turn a family farm into a nuclear waste facility in his essay "Confessions of a Negative Campaigner". A newspaper's public records request revealed he used an AOL email address while in office. This self-described "Rush Limbaugh on decaf" was criticized by Republican Greg Ballard for signing SB 101, the (*) Religious Freedom Restoration Act, into law in 2015. He worked with his state legislature to grant 7 million dollars in tax breaks to prevent a furnace-making factory from moving jobs in his state to Mexico. To take his current post, this man resigned as Governor of Indiana. For 10 points, name this Vice President of the United States.

ANSWER: Mike Pence [or Michael Richard Pence] <Bentley>

3. In this country, the office of the newspaper *Respublika* was firebombed in 2002 shortly after a decapitated dog was hung from that building with the note "There will be no next time." James Giffen was the central figure in a scandal named after this country which involved giving bribes to secure contracts over its Tengiz oil field. In this country, the Nevada – (*) Semipalatinsk movement successfully advocated for the closing of the Semipalatinsk nuclear test site in 1991. New farms were established in the north of this country as part of Nikita Khrushchev's Virgin Lands Campaign. The Soviet space program was based in this country's Baikonur Cosmodrome. For 10 points, Nursultan Nazarbayev moved which Central Asian country's capital from Almaty to Astana?

ANSWER: Kazakhstan <Cheng>

4. In one story by this author, the 104-year-old general George Poker Sash dies onstage in a wheelchair at a graduation before his granddaughter Sally collects her diploma. In another story by this author, a man sneers, "I've been believing in nothing ever since I was born" to a philosophy Ph.D. who often quotes Malebranche; that Bible salesman, Manley Pointer, steals a (*) wooden leg from Hulga Hopewell. In a story by this author of "A Late Encounter with the Enemy" and "Good Country People," the antagonist tells his mook Bobby Lee that "It's no real pleasure in life" after killing Bailey's family. For 10 points, name this author who created the Misfit in "A Good Man is Hard to Find."

ANSWER: (Mary) Flannery O'Connor <Bollinger>

5. The reason why this statement does not apply to clock rates is given by a formula relating linear dimensions to power rates, Dennard scaling. This statement was formulated after Carver Mead had a discussion about the possibility that electron tunneling would limit the overall power of circuits. This statement is named after a man who once theorized that the cost of creating fabrication plants grows exponentially, and who founded (*) Intel with Robert Noyce. This statement's accuracy has been upheld recently by the advent of multicore processors, while photolithography and the development of the integrated circuit kept it true in the 20th century. For 10 points, name this law stating that the number of transistors used in computer parts doubles every 18 months.

ANSWER: Moore's law <Jose>

6. An exhibition titled *Freeze* in this decade featured a photograph of a wound made from an ice pick titled *Bullet Hole* by Mat Collishaw. A poster reading "Made in Heaven" advertising a Whitney exhibit in this decade depicted a racy image of Ilona (ill-OH-nah) Staller and Jeff Koons. An artist who died in this decade included a griot in his painting *Flexible* and was a both a member of SAMO and a collaborator of Andy Warhol. Damien (*) Hirst formed the Young British Artists during this decade, in which street artist Jean-Michel Basquiat (boss-kee-AH) died. An exhibition in the last year of this decade titled *The Perfect Moment* featured controversial nude photographs by Robert Mapplethorpe. For 10 points, Mapplethorpe died in what decade, during which many artists made works responding to the AIDS crisis?

ANSWER: 1980s <Bentley>

7. This non-Greek city was briefly ruled by the Duke of Athens, Walter of Brienne. "Mud angels" in this city saved art damaged by a 1966 flood. This city's rulers sent agents to stir up rebellion in Gregory XI's Papal States to incite the War of the Eight Saints. Michele (mee-KEH-lay) di Lando was installed as *gonfaloniere* of justice and greater power was given to the lower guilds during a brief period of democratic rule in this city that followed a (*) revolt of wool workers. Sixtus IV supported a plot to assassinate a leader of this city and his brother during High Mass in 1478. That Pazzi Conspiracy sought to end the rule of a family who came to power in this city after the fall of the Albizzi and Strozzi families. For 10 points, name this Italian city once ruled by the Medicis.

