



PACE NSC 2017 - Round 01 - Tossups

1. This city is home to a UFO-shaped ice cream parlor called Coppelia, which was founded by a world leader. Nearly a million people are buried in this city's Colón Cemetery, including chess champion José Raúl Capablanca. The Hershey Electric Railway connects this city to Matanzas. A constructivist building resembling a sword hilt contains this city's Russian embassy. A presidential palace-turned-museum in this city includes a glass enclosure protecting the yacht (*) *Granma*. This city's Morro Castle can be seen in the background of *Watson and the Shark*. Waterfront hotels in this city owned by Meyer Lansky hosted a 1946 meeting of Mafia leaders during a tourist-friendly period under Fulgencio Batista. For 10 points, José Martí International Airport serves what capital of Cuba?

ANSWER: Havana, Cuba [or La Habana] <Shimizu>

2. A group of people in this country undergoes the *Soyal* ritual on the winter solstice to "awaken" the Sun from its "sleep". That group in this country believes humanity currently inhabits "the Fourth World," and symbolizes that belief by building *sipapu* openings into keyhole-shaped structures called *kivas*. A group in this country believes that Patung and Angak are among the various (*) *kachina* spirits that inhabit inanimate objects. A man training to be a medicine doctor in this country named Wovoka was inspired by a solar eclipse to spread the Ghost Dance. Many religious rites from this country take place in sweat lodges, which were built by the shamans of the Plains Indians. For 10 points, name this country home to the Navajo people.

ANSWER: United States of America [or USA; or America] <Jose>

3. A city-state on this island sent settlers to Lycia to found Phaselis. Dorians established the city-states of Camirus, Ialysus (eye-AL-ih-sus), and Lindus on this island. A 130-foot-tall siege engine called the Helepolis was used against this city by Demetrius I of Macedonia, who earned his epithet "the Besieger" for his failed year-long siege of its largest city. In a later siege, men under Philippe Villiers de L'Isle Adam (fee-LEEP veel-YAY duh LEEL ah-DOM) held this island against 100,000 Ottomans for six months before surrendering it to (*) Suleiman the Magnificent. Malta became the base of the Knights Hospitaller after they left this island. An earthquake destroyed a statue of Helios that once stood in a harbor on this island. For 10 points, name this Greek island, whose Colossus was one of the Wonders of the Ancient World.

ANSWER: Rhodes [or Rodos] <Bentley>

4. A character by this name is shown a photograph of a messenger practicing the high jump by the Bridge Inn's landlady. A character with this surname walks upstairs to some stuffy offices with an usher after a student carries the usher's wife up the stairs. This is the name of a character who often abuses his two identical assistants, Jeremias and Artur. A character with this surname meets a prison chaplain in a cathedral, who tells him the (*) parable "Before the Law." This is the name of a surveyor who marries the barmaid Frieda while trying to access a fortress, and the surname of man who is executed in a quarry after being arrested for an unknown crime. For 10 points, identify this letter which provides the names of the protagonists of *The Castle* and of *The Trial*, whose author's surname begins with this letter.

ANSWER: **K** [or Joseph **K**] <Brownstein>

5. This painting, whose style was reused in its artist's later painting *The Charnel House*, was exhibited alongside a fountain that pumps mercury. A tapestry copy of this painting was covered by a curtain during a Colin Powell press conference at the United Nations. The creation of this painting was documented in a series of photographs by its artist's long-time partner Dora Maar. This painting was vandalized with the words (*) "kill lies all" written in red spray paint in a response to the My Lai (mee lye) Massacre. This painting uses only black, white, and gray to portray a flower growing from the hand of a dead soldier and a horse screaming in pain. For 10 points, name this massive painting inspired by the 1937 bombing of a Basque city, a work of Pablo Picasso.

ANSWER: ***Guernica*** <Shimizu>

6. This quantity changes down the length of the column during chromatofocusing. It is plotted on the x-axis of a speciation diagram. A gradient in this quantity is used to separate proteins in 2D SDS-PAGE before the separation based on size. Molecular biologists use Tris and EDTA to prevent swings in this quantity. Glass (*) electrodes are used to measure this quantity. The solubility of magnesium hydroxide rapidly decreases as this quantity increases due to the common ion effect. The color of bromothymol blue is a function of this quantity. This quantity is equal to the difference between the percent ionization and the pKa according to the Henderson–Hasselbalch equation. For 10 points, name this quantity that buffer solutions usually keep near seven.

