PACE NSC 2017 - Round 03 - Tossups

1. In a story by this author, John realizes that his sighting of his wife with two elderly twin sisters on a ferry had been a premonition of his death when he is stabbed with a throwing-knife by a dwarf in Venice. In a story by this author, news bulletins stop coming through on the radio while a family led by the veteran Nat Hocken barricades themselves in their cottage on the Cornwall coast. In a novel by this author of "Don't Look Now," the discovery of the title character's (*) sunken boat stops the protagonist from committing suicide at the urging of the sinister housekeeper Mrs. Danvers; that novel by this author ends with a fire destroying the estate of Manderley and is titled for the ex-wife of Maxim de Winter. For 10 points, name this British author of "The Birds" and *Rebecca*.
ANSWER: Daphne du **Maurier** <Brownstein>

2. In a Rogier van der Weyden (roh-GEER fon der VYE-den) work similar in composition to Jan van Eyck's *Madonna of Chancellor Rolin*, a saint in red stares at the Virgin and Child while engaged in this activity. A sculpture of an ox representing Saint Luke sits on a shelf in the top left of a Jan Steen (yahn STAIN) depiction of a boy and girl being instructed in this activity. In another work titled for this activity, a map by Claes Janszoon Visscher (KLAHS YAHN-zone VISS-er) of the Seventeen Provinces of the (*) Netherlands hangs behind a woman wearing a laurel wreath and a blue dress who holds a book in one hand and a horn in the other; a man in a black beret examines that woman while performing this activity in an allegory by Jan Vermeer. For 10 points, name this activity performed by Vermeer to create that oil-on-canvas work.
ANSWER: **paint**ing [or **draw**ing; prompt on making art] <Bentley>

3. This object and its "spider" support were brought to San Francisco for the opening of the first Transcontinental Telephone Line. In 1996, a Yum! Brands fast food chain ran April Fool's Day newspaper advertisements in which they claimed to have purchased and renamed this object. This object was hidden away in modern-day Allentown in 1777. A distinctive feature of this object supposedly developed during John (*) Marshall's funeral and became more prominent during an 1846 celebration of Washington's birthday. The copper and silver contents of this object were increased after its original version was found to be defective in 1752. It is currently on display in a namesake center near Independence Hall in Philadelphia. For 10 points, name this cracked symbol of American freedom.
ANSWER: **Liberty Bell** [prompt on bell; accept Independence Bell until "Independence" is read; accept the Taco Liberty Bell] <Bentley>

4. 5-fluoro·orotic acid is often used as a selection marker when culturing these organisms. The G1 checkpoint is called START during mitosis in these organisms. "Bait" and "fish" domains are used to discover protein-protein interactions in these organisms. A shmoo forms during mating in these organisms, which only occurs between mating types labelled a and alpha. One of these organisms had its 16 (*) chromosomes fully sequenced in 1996, a first for a eukaryote. Two species of these organisms, *pombe* and *cerevisiae* (POM-bay and seh-reh-VEE-see-ay), both in the genus *Saccharomyces* (SACK-ah-roh-MY-seez), reproduce by fission and budding, respectively. These organisms generate ethanol and carbon dioxide during fermentation. For 10 points, name these unicellular fungi used in breadmaking.
ANSWER: **yeast**s [or *__Saccharomyces__ cerevisiae* until "Saccharomyces" is read; prompt on fungi or word forms] <Silverman>

5. In one play by this author, stage directions instruct the protagonist to take the pose of Rodin's *The Thinker* after being expelled from the IWW for calling for terrorism; in that play by this author, a coal stoker's dirty appearance shocks the wealthy Mildred Rogers, who faints after giving him the title nickname. In another play by this author, the title character begs for the electric chair after confessing to shooting his wife, (*) Evelyn, for hoping to reform his alcoholism. Larry Slade and Don Parritt are two regulars of Harry Hope's Saloon, where Theodore Hickman attempts to dissipate his friends' "pipe dreams," in that play by this author. For 10 points, name this American playwright of *The Hairy Ape* and *The Iceman Cometh*.
ANSWER: Eugene Gladstone **O'Neill** <Bollinger>