ANSWER: Florence [or Firenze] <Bentley>

8. In a novel by this author, a mob castrates the corpse of a shopkeeper who had only given credit to villagers in exchange for women's favors. A novel by this author in which Denise works as a salesgirl in a department store regained popularity under the title *The Ladies Paradise*. One of his novels is set in Village 240, where sabotage conducted by the Russian anarchist Souvarine leads to a flood that traps Catherine (*) Maheu (kaht-REEN mah-OO) and the protagonist. This author noted "a guilty man is being passed off as innocent" after a court martial acquitted Major Esterhazy. Étienne Lantier (ay-tee-EN lont-YAY) leads a coal miners' strike in a novel by this author, who wrote a letter published in *L'Aurore* denouncing an anti-semitic trial. For 10 points, name this author of *Germinal* (zhair-mee-NALL) who defended Alfred Dreyfus in "J'accuse."

ANSWER: Emile Zola <Brownstein>

9. This character thrice contemplates suicide after being tricked into boarding a ship by a misty phantom of his enemy. The metamorphosis of Io is depicted on his shield, while an image of the Chimera appears on his triple-crested helmet. This son of the nymph Venilia has a dream in which he is pierced by a flaming torch thrown by the priestess Calybe, who reveals herself to be the fury Alecto. False news of this man's death prompts (*) Amata to hang herself. He takes a spear to the thigh and pleads for mercy, but is instantly slain when his opponent sees the belt he took after killing Pallas. Mezentius and Camilla were among those who supported this man's claim for the hand of Lavinia. For 10 points, name this Rutulian king who leads the Latin army against Aeneas in the *Aeneid*.

ANSWER: Turnus <Carson>

10. After seeing a one-man show, Grace Hartigan started producing paintings in this style such as *Ninth Street*. Hedda Sterne was the only woman included in a noted photo of members of this art movement. Pink and white hues dominate *City Landscape*, one of Joan Mitchell's masterpieces in this style. Robert Hughes argues that the first painting to fully realize the goals of this movement was a six-meter wide canvas commissioned for Peggy (*) Guggenheim's apartment. An alcoholic leader of this movement often painted his canvases directly on the floor in a process captured by Hans Namuth. That member of this movement was married to Lee Krasner and created such paintings as *Autumn Rhythm* and *Lavender Mist*. For 10 points, name this art movement exemplified by Jackson Pollock.

ANSWER: abstract expressionism [or action painting; or gestural abstraction; or drip painting; prompt on abstraction or expressionism] <Bentley>

11. Walter M. Camp interviewed a scout named Curly who witnessed this battle. This battle prompted Congress to pass the "Sell or Starve" Bill and was fought two weeks after George Crook's troops lost the Battle of Rosebud River. The vague orders given by Alfred Howe Terry allowed the losing commander to engage in this battle where his brothers, Tom and Boston, both were killed. Pivotal fighting took place on (*) Reno Hill at this battle. According to oral tradition, Buffalo Calf Road Woman struck a pivotal blow at this battle. Its winners were ultimately required to cede control of the Black Hills. This battle was a resounding victory for Crazy Horse and Sitting Bull. For 10 points, name this battle in which the US 7th Cavalry under George Armstrong Custer was defeated.

ANSWER: Battle of Little Bighorn [or Battle of the Greasy Grass; accept Custer's Last Stand until "Custer" is read] <Bentley>

12. This process is induced in *Magnetospirillum* bacteria upon introduction of a magnetic field, and cAMP (c-a-m-p) induces it in the genus *Dictyostelium* by forming a slug. The rate of this cellular process is measured in an assay where the experimenter literally scratches a tissue with a pipette. Actin polymerizes at the lamellipodium, or leading edge, during this process. It's not mitosis, but in most eukaryotes, this process is accomplished by an organelle homologous to a (*) centriole composed of a 9-plus-2 axoneme linked to a basal body. When this behavior depends upon a stimulus, it is classified as either a taxis, a kinesis, or a tropism. Amoebas accomplish this process with pseudopodia. For 10 points, name this basic cellular process facilitated by flagella and cilia.