ANSWER: **pH** [or **power of hydrogen**; prompt on isoelectric point or pI] <Silverman>

7. One of these places titles a novel in which Alain covets his aunt's apartment and seeks to impress his literary idol Germaine Lemaire; that novel is by Nathalie Sarraute (NAH-tah-lee sah-ROHT). In one of these specific facilities, Buzz and Jim's class watches a lecture about how the human race will be "destroyed as [it] began, in a burst of gas and fire" in *Rebel Without a Cause*. Zeiss projectors are often used in these places, which serve similar functions to older (*) armillary spheres and orreries. New York City's Rose Center contains a huge spherical example of these facilities named for Charles Hayden, the director of which is Neil DeGrasse Tyson. For 10 points, name these domed theaters, often found at science museums and observatories, that depict the cosmos.

ANSWER: **planetariums** [or **planetaria**; prompt on observatory or observatories until mentioned.] <Jose>

8. To visit one of these places, a count disguises himself as the ghost of a nun who was buried alive there. In one of these places, a man's speech about "lusts of the flesh" is interrupted by the arrival of his three daughters, who wear "velvet, silk, and furs." A Belgian man who heads of one of these places, Constantin Héger (ay-ZHAY), partly inspired the title character of a posthumously published first novel. A tablet reading "Resurgam" marks the grave of a character who dies of (*) typhus at one of these places, another of which provides the setting of the novel *Villette*. The protagonist meets the saintly Helen Burns in one of these places, which is run by the cruel Mr. Brocklehurst. For 10 points, what sort of institution, such as Lowood in *Jane Eyre*, are often populated by girls in Charlotte Bronte novels?

ANSWER: all-girls boarding schools [or classrooms; or dormitories] <Brownstein>

9. A generalization of one of this man's namesake objects uses a linear combination of orthogonal versions of a Bessel function to solve PDEs in cylindrical coordinates. The Cooley–Tukey algorithm implements an efficient version of an operation named after this man; the basic form of that operation uses an integral from negative infinity to infinity and contains the term " e to the minus $2\pi iVT$." This man's most famous mathematical invention may have coefficients of " $\frac{4}{n\pi}$ " for odd n , and zero for even n , and that (*) expansion decomposes a periodic function into a sum of trigonometric functions, particularly sines and cosines. For 10 points, name this French mathematician, namesake of a transform and series that analyze signals in the time and frequency domains.

ANSWER: Jean-Baptiste Joseph Fourier [or Fourier-Bessel series; or fast Fourier transform; or Fourier transform; or Fourier expansion; or Fourier series] <Aggarwal>

10. This substance was extracted from *jindan* (jeen-DON), a specimen that is thought to be a key ingredient in a mixture called the "Cold-Food Powder". Enormous amounts of this substance are supposedly situated in between candles made of "man-fish" oil in a location whose bronze roof is studded with pearls to represent the constellations. The *Records of the Grand Historian* claims that automatic crossbows fire at intruders at a location where (*) "rivers" of this substance represent the Yangtze and Yellow Rivers. A ruler succumbed to a mixture of pulverized jade and this substance while travelling in Shaqiu (shah-cho) outside of his capital of Xianyang (sh'yen-yong). To attain immortality, Qin Shi Huangdi consumed pills of, for 10 points, what liquid metal that Chinese alchemists called quicksilver?

ANSWER: mercury [or quicksilver] <Jose>

11. This symbol comes between the letters "L" and "A" in the first line of a 20-letter poem about loneliness and a falling leaf. In another poem, this punctuation mark precedes the lines "and only the snow can begin to explain / how children are apt to forget to remember." The poem "Since feeling is first" ends by noting "life's not a paragraph / and death i think is no" this mark. This punctuation mark sets off the phrase "i (*) carry it in my heart" in the first two lines of the poem "i carry your heart with me." They surround the words "with up so floating many bells down" in the second line of "anyone lived in a pretty how town." For 10 points, name this punctuation mark that, in many E. E. Cummings poems, marks off phrases that break the main flow of words.

ANSWER: parenthesis [or parentheses; or open parenthesis; or close parenthesis; or round brackets; or curved brackets; prompt on brackets] <Brownstein>

12. The sixth of these works was, like their composer's third symphony, expanded from incomplete sketches by Anthony Payne. Their composer's song "The King's Way" reuses the melody from the fourth one's central section, which opens with the violins playing an open G string. Liverpool Orchestral Society founder Alfred Rodewald was the dedicatee of the first of these works, material from which became the setting for lyrics by Arthur Benson in the finale of their composer's (*) *Coronation Ode* for Edward VII. The first of these works contains a trio section whose melody is used for the patriotic song "Land of Hope and Glory", and is regularly played on the last night of the BBC Proms. For 10 points, name this set of marches by Edward Elgar, the first of which is commonly played at graduations.