6. In the Bielefeld school of history, this policy is the standard example of the "negative integration" strategy. Under this policy, the salaries of individuals who didn't comply with it were suspended via the "Breadbasket Law." One aspect of this policy was the formation of a Settlement Commission to target Polish culture in Posen. The name of this campaign was coined by a pathologist who later challenged its initiator to a duel involving a parasite-laden sausage; that pathologist was (*) Rudolf Virchow (FUR-khoh). Under Ludwig Windhorst, the Centre Party opposed this campaign. Leo XIII helped end this campaign, during which Adalbert Falk released the May Laws, seminaries were closed, and the Jesuits were banned. For 10 points, name this anti-Catholic campaign initiated by Otto von Bismarck in Prussia.
ANSWER: **Kulturkampf** [prompt on translations such as Culture War or descriptive answers such as Bismarck's anti-Catholic campaign] <Brownstein>

7. This figure's wife shares her name with the father of Odysseus's wet nurse; early cults, however, paired that wife with Consus and this god with Lua. This figure gave laws to people "sprung from the boles of trees and the obdurate oak" according to a speech given by Evander. During the Republic, the *aerarium*, or public treasury, was kept in the temple of this husband of Ops. Either this deity or Mars was the father of Picus, who was turned into a woodpecker after serving as the first king of Latium, which was ruled by this god during the (*) Golden Age. A festival dedicated to this god, during which the master-slave relationship was reversed, took place in late December. For 10 points, name this sickle-wielding Roman god who was often equated with the Greek Cronus.
ANSWER: **Saturn** [or **Saturnus**] <Carson>

8. This city was founded when a ruler arrived at the confluence of two rivers and proclaimed the building of a perfectly round "City of Peace." Doquz sought to spare Christians during one siege of this city. The first paper mill was supposedly founded in this city by members of the Barmakid family. A ruler from this city tried to impose the doctrine of Mu'tazila by using courts called *mihna* (MIKH-nuh). After one event in this city, a river supposedly ran (*) black with ink and its ruler was trampled in a carpet. A center for scholarship in this city was home to the developer of algebra, al-Khwarizmi, and was founded by al-Ma'mun. This city was devastated when its House of Wisdom was destroyed during a sacking by Hulagu Khan. For 10 points, name this capital of the Abbasid caliphate.
ANSWER: **Baghdad** <Zhou>

9. The power that can be extracted from a windmill depends on this function of the wind speed. The self-force on a particle is inversely proportional to this function of the speed of light. Planck's law predicts that the radiance of a blackbody depends on this function of the frequency over the exponential of frequency. At very low temperatures, phonons cause the heat capacity of a solid to vary with this function of temperature. The reciprocal of this function of the radius is proportional to a (*) dipole's electric field. The orbital period is proportional to the square root of this function of the semimajor axis according to Kepler's third law. The universal gravitational constant has units containing this function of length. For 10 points, name this function that is applied to length to get units of volume.
ANSWER: **cube**d [or **third power**] <Silverman>

10. The Vitousek lab uses a four-million-year chronosequence in this region to understand the successional dynamics of nutrient cycling. A fungal pathogen and the nitrogen-fixing firetree are causing the decline of this region's dominant tree, the *'ōhi'a* (OH-HEE-uh). The *Tanager* expedition sought to eliminate rabbits on this region's island of Laysan. Many bird species on this archipelago are threatened by the introduction of the small Asian mongoose, including a goose called the (*) *nēnē* (nay-nay). Two mountains in this region are the only growth sites of Kona coffee. The world's largest shield volcano is on the same island in this chain as its highest point, the site of an extensive observatory complex. For 10 points, name this archipelago, whose Big Island is home to Mauna Loa and Mauna Kea.
ANSWER: **Hawai'i**an islands [or the **Hawai'i**an archipelago; or Mokupuni o **Hawai'i**] <Kothari>