ANSWER: cellular motion [or locomotion; or motility; or movement; or other word forms; or cellular migration; or cellular aggregation; accept taxis or chemotaxis or magnetotaxis until "taxis" is read] <Silverman>

13. The third measure of this work's third movement begins with an unexpected *forte* D major harmony from the strings and bassoon. Its opening theme is quoted, but modulated down a half step, in the first movement of its composer's *La Reine* (REN) symphony. The violins play several variations of a "hiccuping" Lombard rhythm in the second movement of this symphony. Except for the *presto* first section of its two-part finale, all of this symphony is in triple time. The composer had to order new half-step crooks for the horns to play this symphony, which is in the unusual key of (*) F-sharp minor. It ends with two muted violins playing after the other musicians take turns extinguishing candles and leaving the stage. For 10 points, name this Joseph Haydn symphony written to indicate his desire to leave Eszterháza. ANSWER: the Farewell Symphony [or Franz Joseph Haydn's Symphony No. 45 in F-sharp minor; or Abschieds-symphonie] <Carson>

14. The Herfindahl Index calculates how well this condition is being met in an industry. Prices and allocations must satisfy rationality and feasibility in Walrasian equilibrium, which is also called this kind of equilibrium. One type of this phenomenon involves a multitude of firms whose products are not perfect substitutes, which is known as this phenomenon's (*) monopolistic variety. Another form of this state contains price-taking firms that are free to enter and exit the market. Antitrust laws promote, for 10 points, what economic state whose "perfect" form is characterized by many identical sellers who lower their price to marginal cost to attract buyers?

ANSWER: competition [or monopolistic competition; or perfect competition; or competitive equilibrium] <Aggarwal>

15. The opening two words "Smart lad" in this poem's third quatrain are both stressed, breaking the otherwise iambic tetrameter of the poem. This poem's penultimate quatrain advises "So set, before its echoes fade, / The fleet foot on the sill of shade." Earlier, the poet contrasts two different occasions when the title figure is carried shoulder-high. The speaker of this poem commands the listener to "hold to the low lintel up / The still-defended (*) challenge cup" and it ends with the couplet, "And find unwithered on its curls / The garland briefer than a girl's." It begins by remembering "The time you won your town the race." Published in the collection *A Shropshire Lad*, for 10 points, name this A. E. Housman poem about a recently deceased running champion.

ANSWER: "To An Athlete Dying Young" <Bentley>

16. Gaussian wave packets are usually represented in spaces where these two quantities form the basis and can be interconverted by a Fourier transform. The raising operator for the harmonic oscillator is a linear combination of these two other operators. Hamiltonians are written as functions of generalized versions of these two variables, which are symbolized p and q . A relationship between these two quantities is often explained with a microscope focused on (*) electrons passing through a slit. Since the canonical commutator of these two quantities equals i times \hbar , the product of their standard deviations must be greater than \hbar over two. For 10 points, name these two conjugate variables that cannot be simultaneously measured according to the Heisenberg uncertainty principle.

ANSWER: position AND linear momentum [or coordinate AND linear momentum; or x AND p ; either order acceptable; prompt on partial answer; do not accept or prompt on answers involving "angular momentum"] <Silverman>

17. In a play by this author, a character shows his buttocks to the title character in reaction to a bad joke he tells that puns on the sentence "It's not fair, is it?" After a character in a play by this author compares conflict to "bumps," another imagines an essay called "A World Without Collisions." In a play by this author, the line "you can't fly kites on rainy days" is repeated as characters remember making a kite out of a tomato box and flying it in the park. That play by this author is set in the (*) St. George's Park Tea Room, where two characters are preparing for a dance contest when news that the title teenager's alcoholic father is coming home prompts him to racially abuse Willie and Sam. For 10 points, name this South African playwright of *"Master Harold" ... and the Boys*.

ANSWER: Athol Fugard [or Harold Athol Lanigan Fugard] <Brownstein>

18. Methods such as torture and hostage-taking were employed against this organization in a campaign led by the "Iron Prefect" in the 1920s. Protests against this organization were staged following the death of Carlo Alberto dalla Chiesa, one of the reasons why 475 of its members were tried in the Maxi trial. In the 1960s, this organization spread northward thanks to groups like the 'Ndrangheta (in-DRAHN-gay-tah). Operation Husky was assisted by members of this organization thanks to the connections of (*) Charles Luciano. Giovanni Falcone was killed by this organization for prosecuting its members, who follow the *omertà* code. It began in 19th-century Sicily with groups such as the Stidda and Cosa Nostra. For 10 points, name this Italian organized crime syndicate.