ANSWER: the *Pomp and Circumstance* *Military Marches* <Carson>

13. This designation was given by Walt Rostow to his file containing the Johnson administration's evidence of Nixon's sabotage of the Paris Peace Talks. Thomas Mann's image of a long-dead star "whose light shines most brightly on this world" was used as an analogy to the popularity of the USSR outside Russia itself in a *Foreign Affairs* article informally referred to by this designation that detailed the policy of (*) containment first outlined in its author's "Long Telegram". George Kennan's article "The Sources of Soviet Conduct" was attributed to an alias including this letter, which was adopted in 1950 to replace the identifier "Little" by a man who gave the "Message to the Grass Roots" and "The Ballot or the Bullet" speeches before his 1965 assassination by Nation of Islam members. For 10 points, give the single-letter surname adopted by black nationalist leader Malcolm.

ANSWER: X [accept the X file, the X envelope, the X Article, Mr. X, or Malcolm X; do not accept "the tenth"] <Carson>

14. A character of this profession has two women swear on their beards to point out that a knight who swore on his honor about the bad mustard on his pancakes wasn't lying. A character of this type sings "When that I was and a little tiny boy, / With hey, ho, the wind and the rain" a few scenes after disguising himself as Sir Topas to torment an imprisoned man. A character of this profession secures the hand of the goatherd Audrey after following (*) Duke Frederick into exile. With the Duke of Kent, a character of this type follows his master onto the heath during a thunderstorm and may have been double-cast with Cordelia. Characters of this type include Touchstone in *As You Like It* and Feste in *Twelfth Night*. For 10 points, King Lear is served by a member of what comic profession?

ANSWER: Shakespearean fools [or jesters; or clowns] <Brownstein>

15. In Stephen Hubbell's neutral theory, theta equals two J times rho, where rho is the rate of this process. The Bateson–Dobzhansky–Muller model is a mechanism for this process. According to Sewall Wright, this process occurs when a peak shifts on a rugged landscape. It was postulated to occur in a ring for *Larus* gulls. Ernst Mayr (mire) proposed a mechanism for this process that Eldredge and Gould used to theorize (*) punctuated equilibrium. The four mechanisms for this process are classified based on population size and if geography is a factor. This process corresponds to forming a new branch on a phylogenetic tree. For 10 points, name this process that has sympatric and allopatric forms and is caused by individuals evolving so they can no longer interbreed.

ANSWER: speciation [or specific types of speciation; prompt on evolution; prompt on reproductive isolation] <Silverman>

16. A song in this genre that closes the album *Light as a Feather* opens with the pianist playing the melody of the adagio from the *Concierto de Aranjuez* (ah-rahn-WEZZ). A 1973 recording in this genre of an earlier song features Bill Summers imitating the sound of *hindewhu* music by blowing into a beer bottle. The groups Return to Forever and The Headhunters were led by pioneers of this genre; another such pioneer wrote the song "Pharaoh's Dance" for the (*) Miles Davis album *Bitches Brew*. That man, Joe Zawinul (ZAH-vin-ull), played alongside saxophonist Wayne Shorter and bassist Jaco Pastorius in Weather Report, a group that primarily played this genre. Post-bop-era Herbie Hancock and Chick Corea primarily played, for 10 points, what genre that combined jazz with elements of funk and rock music?

ANSWER: jazz **fusion** [prompt on jazz; accept jazz-rock or jazz-funk and prompt on funk until "funk" is read] <Minarik>

17. It's not Greece, but this present-day country is the birthplace of a philosopher who developed a framework in which a proposition can be true, false, both true and false, or neither true nor false. That philosopher based his thought around an idea translated as "emptiness." Schopenhauer borrowed the phrase "Thou art that" from a dialogue from this country, and Nietzsche denigrated Christian morality in favor of the Law of (*) Manu from this country. Schools of thought in this country debated six ways of knowing called *pramanas*, and whether ultimate reality is equivalent to the soul, or *atman*. Philosophers from this country include Nagarjuna, and schools from this country are called *nastika*, or heterodox, if they reject the Vedas. For 10 points, name this birthplace of Buddhism and Hinduism.