11. A stuffed puma appears repeatedly in a novel by this author, including in a scene where the young protagonist convinces a dying professor that it's his dog. A character nicknamed "the Turk," who keeps his harelip covered with a handkerchief, falls in love with one of this author's protagonists, who uses dough to make fake grenades for guerrillas to use in a prison break. A snake-bitten gardener and a servant named (*) Consuelo have a child who becomes a storyteller in a novel by this author. This author wrote about a girl who doesn't speak for nine years after poisoned brandy kills her green-haired sister, Rosa; that girl moves to the Tres Marias estate with her philandering husband, Esteban. For 10 points, name this author of *Eva Luna* who wrote about the Trueba family in *House of the Spirits*.
ANSWER: Isabel **Allende** <Brownstein>

12. **In one ad from this election year, hands remove a Social Security card from a person's pocket to mock the losing VP candidate, William Miller. In another ad from this year, a man takes a saw to a model of the United States in reference to Miller's running mate saying that "this country would be better off if we would just saw off the Eastern seaboard." The slogan "In your (*)** heart, you know he's right" was used in this campaign. In an ad aired only once during this campaign, a narrator intones "these are the stakes" after a little girl pulls petals from the title flower. The "Daisy" ad aired during this campaign, in which the Democrat won 61.1 percent of the popular vote. For 10 points, name this election in which Barry Goldwater was defeated by Lyndon Johnson.
ANSWER: **1964** U.S. presidential election [prompt on '**64**] <Bentley>

13. **A normed space named after these objects defines the notion of these objects' size. One type of these objects is left-multiplied by "A minus lambda I" to yield these objects' additive identity. According to Helmholtz's theorem, a mathematical construct composed of these objects can be uniquely specified by regional divergence, curl, and a boundary (*)** normal component. The basic definition of the Cauchy–Schwarz inequality in an inner product space is defined on these objects. A parallelepiped (para-LEL-uh-PIPE-id) with edges defined by three of these objects has a volume of those three objects' box product. Two linearly dependent instances of these objects have a cross product of zero. For 10 points, name these mathematical objects that have both magnitude and direction, unlike scalars.
ANSWER: **vector**s [accept **vector** fields; accept eigen**vector**s until "Helmholtz's" is read] <Aggarwal>

14. **In 2007, researchers showed that both monkeys and four-year-olds behaved similarly to adults who demonstrated this phenomenon in an experiment in which Jack Brehm pretended to offer subjects his wedding gifts. Elliot Aronson posited that this effect was larger in people with higher self-esteem. This phenomenon was greater in men who were paid one dollar than those who were paid zero or twenty dollars to convince others that an experiment was fun. In the "spreading of alternatives," an effect induced by this phenomenon, people who made a difficult decision viewed a (*)** rejected choice more negatively. It was popularized in a book by Leon Festinger about the increased religious faith of sect members who witnessed the title failed prophecy. For 10 points, name this discomfort produced by holding two or more contrasting beliefs.
ANSWER: **cognitive dissonance** <Bentley>

15. **The Ears Open Society was founded by composers from this country, including a woman who wrote the opera *L'Amour de Loin* (lah-MOOR de lwann) and a man who wrote *Kraft* (krahft) for the ensemble Toimii (TOY-mee). The music director of the Minnesota Orchestra is from this country, as is a man who used the soloist's cadenza as the development section of the first movement of his 1905 violin concerto. A composer from this home country of Magnus Lindberg had the trombone introduce the "Aino" theme of his seventh and (*)** final symphony, which is in one movement; that composer from this country used an English horn to depict a bird swimming through the underworld in "The Swan of Tuonela" (too-oh-NEH-lah), a movement from his *Lemminkäinen Suite*. For 10 points, name this country where many musicians study at the Sibelius Academy.
ANSWER: **Finland** [or **Suomi**; accept the Republic of **Finland** or **Suomen** Tasavalta] [The unnamed woman is Kaija Saariaho, and the music director is Osmo Vänskä.] <Kothari>