ANSWER: Sicilian Mafia [or the mob; anti-prompt on Cosa Nostra] <Bentley>

19. These objects are used by some practitioners of Tantric Buddhism to create cups called *kapala*. In Tibet, these objects are disassembled by *rogyapas*, who pulverize these objects and mix them with *tsampa*, or barley flour. Some Buddhists believe that when some of these objects are burnt, pearl-like crystals called *sarira* are produced. In Islam, these objects are central to the *janazah* ritual, before which they receive (*) *ghusl* and are wrapped by a cloth called a *kafan*. In Zoroastrianism, these objects are placed on top of *dakhmas*, or Towers of Silence. Ancient Egyptians removed the interiors of these objects and placed them inside of canopic jars. For 10 points, name these objects that are fed to vultures during the sky burial.

ANSWER: corpses [or dead bodies or dead people or obvious equivalents; accept skeletons or bones or skulls] <Cheng>

20. Adolph Reed Jr. claimed that this thinker turned to an ideology close to Fabian socialism. This thinker pondered the question "How does it feel to be a problem?" in one work, and called for the creation of "race organizations" in his speech "The Conservation of Races." In one book, this thinker wrote that "the problem of the twentieth century is the problem of the color-line." That book's chapter "Of Our Spiritual Strivings" describes the feeling of (*) "two-ness" within African-American subjects, resulting from seeing themselves through white eyes, as "double consciousness." This man argued that a "talented tenth" would lift up African-Americans and rejected Booker T. Washington's Atlanta compromise. For 10 points, name this author of *The Souls of Black Folk*.

ANSWER: W. E. B. Du Bois [or William Edward Burghardt Du Bois] <Kothari>

21. Michael Walzer popularized a thought experiment in which these figures must potentially violate fundamental morality in pursuit of a greater good, the problem of "dirty hands." A game theory analysis pioneered by William Riker determines how these figures leverage mutual interest to form coalitions that maximize their "power index." In one treatise, Aristotle compares these figures' role to that of craftsmen and directly equates them with (*) lawgivers. Through a spoils system, a member of this profession can replace employees of a bureaucracy with supporters. A member of this profession who blames an elite class for the plight of the common people is known as a populist. For 10 points, name this profession whose members constituents vote for in democracies.

ANSWER: **politicians** [or **statesman**; or **stateswoman**; or **legislators**; or **public servants**; or **lawmakers** until "lawgivers" is read; or political **leaders**; accept specific types of politicians like **mayors** or **presidents**; do NOT accept answers like "kings" or other such figures with hereditary/royal titles] <Aggarwal>



PACE NSC 2017 - Round 20 - Bonuses

1. A 2011 book by Stephen Greenblatt about "how the world became modern" is titled for an English translation of this concept. For 10 points each:

[10] Name this concept, introduced to explain the origin of free will, in which atoms sometimes move unpredictably rather than simply fall straight through the void.

ANSWER: clinamen [or swerve; or *The Swerve*]

[10] Greenblatt's book details Poggio Bracciolini's recovery of the only extant copy of Lucretius's *De rerum natura*, a long poem that seeks to lead the reader to *ataraxia* by advocating the system of philosophy named for this Greek philosopher.

ANSWER: Epicurus [prompt on "Epicureanism"]

[10] In *The Swerve*, Greenblatt also suggested that the "pursuit of pleasure" central to the writings of Lucretius and other Epicureans influenced the ideal society depicted in this satirical book by Thomas More.

ANSWER: Utopia [accept *De optimo rei publicae deque nova insula Utopia* or translations such as *Concerning the Highest State of the Republic and the New Island Utopia*] <Carson>

2. This period marks the second of three devised by Christian Jurgensen Thomsen. For 10 points each:

[10] Name this period of human history, during which England's Wessex culture developed and the Minoan civilization flourished. The Greek Dark Ages began after the collapse of the civilizations from this period.

ANSWER: Bronze Age

[10] During the Bronze Age, this device was first put to practical use in Eurasia. The first spoked examples of these devices began appearing on chariots in Asia Minor around 2000 BCE.