ANSWER: **India** [or **Bharat**] <Kothari>

18. A leader of this cause stated "The argument of the broken window pane is the most valuable argument in modern politics." John Redmond's ear was cut by a hatchet that a supporter of this cause threw at H.H. Asquith. Winston Churchill was horsewhipped by a backer of this cause at the Bristol Railway station, and another backer of it took a knife to Velázquez's *Rokeby Venus*. The Hurst Park (*) Racecourse pavilion was burned down by supporters of this cause after another supporter, Emily Wilding Davison, threw herself under a royal horse. The Pankhursts were leading advocates of this cause. It was achieved for those over thirty by the Representation of the People Act of 1918. For 10 points, name this cause, fully achieved in the UK through the 1928 Equal Franchise Act.

ANSWER: British **women's suffrage** [or obvious equivalents of **women's** right to **vote**; prompt on universal suffrage; prompt on general suffrage; prompt on suffrage] <Bentley>

19. One of these things was created in response to its creator's displeasure with a group of giants he had produced by breathing into large stones and was called Unu Pachacuti. The king of the Dravida Kingdom and the saptarishis were assisted during one of them by Matsya. Ziusudra (zee-oo-SOO-drah), who is later taken to Dilmun, and Atrahasis are both told about one of these events by the the patron god of Eridu. In a similar story, the actions of Adad cause the Anunnaki to (*) cower in heaven during one of these events, which Ea warns Utnapishtim about. Two people are instructed to "throw the bones of your mother over your shoulder" after one of these events, which allows them to repopulate the world. For 10 points, name these mythical events survived by Manu, Deucalion and Pyrrha, and Noah.

ANSWER: **floods** [or **deluges**] <Carson>

20. The normalization constant for a partition function in n -dimensional phase space is this quantity to the negative n . Precise measurements of this constant in 2017 will enable the kilogram SI unit to be physically defined for the first time. The first energy level of a particle-in-a-box is this quantity squared over eight $m L$ -squared. The Compton wavelength is defined as this quantity over mass times the speed of light. This quantity was plugged into the numerator of an exponential to prevent the Rayleigh–Jeans law from diverging at high frequencies. A photon's (*) energy equals its frequency times this constant. The reduced form of this constant gets a bar written across it. For 10 points, identify this value named for the formulator of quantum theory, which is symbolized h .

ANSWER: Planck's constant [accept h until it is read; do not accept or prompt on " h -bar" or "reduced Planck's constant"] <Silverman>

21. An expedition this ruler sent against Java was betrayed by his local client Raden Wijaya, who expelled his army and founded the Majapahit Kingdom. Tibetan lamas held a special place at his court thanks to his *yon-mchod* alliance with Phags-pa (pogs-pah). After winning a succession war against his brother Ariq Böke, he conquered southern (*) China with his pyro-curious general Bayan Hundred Eyes. This creator of a four-tier "nationalities policy" was the first Emperor of China to mandate the use of paper money, whose value deteriorated due to constant military ventures, such as his *kamikaze*-foiled invasion of Japan. For 10 points, name this Yuan Dynasty Emperor visited by Marco Polo, the grandson of Genghis Khan.

ANSWER: Kublai Khan [or Yuan Shizu] <Bollinger>



PACE NSC 2017 - Round 01 - Bonuses

1. After 1664, this award was given to the person who best represented "the heroic actions of the King" in visual form. For 10 points each:

[10] Identify this award, functionally a scholarship that allowed an artist to study at a branch of the Academie de France in the Palazzo Mancini. Anne-Louis Girodet won this award in 1789.

ANSWER: **Prix de Rome** (PREE deh Rome) [or **Rome Prize**]

[10] A goal of the Prix de Rome was to fill up French palaces by encouraging artists to perform this action. Peter Paul Rubens performed this action on Leonardo's *The Battle of Anghiari*, which is how we know what the now-lost original looks like.

ANSWER: **copying** other works of art [accept equivalents]

[10] An artist with this last name, Charles, reformed the Prix de Rome in 1674. A female artist who acquired this surname in a marriage painted sympathetic portraits of Marie Antoinette and her family before going to the court of Catherine the Great and painting the Pavlovna sisters.

ANSWER: **Lebrun** [accept Charles **Lebrun** or Élisabeth Vigée **Le Brun**] <Bentley>

2. Identify the following about the interesting career of geologist Clarence King, for 10 points each.

[10] In 1872, King figured out that Philip Arnold and John Slack had salted a mine allegedly containing large quantities of these precious items. A real 19th-century mine of these gems was discovered in Kimberley, South Africa.