16. The fourth version of this building was funded by an unpopular tax on taverns and salt and was badly damaged by an 1837 fire. This building was the planned destination of a march of striking factory workers that sought to present "The Most Humble and Loyal Address" and was led by Father Gapon. The *Aurora* opened fire on officials holed up in this building's Malachite Room. Workers were (*) massacred while marching toward this building on "Bloody Sunday" in 1905. Empress Elizabeth commissioned architect Francesco Rastrelli to design this building. The storming of this building was depicted in the film *October* by Sergei Eisenstein. In 1922, some of this building was converted into the Hermitage Museum. For 10 points, name this residence of the tsars in Saint Petersburg that is named for a season.
ANSWER: **Winter Palace** [prompt on **Hermitage** until it is read] <Bentley>

17. A form of the *laya* type of this practice aims to arouse *kundalini*, which is often represented as a coiled serpent. 196 sutras about this practice were compiled by Patanjali and were elaborated on in a book on the *raja* type of this practice by Swami Vivekananda. There are often said to be eight limbs of this practice, beginning with ethical rules called *yama*s and ending with *samadhi*. The (*) Bhagavad Gita enumerates three types of this practice, one of which involves devotion to a deity and is called *bhakti*; the other two are *karma* and *jñana* (j'NYAH-nuh). While performing this practice, one may engage in *prayana* (PRY-uh-nuh), or breathing exercises, and enter into *asana*s, or postures. For 10 points, name this practice from India that, in the West, is often seen as a physical exercise.
ANSWER: **yoga** [accept laya **yoga**, kundalini **yoga**, raja **yoga**, bhakti **yoga**, karma **yoga**, or jnana **yoga**] <Cheng>

18. The AMBER software package maps this scalar quantity to molecular structure. The standard unit for this quantity in quantum chemistry is the hartree. The Born–Oppenheimer approximation allows two forms of this quantity to *add* independently. Variational methods minimize this quantity. Franck–Condon and Jablonski diagrams implicitly plot this quantity along the (*) vertical axis. Transition states are saddle points on a plot of this quantity against the reaction coordinate. This quantity is the eigenvalue of the Hamiltonian in the Schrödinger equation. Degenerate orbitals have the same value for this quantity, which determines the order in which electrons fill orbitals according to the *aufbau* (OWFF-bow) principle. For 10 points, name this quantity that, like work, is measured in joules.
ANSWER: **energy** [or potential **energy**; or orbital **energy**; or electron **energy**; or kinetic **energy**; or free **energy**; or Gibbs free **energy**] <Silverman>

19. Five artworks in this form depicting the senses and a sixth featuring the motto "À mon seul désir" (ah mon suhl day-ZEER) make up a series decorated in its *millefleurs* (MEEL-flurr) style. Seven drawings depicting scenes from the lives of St. Peter and St. Paul were created as preparatory studies for this art form by Raphael and are known as his "cartoons." By the 14th century, so many works in this art form were produced in (*) Arras (ah-ROSS), France, that the word "arras" ("heiress") came to refer to them. The *Hunt of the Unicorn* series and the *Lady and the Unicorn* series were created in this art form, which lends its name to an 11th-century work that might show Harold II taking an arrow to the eye. An embroidered work named for Bayeux is often referred to by the name of, for 10 points, what textile art form woven on a loom?
ANSWER: **tapestry** [or **tapestries**] <Carson>

20. **This character is upset when a pet canary pecks at his love interest's lips and then his. On his birthday, this character receives a two-volume copy of Homer, from which he reads the story of Emmaus (eh-MAY-us) after a group of aristocrats snub him at a dinner party. While looking out the window at a morning rain, this character bursts into tears when a woman says, "Klopstock!" After quitting his hated job as an assistant to an ambassador, this character returns to (*)** Wahlheim, where he gives a passionate reading of his translation of the songs of Ossian. In anguish over his love interest's marriage to Albert, this character asks her to send him two hunting pistols and then kills himself in a widely imitated suicide. For 10 points, name this lover of Lotte (LOH-tuh) whose "sorrows" title a Goethe novel.
ANSWER: Young **Werther** (VAIR-tur) <Brownstein>