ANSWER: the wheel

[10] During the Bronze Age, tin was often smelted with copper traded from this island, which was then called Alasiya. Guy of Lusignan purchased this island from the Templars in 1192.

ANSWER: Cyprus <Bentley>

3. Apollodorus states that Ascalaphus, the man who watched over the orchard of Hades, was a son of Gorgyra and the god of this river. For 10 points each:

[10] Name this river of the Underworld, which represents "woe" or "pain".

ANSWER: Acheron

[10] Virgil states that Acheron was the largest river of the Underworld, and that this other river branched off of it. Unbreakable oaths were sworn using the water from this river, which was crossed by the ferryman Charon.

ANSWER: Styx [accept Stygian oaths]

[10] Alcaeus writes that, due to his cunning, this man "twice crossed Acheron at fate's command". He once trapped Thanatos in his own chains, making it so that men could not die despite growing old.

ANSWER: Sisyphus <Jose>

4. Answer the following about indeterminate or aleatoric music, in which elements of compositions are determined by chance, for 10 points each.

[10] This man used the *I Ching* to make decisions while composing his *Music of Changes*. Performers are instructed not to play their instruments for the entirety of his most famous composition, 4'33" (four thirty-three).

ANSWER: John Cage [or John Milton Cage Jr.]

[10] Handbells play at random and the choir sings disordered lyric fragments in the second part of *Cloudburst* by this modern choral composer. He used his compositions *Sleep* and *Lux Aurumque* (LUKES OW-room-kway) for the first of his "Virtual Choir" projects.

ANSWER: Eric Edward Whitacre

[10] This composer included some proto-aleatoric techniques in his work; for example, the quartet of flutes is given some flexibility regarding when they "respond" to the solo trumpet in his 1908 composition *The Unanswered Question*.

ANSWER: Charles Edward Ives <Carson>

5. This period began after the Governor of Elba took leave to mainland Italy to visit a mistress, allowing Napoleon an opportunity to escape. For 10 points each:

[10] Give this name for the period between Napoleon's return from exile and his final defeat at Waterloo. Since Franklin Roosevelt, US Presidents have sought to turn the country around in this many days following their inauguration.

ANSWER: Hundred Days [or les Cent-Jours]

[10] This Prussian general at Waterloo had been defeated and injured by Napoleon a few days earlier at Ligny (leen-YEE). Nicknamed "Marshall Forwards," he went insane later in life, believing that he was pregnant with an elephant.

ANSWER: Gebhard Leberecht von Blücher, Fürst von Wahlstatt [or Fürst von Wahlstatt]

[10] During the Hundred Days, Joachim Murat, the "Dandy King" of this Napoleonic kingdom, fought a war against the Austrian Empire. This kingdom was unified with another following Murat's defeat.

ANSWER: Kingdom of Naples <Bentley>

6. Anadromous fish like salmon live most of their lives in this type of water, but won't breed in it; eels do the opposite. For 10 points each:

[10] Name this type of water which makes up the majority of water on Earth.

ANSWER: saltwater [or saline water]

[10] Although mangrove trees can't survive in pure salt water, they do form forests in this type of water, which is found in estuaries and is slightly less saline than seawater.

ANSWER: brackish water

[10] Sharks survive in very saline water by achieving a very high blood osmolarity due to a high concentration of this compound. In mammals, this one-carbon compound is formed when arginase hydrolyzes arginine's side chain. It is also often used to denature proteins.

ANSWER: urea [do not accept or prompt on "urine"] <Grames>

7. J.R.R. Tolkien challenged this concept in his essay "On Fairy-Stories," which suggests that internal consistency in a literary work is more effective at producing the desired effect. For 10 points each:

[10] Identify this literary term coined by Samuel Taylor Coleridge, who defined it as a "poetic faith" that would allow readers to enjoy supernatural or romantic works that displayed sufficient "human interest" and "semblance of truth."

ANSWER: willing **suspension of disbelief** [accept word forms, like **suspending disbelief**]

[10] Coleridge's definition of suspension of disbelief appeared in the fourteenth chapter of this semi-autobiographical 1817 prose work, which also explains his distinction between "imagination" and "fancy."

ANSWER: **Biographia Literaria** [or **Biographia Literaria**; or *Biographical Sketches of My Literary Life and Opinions*]

[10] Coleridge notes that he sought to evoke suspension of disbelief in this long poem, whose title character recounts shooting an albatross, thereby seemingly cursing his ship.