ANSWER: **diamonds**

[10] King adopted the identity of James Todd in order to marry an African American woman named Ada Copeland. James Todd claimed to be employed in this railroad profession, many of whom joined a Brotherhood founded by A. Philip Randolph.

ANSWER: Pullman **porter** [or sleeping car **porter**]

[10] King was succeeded as Director of the US Geological Survey by this man, whose namesake 1869 expedition was the first verified European traversal of the Grand Canyon.

ANSWER: John Wesley **Powell** <Bentley>

3. A subplot in this novel involves a comically restrained romance between Old Grannis and Miss Baker. For 10 points each:

[10] Name this Frank Norris novel whose title character, an unlicensed dentist, murders his wife Trina and absconds with her lottery winnings, only to wind up stranded in Death Valley handcuffed to the corpse of his former friend Marcus Schouler.

ANSWER: **McTeague** [accept, but DO NOT REVEAL, *McTeague: A Story of San Francisco*]

[10] *McTeague* is set in this western state. Norris's novel *The Octopus*, whose subtitle proclaims it to be a "story of" this state, was based on a conflict between San Joaquin Valley wheat farmers and the Central Pacific Railroad in this state.

ANSWER: **California**

[10] Trina's fingers are amputated because McTeague constantly biting them left them vulnerable to poison from an allegedly "non-poisonous" variety of this substance. The title character of *The Rise of Silas Lapham* becomes rich when he discovers a natural source for this product.

ANSWER: mineral **paint** <Carson>

4. Flow batteries composed of hydrogen and bromine are attractive alternatives to these devices, which can produce a potential of 1.23 volts at standard conditions. For 10 points each:

[10] Name these devices which generate electrical energy by the reaction of hydrogen and oxygen gas to make water.

ANSWER: **fuel cells** [prompt on galvanic cells; prompt on voltaic cells]

[10] At the heart of a fuel cell is a membrane that is selectively permeable to this species. Two of these species are reduced by two electrons to make one mole of gas in the redox reaction conventionally assigned zero volts.

ANSWER: **protons** [or **H-plus**; or **hydrogen ion**; or **hydrogen cation**; prompt on hydrogen or H; do not accept or prompt on "hydrogen atom"]

[10] Since the hydrogen eventually does get oxidized into protons in the fuel cell, it enters the device at this electrode, which is where the oxidation occurs. In a galvanic cell, a salt bridge connects this electrode to the cathode.

ANSWER: **anode** <Silverman>

5. The sixteenth of these works, often nicknamed "facile" or "semplice" (**fah-CHEE-lay** or **sem-PLÉE-chay**), opens with the left hand playing a broken C major chord in the Alberti bass style. For 10 points each:

[10] Identify this set of eighteen keyboard works by a Classical composer. The eleventh of them ends with a movement imitating the then-popular sound of Janissary bands.

ANSWER: **piano sonatas** by Wolfgang Amadeus **Mozart** [prompt on partial answer]

[10] That movement is often known by a name appending "alla Turca" to the name of this musical form, in which a main theme is alternated with one or more contrasting "episodes". It developed from the Baroque *ritornello*.

ANSWER: **rondo** [accept **rondo** form or "**Rondo** alla Turca"]

[10] Mozart's A major fifth work in this genre was also heavily inspired by Turkish music. Vivaldi's *The Four Seasons* are also this type of composition, written for a solo string instrument and orchestra.

ANSWER: **violin concerto** [or **violin concerti**; prompt on partial answer] <Carson>

6. Hungarian author György Dalos (**JURJ DAW-lohsh**) wrote a Prague Spring-inspired sequel to this novel that depicts a Eurasian invasion of Oceania. For 10 points each:

[10] Name this dystopian novel by George Orwell that chronicles Winston Smith's ultimately futile resistance against Big Brother.

ANSWER: **Nineteen Eighty-Four** [or **1984**]

[10] A two-part book titled *1985*, whose first part is a discussion of Orwell's *1984* and whose second part is a reimagining of it involving the rise of trade unions and Islam, was written by this author of a dystopian novel in which a group of droogs speak the slang Nadsat.

ANSWER: Anthony **Burgess** [or John Anthony Burgess **Wilson**] [The novel is *A Clockwork Orange*.]

[10] Orwell's choice of the year 1984 may have been inspired by this satirical G. K. Chesterton novel, also set in an alternate 1984. In it, English king Auberon Quin splits the various boroughs of London into separate towns led by provosts, including Adam Wayne, the title character.

ANSWER: *The **Napoleon of Notting Hill*** <Carson>

7. This component of the Earth is divided into four layers, the top level of which is deep-sea sediment, and the bottom of which is gabbro. For 10 points each:

[10] Name this structure, which contains more magnesium and iron than its "continental" counterpart. It moves through seafloor spreading.

ANSWER: **oceanic crust** [prompt on **benthos** or **ocean floor**; prompt on **crust**]

[10] The Vine–Matthews–Morley Hypothesis tested seafloor spreading by assuming that "reversals" of this vector field alter the striping of the seafloor. This field causes compasses to point towards "true north".

ANSWER: Earth's **magnetic** field [or **geomagnetic** field]

[10] Oceanic crust is formed by the solidification of this rock in the mantle, which has a greenish color. This rock is comprised of olivine and pyroxene minerals, and it was named for a semiprecious gem made from olivine.

ANSWER: **peridotite** [do not accept or prompt on "peridot"] <Jose>

8. In one of the many "riots" named for this disease in the 1890s, citizens of Astrakhan attacked a local hospital before marching to the governor's mansion and setting it on fire. For 10 points each:

[10] Identify this disease characterized by watery diarrhea. John Snow traced an outbreak of this disease in London in 1854 to a water pump on Broad Street.

ANSWER: **cholera**

[10] In a cholera riot in this German city in 1893, a sanitation official was beaten to death. Earlier in the century, this "Free and Hanseatic City" sometimes known as "Germany's gateway to the world" joined the German Confederation.

ANSWER: **Hamburg**

[10] The death from cholera of Casimir Perier and Jean-Maximilien Lamarque in *this* year sparked the Parisian June Rebellion against King Louis-Philippe chronicled in *Les Misérables*.

ANSWER: **1832** <Bentley>

9. The father of an Indian girl who is dying of this disease has sued Johnson & Johnson to release a new drug to treat it. For 10 points each:

[10] Identify this disease. The multi-drug-resistant version of this disease can be treated by Johnson & Johnson's drug bedaquiline.

ANSWER: **tuberculosis** [or **TB**]

[10] Bedaquiline is this type of drug, as is penicillin. Fear of resistance to these types of drugs led the FDA to ban 19 types of them in soaps and body washes in 2016.

ANSWER: **antibiotic** [or **antibacterial**; prompt on **antimicrobial**]

[10] India is the largest global producer of these types of drugs, which became much easier to sell in the United States following the passage of the 1984 Hatch-Waxman Act. These drugs are typically less complex to make than biosimilars.

ANSWER: **generic** drugs <Bentley>

10. A goddess who performed this action did it out of rage at the poor treatment she received from her father Daksha after showing up to Daksha's yajna uninvited. For 10 points each:

[10] Identify this action. Tecciztecatl (**teh-KEEZ-teh-COTT-ul**) is initially too cowardly to do it, but Nanahuatzin's (**na-na-WAHT-zeen's**) courageous and dutiful performance of it spurs him to do it as well.

ANSWER: **jumping** into a **fire** [accept anything that indicates voluntarily **entering** a **fire** or **sacrificial fire** or funeral **pyre**; accept self-**immolation**; prompt on **suicide** or equivalents]

[10] Those two Aztec gods thus become two suns, a situation that lasts until another god throws one of these animals in Tecciztecatl's face, turning him into the moon. In a Chinese myth, one of these animals lives on the moon with the goddess Chang'e (**chong-UH**).

ANSWER: **rabbit** [or **hare**; or **bunny**; accept "jade" or "gold" appended to any of those answers]

[10] Eventually, the sun that used to be Nanahuatzin was made to move across the sky by Ehecatl, the wind god aspect of this Aztec deity, who is commonly represented as a feathered serpent.

ANSWER: **Quetzalcoatl** <Carson>

11. It was said that during this leader's Southern Campaign, he captured and released the rebel leader Meng Huo (**mung hwoh**) seven times until he acknowledged his defeat. For 10 points each:

[10] Name this leader, who was an advisor to Liu Bei (**lyoh bay**), the founder of the state of Shu. He devised the Longzhong Plan for reuniting the empire under Liu Bei.

ANSWER: **Zhuge** Liang [or **Kongming**]

[10] Zhuge Liang (**JOO-guh lyong**) was a leader in this historical period in China, which saw conflicts between the states of Wei, Shu, and Wu. It was the subject of a namesake "romance" attributed to Luo Guanzhong.