ANSWER: "The **Rime of the Ancient Mariner**" <Carson>

8. Answer the following about massive power outages, for 10 points each.

[10] In July 2012, over 600 million people in the northern half of this country were affected by the largest power outage in history. The outage put pressure on then-Prime Minister Manmohan Singh's plan to improve its power grid.

ANSWER: **India** [or Republic of **India**; or **Bharat** Ganarajya]

[10] The entire country of Paraguay lost power for 15 minutes in 2009 after transformers at this dam on the Paraná River short-circuited.

ANSWER: **Itaipu** Dam

[10] After a 1998 storm and subsequent blackout, this country responded with its largest military deployment since the Korean War. This country's McGill University used the blackout to study the effects of stress on pregnant women.

ANSWER: **Canada** <Shimizu>

9. The Young–Laplace equation balances the pressure force with this other force to maintain the integrity of a soap bubble. For 10 points each:

[10] Name this force that arises because molecules at an interface experience unbalanced cohesive intermolecular attractions since they are no longer surrounded by other molecules.

ANSWER: surface **tension** [or **tension** force; prompt on surface forces]

[10] Surface tension therefore explains the formation of this curved structure at the surface of a liquid.

ANSWER: **meniscus** [or **menisci**]

[10] The height to which a column of liquid rises in a capillary equals the pressure across the meniscus, which is given by the Young–Laplace equation, divided by the product of what two variables?

ANSWER: fluid **density** AND **gravitational acceleration** [or **rho** AND **g**; or **density** AND little **g**; or **density** AND **acceleration due to gravity**; do not accept or prompt on answers involving "big G" or "gravitational constant"] <Silverman>

10. This character is last seen walking into the distance with his dog Willie as his voice-over provides a description of a Roman triumph that ends with the line "All glory... is fleeting". For 10 points each, [10] Name this film character portrayed by George C. Scott. The film in which he appears opens with him standing in front of a gigantic American flag, delivering a monologue to an unseen audience.

ANSWER: George S. **Patton** [prompt on George]

[10] *Patton* was co-written by this Italian-American director, whose other 1970s hits included *Apocalypse Now* and the first two *Godfather* films.

ANSWER: Francis Ford **Coppola**

[10] *Apocalypse Now* and *The Conversation* each won this highest prize awarded at the Cannes Film Festival, making Coppola one of only eight directors to have won it multiple times.

ANSWER: **Palme d'Or** [accept **Golden Palm**] <Carson>

11. The decision of these bodies was for the most part final, although death penalty verdicts could be appealed to the chancillería. For 10 points each:

[10] Identify these royal bodies in Spanish-controlled America that were also tasked with handling Indian affairs. The first of these bodies in the Americas was established in Santo Domingo in 1511.

ANSWER: **audiencias**

[10] This conquistador sought to get around the Governor of Cuba by founding his own settlement of Villa Rica de la Vera Cruz that would be accountable directly to the King of Spain. This man conquered the Aztec Empire.

ANSWER: Hernán **Cortés** [or Fernando **Cortés**; or Hernando **Cortés**]

[10] Cortés' clash with Beltrán Nuno de Guzmán helped end the First Audiencia that governed this colony, which included all of modern-day Mexico along with large portions of the United States.

ANSWER: **New Spain** [or **Nueva España**] <Bentley>

12. Answer the following about the critic S. T. Joshi, for 10 points each.

[10] Joshi is likely most famous as an editor and biographer of this distressingly racist American horror author of such stories as "The Shadow over Innsmouth" and "The Call of Cthulhu".

ANSWER: H. P. **Lovecraft** [or Howard Phillips **Lovecraft**]

[10] In 2000, Joshi and David Schulz produced an unabridged edition of this book, which was originally published as a column in the San Francisco *Wasp*. It memorably describes marriage as "a household consisting of a master, a mistress, and two slaves, making in all, two."

ANSWER: *The **Devil's Dictionary*** [or *The **Cynic's Word Book***] [by Ambrose Bierce]

[10] Joshi also edited several collections of works in this genre by M.R. James, whose "Oh, Whistle, and I'll Come to You, My Lad" was published in a book titled for these pieces "of an Antiquary". Henry James's "The Jolly Corner" is also an example of this genre.