ANSWER: **Three Kingdoms** period [or **Sanguo**; accept *Romance of the **Three Kingdoms*** or ***Sanguozhi** yanyi*]

[10] The state of Wei had its origins in the territories controlled by this leader, who served as chancellor for Emperor Xian (**sh'yen**), the last Han emperor. He was defeated in the Battle of Red Cliffs.

ANSWER: **Cao Cao** (**tsow tsow**) [or **Mengde**; prompt on **Cao**] <Cheng>

12. This action was emphasized by members of a Russian sect known as the Skoptsy, who referred to different forms of this action as the "minor seal" and the "major seal." For 10 points each:

[10] Name this action, which Eusebius of Caesarea (you-SEE-bee-us of see-zah-REE-uh) claimed that Origen (OR-ee-jen) did to himself thanks to a literal interpretation of Matthew 19:12 ("chapter 19, verse 12").

ANSWER: **castration** [accept word forms; accept becoming a **eunuch**, **emasculation**, or reasonable equivalents]

[10] The first canon promulgated by an ecumenical council held in this city banned eunuchs who castrated themselves from the clergy. That council also condemned Arianism and created a creed named for it.

ANSWER: **Nicaea** [accept **Nicene** Creed]

[10] In Chapter 8 of Acts of the Apostles, Philip the Evangelist baptized a eunuch from this country. St. Frumentius later spread Christianity to this country, where he baptized King Ezana.

ANSWER: **Ethiopia** <Cheng>

13. The protagonist of this novel starts believing "I *was* the root of the chestnut tree. Or rather I was all consciousness of its existence". For 10 points each:

[10] Identify this novel centering on Antoine Roquentin, a historian researching the life of the Marquis de Rollebon who develops a sensation he describes as a "sweetish sickness".

ANSWER: **Nausea** [or *La Nausée*]

[10] *Nausea* was written by this man. Joseph Garcin declares "hell is other people" in his play *No Exit*.

ANSWER: Jean-Paul Charles Aymard **Sartre**

[10] In *No Exit*, Estelle eventually admits that she performed this horrible action at a hotel in Mexico, which prompted her lover to commit suicide.

ANSWER: she **killed** her **child** [accept synonyms in place of both "kill" and "child"] <Bentley>

14. This work was placed behind a screen at the Armory Show. For 10 points each:

[10] Identify this work in porcelain by Marcel Duchamp. It consists of a urinal signed with the name "R. Mutt".

ANSWER: **Fountain**

[10] Another Duchamp work consisted of one of these things stuck upside down on a stool. After making objects such as *Bottle Rack*, Duchamp retroactively concluded that the work of this title was a readymade.

ANSWER: a **bicycle wheel** [prompt on partial answer]

[10] This more recent artist un-retired by installing a solid-gold toilet in a bathroom at the Guggenheim Museum in New York. This Italian's humor-infused works include *The Ninth Hour*, a sculpture of Pope John Paul II getting hit by a meteorite.

ANSWER: Maurizio **Cattelan** <Bentley>

15. It used to be common for physics teachers to create an analyzer from a type of dichoric photographic material developed by Edwin Land to demonstrate the plane of this property. For 10 points each:

[10] Identify this property that comes in linear, circular, and plane forms for light.

ANSWER: **polarization** [or **polarized** light]

[10] Polarization can only exist for these types of waves since longitudinal waves do not oscillate in a fashion that allow them to be polarized. Pond ripples are examples of these types of waves.

ANSWER: **transverse** waves

[10] Some of these devices are made up of twisted-nematic cells, which eliminate the twist between bottom and top polarizers when an electric field is applied, rendering the cell opaque. That twisted-nematic effect allowed these devices to work with small voltages from batteries.

ANSWER: **LCDs** [or **liquid crystal displays**; prompt on **liquid crystals**] <Bentley>

16. An "informal introduction" to this process is presented in Michael Agar's book *The Professional Stranger*. For 10 points each:

[10] Name this process of describing cultures that Clifford Geertz advocated should be done with "thick description." Its name comes partly from the Greek for "writing."

ANSWER: **ethnography**

[10] Ethnography is a key component of this social science, the study of cultures and man. Pioneers of this social science include Margaret Mead.