ANSWER: **ghost** stories [prompt on supernatural, weird, or horror stories/fiction; accept *Ghost Stories of an Antiquary*] <Carson>

13. In 2004, Merck was forced to pull a blockbuster inhibitor of one of these enzymes from the market. For 10 points each:

[10] Name these enzymes crucial to prostaglandin synthesis which come in two isoforms, labelled 1 and 2. Non-steroidal anti-inflammatory drugs like aspirin and ibuprofen target these enzymes.

ANSWER: **cyclooxygenases** [or **COX**; **COX-1**; or **COX-2**; or **prostaglandin-endoperoxide synthase**; or **PTGS**; do not accept or prompt on "oxygenases"]

[10] Merck's failed drug Vioxx selectively inhibited only COX-2, and as a result, limited this common side effect of NSAIDs. In this condition, a small break forms in the mucosa of the stomach.

ANSWER: gastric **ulcer** [or peptic **ulcer**]

[10] Unfortunately, the decrease in ulcers was countered by a sharp increase in the prevalence of this other condition, in which blood flow to the heart suddenly stops. It is often accompanied by chest pain.

ANSWER: **heart attack** [or acute **myocardial infarction**] <Silverman>

14. Answer the following about portraits, for 10 points each.

[10] Full-length portraits, which sometimes stretched up to nine feet in height, were popularized in England by this Flemish court painter to Charles I, whose subjects often have short, pointed beards.

ANSWER: Anthony **van Dyck** (dike) [or Antoon **van Dyck**]

[10] An even grander type of portrait was this one, in which the subject was depicted on or near a horse. It's generally not true that the hoof position in statues of this type indicate whether the subject died in battle or not.

ANSWER: **equestrian** portrait [or **equestrian** statue]

[10] This artist's first full-length portrait unusually depicts the Scottish lawyer William Grant skating in Kensington Gardens. A more famous full-length portrait by this artist, the Lansdowne portrait, was saved from destruction in 1814.

ANSWER: Gilbert **Stuart** <Bentley>

15. Originally, this group included eight companies, including Arthur Young and Touche Ross. For 10 points each:

[10] Give this term for the companies PriceWaterhouseCoopers, Ernst & Young, Deloitte, and KPMG, which perform most of the audits of publicly traded companies in the world.

ANSWER: **Big Four** accounting firms

[10] Arthur Andersen, the most recent member to drop from the grouping, was dissolved after the scandal centering on this former energy company based in Texas broke in 2001.

ANSWER: **Enron** Corporation

[10] Arthur Andersen never actually filed for this status, in which a company or individual is unable to repay creditors. Its "Chapter 7" form involves corporate liquidation, while its "Chapter 11" form permits reorganization.

ANSWER: **bankruptcy** <Jose>

16. This theologian compared the heart to a mirror that can reflect the light of God in "The Marvels of the Heart," a chapter from his book *The Revival of the Religious Sciences*. For 10 points each:

[10] Name this theologian who disputed Greek-influenced *falsafa*, a strain of Islamic philosophy in his treatise *The Incoherence of the Philosophers*.

ANSWER: Abu Hamid Muhammad ibn Muhammad al-Ghazali [or Algazel]

[10] Al-Ghazali compiled parts of *The Revival of the Religious Sciences* while living atop the Golden Gate on the Temple Mount in this city, near the Dome of the Rock.

ANSWER: Jerusalem

[10] Al-Ghazali's *Deliverance from Error* explains his turn towards this Islamic tradition to cure his uncertainty. Members of the Mevlevi Order of this tradition are sometimes known as "whirling dervishes".

ANSWER: Sufism <Kothari>

17. A novel about this headache-stricken character begins by describing him "in a white cloak with a blood-red lining, with the shuffling gait of a cavalryman." For 10 points each:

[10] Name this character who is served by Mark Ratslayer and becomes fascinated with the condemned prisoner ha-Notsri (**ha-notes-REE**). He is the protagonist of a novel-within-a-novel which is restored with the words "Manuscripts don't burn."

ANSWER: Pontius Pilate [accept either underlined portion]

[10] That novel about Pilate is written by this unnamed writer, the first title character of a novel in which his lover obtains his freedom from an insane asylum with the help of the devil, who appears as Professor Woland.