ANSWER: **anthropology**

[10] This classic of anthropology is considered to be the first ethnographic text that incorporates the speech and daily life of its subject culture. It was the first book its author wrote on the Trobriand Islanders in a trilogy that also includes *The Sexual Life of Savages in North-Western Melanesia* and *Coral Gardens and Their Magic*.

ANSWER: **Argonauts of the Western Pacific** <Jose>

17. A text produced by this man used the Vulgate as its source, and was partially funded by an investment from Johann Fust. For 10 points each:

[10] Name this goldsmith from Mainz whose namesake 42-line Bible was the first book printed in Europe using movable type.

ANSWER: Johannes **Gutenberg**

[10] Of the 180 or so copies of the Gutenberg Bible printed, around 45 of them were printed on this material rather than paper. The "uterine" form of this extremely expensive writing material was made from the skin of newborn or stillborn calves or lambs.

ANSWER: **vellum**

[10] The design of printed books greatly improved through the innovations of the Aldine Press, which was established in this city in 1494. Byzantine craftsmen helped make this city a major glass manufacturer starting in the 13th century.

ANSWER: **Venice** [or **Venezia**] <Bentley>

18. The paper "A Linguistic Consideration of Thinking in Primitive Communities" advances this argument by asking "Does the Hopi language show here a higher plane of thinking... than our vaunted English?" For 10 points each:

[10] Name this argument, which holds that the structure of a language affects the way a human thinks.

ANSWER: **Sapir-Whorf** hypothesis

[10] The Sapir-Whorf hypothesis advances the linguistic form of this position. The "cultural" form of this position holds that a culture should be analyzed with respect to its own values, and not to those of some other culture.

ANSWER: **relativism** [or word forms; accept linguistic **relativism** or cultural **relativism**]

[10] A weaker form of linguistic relativism has been advocated by George Lakoff (**LAY-koff**) and Mark Johnson, who co-wrote a book asserting that people "live by" these rhetorical constructs.

ANSWER: conceptual **metaphors** <Jose>

19. The namesake protein of this signaling pathway is glycosylated by three isoforms of the Fringe protein; namely *manic fringe*, *lunatic fringe*, and *radical fringe*. For 10 points each:

[10] Name this unusual signaling pathway which is activated when a transmembrane receptor is proteolytically cleaved by the Delta protein on another cell.

ANSWER: **Notch** pathway

[10] Traditionally, signaling pathways rely less on proteolysis and more on the targeted proteasomal destruction of proteins that are tagged with this small protein. This protein is named for the fact that it's found in nearly all eukaryotes.

ANSWER: **ubiquitin** [or **ubiquitination**; or **Ub**]

[10] For instance, ubiquitination is key to the Wnt ("went") pathway, which, like Notch, was first characterized in this model organism, an insect whose species name is *melanogaster*.

ANSWER: ***Drosophila melanogaster*** [or **fruit fly**; prompt on **fly**] <Silverman>

20. A lieutenant writes "Long live the Imperial Forces" before engaging in this action in the story "Patriotism." For 10 points each:

[10] Name this action that the author of "Patriotism" carried out on live TV in 1975 after soldiers jeered him rather than listen to his planned half-hour speech.

ANSWER: **seppuku** [or **harakiri**; prompt on **suicide** or descriptive answers like self-disembowelment]

[10] That author was this Japanese author of *The Temple of the Golden Pavilion*, *The Sound of Waves*, and *The Sea of Fertility* tetralogy.

ANSWER: Yukio **Mishima**

[10] In this second novel of *The Sea of Fertility*, which is preceded by *Spring Snow* and followed by *The Temple of Dawn*, the reactionary student Isao commits seppuku in a seashore cave after assassinating Kurahara.

ANSWER: ***Runaway Horses*** [or ***Honba***] <Brownstein>

21. A character with this nickname drives to the Hotel Bellweather with his twin sister Alice to participate in a statewide music festival in Kate Racculia's novel *Bellweather Rhapsody*. For 10 points each:

[10] Identify this animal nickname shared by a former high school basketball star who loses a child with his wife Janice in a novel where he "Runs".

ANSWER: **Rabbit**

[10] John Updike, the creator of Harry "Rabbit" Angstrom, also wrote a novel titled for some of these people in a Rhode Island town called Eastwick. Abigail Williams accuses many women of being these supernatural beings in Arthur Miller's *The Crucible*.

ANSWER: **witches**

[10] In *Rabbit at Rest*, Nelson Angstrom's drug addiction results in him losing a business that sells these things, which Harry had inherited from his wife's family.

ANSWER: **cars** [or **Toyotas**] <Bentley>