ANSWER: the Master

[10] Bulgakov's *The Master and Margarita* centers on the devil's arrival in this city, the capital of a government that enthusiastically censored it and novels like Pasternak's *Doctor Zhivago*.

ANSWER: Moscow [or Moskva] <Brownstein>

18. Some of the leaders of the women's suffrage movement in the United States didn't always have the most progressive views on other issues. For 10 points each:

[10] This woman complained that "the ignorant Irishman in the ditch" was able to vote, but women were not. She lost many of her supporters after publishing a book which tried to counter Christian arguments against women's rights titled *The Woman's Bible*.

ANSWER: Elizabeth Cady Stanton [or Elizabeth Cady]

[10] The National Woman Suffrage Association ordered that all black delegates march in the rear of a parade agitating for women's suffrage at this man's 1913 inauguration. The 19th Amendment was ratified during his presidency.

ANSWER: Woodrow Wilson [or Thomas Woodrow Wilson]

[10] A generation earlier, this escaped slave outraged many of the white women in the audience when she declared "nobody helps me into carriages or over mud puddles, or gives me any best place" in her "Ain't I a Woman" speech.

ANSWER: Sojourner Truth [or Isabella Baumfree or Bell Baumfree] <Bentley>

19. Answer the following about the four-line *rubai* (**roo-bah-EE**) verse form, for 10 points each.

[10] Perhaps the most famous *rubaiyat* (**roo-bye-YAHT**) were written by this Persian polymath and extremely loosely translated into English by Edward FitzGerald.

ANSWER: Omar **Khayyam** [or Ghiyath ad-Din Abu'l-Fath 'Omar ibn Ibrahim **Khayyam** Neishahpuri]

[10] Many *rubaiyat*, along with thousands of *ghazals*, can be found in the this Sufi poet's *Divan-e Shams*. He also wrote the six-book *Masnavi*, also known as the *Spiritual Couplets*.

ANSWER: **Rumi** [or Jalal ad-Din Muhammad **Rumi**; or Jalal ad-Din Muhammad **Balkhi**]

[10] This American poet described assembling a jigsaw puzzle in AABA "Rubaiyat quatrains" in a section from his poem "Lost in Translation." His extensive Ouija (**wee-jee**) board sessions inspired his lengthy epic *The Changing Light at Sandover*.

ANSWER: James **Merrill** [or James Ingram **Merrill**] <Carson>

20. Richard Feynman famously remarked upon generations of scientists failing to point out an error in this experiment by discarding real data points that were too far from the original value. For 10 points each:

[10] Name this experiment conducted by Robert Millikan that still got pretty close to the true value of the elementary charge by suspending the namesake objects in an electric field.

ANSWER: Millikan **oil drop** experiment

[10] Millikan's error was a severe misestimation of the magnitude of this force, which, according to Stokes's law, is proportional to but oriented opposite a sphere's velocity.

ANSWER: **drag** [or **air resistance**; or **air friction**; prompt on **friction**]

[10] Applying Stokes's law to the Einstein–Smoluchowski (**small-oo-KOFF-ski**) relationship yields the result that this quantity depends inversely on particle radius. This quantity is the proportionality constant between the gradient of concentration and the mass flux *J*.

ANSWER: mass **diffusivity** [or **diffusion coefficient**; do not accept or prompt on "diffusion"] <Silverman>

21. The first of this movement's namesake establishments was set up in Millbury, Massachusetts by Josiah Holbrook. For 10 points each:

[10] Identify this adult-education movement in the antebellum United States, whose name connects it to Ancient Greece. Following the Civil War, this movement became conflated with the Chautauqua movement.

ANSWER: **lyceum** movement

[10] One regular lecturer on the lyceum circuit was this former Maryland slave, who established the *North Star* newspaper.

ANSWER: Frederick **Douglass** [or Frederick Augustus Washington **Bailey**]

[10] In the 19th century, many students memorized a speech supposedly given by this Duwamish chief. This namesake of a Western city contrasts the multitudes of the "Big Chief at Washington" with his people, who "resemble the scattering trees of a storm-swept plain".

ANSWER: Chief **Seattle** [or Chief **Sealth**] <Bentley>