21. **Alfvén's (all-VANE's) theorem uses the idealized form of this law to prove that magnetic field lines exactly coincide with the streamlines in a plasma. In a common analogy, this equation is compared to Fourier's law for heat transport and Fick's law for mass transport. The three different expressions for Joule heating are interchangeable by using this equation. This equation states that the current density is proportional to the gradient of electric potential or, alternatively, the product of (*)** conductivity and the electric field. After applying Kirchhoff's loop and junction rules to reduce a circuit, you can use this equation to predict the current through a battery. For 10 points, identify this equation, often written as "V equals IR," whose German namesake also identifies the SI unit of resistance.
ANSWER: **Ohm**'s law <Silverman>

1. At the last minute, this artist added portraits of Frederick III and Christian I of Denmark to one of his paintings. For 10 points each:
[10] Identify this artist who was commissioned by Ludovico Gonzaga to paint the Camera degli Sposi (kah-MEH-rah DAY-lee SPOH-see) in Mantua.
ANSWER: Andrea **Mantegna** (ahn-DRAY-ah mahn-TANE-yah)
[10] A peacock and a man in a turban are depicted next to several foreshortened cherubs in this part of the Camera degli Sposi that imitates an oculus.
ANSWER: the **ceiling**
[10] A Mantegna painting now in Milan's Brera Art Gallery shows this figure intensely foreshortened and splayed dead. The stigmata wounds from when this man was nailed to the cross are prominently visible in the painting.
ANSWER: **Jesus Christ** [accept either underlined answer; accept the ***Dead Christ***] <Bentley>

2. Identify the following about women during the Revolutionary era, for 10 points each.
[10] As part of this movement, colonial women produced American-made clothes that could be worn by women and men in opposition to British-made goods. George Washington wore a garment produced from this movement to his first inauguration.
ANSWER: **homespun** movement
[10] In 1776, this woman wrote to her husband to "remember the ladies." In 1797, she became the country's second First Lady.
ANSWER: Abigail **Adams** [or Abigail **Smith**]
[10] Penelope Barker organized a group of women to protest the Tea Act in the Edenton Tea Party, which took place in this modern-day state. Rebels fought Loyalists along this state's southern border in the Battle of Kings Mountain.
ANSWER: **North Carolina** <Bentley>

3. The monk and translator Gjon (g'YOHN) describes the construction of one of these things in a novel by Ismail Kadare (IS-mail kah-DAH-reh). For 10 points each:

[10] Name this sort of object, one of which stands near Višegrad (VEE-sheh-grahd) and is the setting of five centuries of events in Ivo Andrić's (EE-voh AHN-drich's) best-known novel, which is titled for it.

ANSWER: **bridge**s [or *The Three-Arched **Bridge***; or *The **Bridge** on the Drina*; or ***Ura** Me Tri Harqe*; or *Na Drini **ćuprija***]

[10] This peninsula is the setting of both Kadare's *The Three-Arched Bridge* and Andrić's *The Bridge on the Drina*, the latter of which ends during World War I, which was initially triggered by events in this region.

ANSWER: **Balkan** Peninsula [or **Balkans**]

[10] In both novels, the bridges' builders kill people in this manner to protect the bridges from the sabotage of water spirits. In a story, a character is killed in this manner by a man who has borne "a thousand injuries" and has the motto "Nemo me impune lacessit" (NEH-mo may im-POO-nay lah-CHESS-eet).

ANSWER: **wall**ing them up alive [or obvious equivalents of **burying** them alive; or **immure**ment]
<Brownstein>

4. Late in his life, this man unsuccessfully warned his fellow citizens that Peisistratus was going to become a tyrant. For 10 points each:

[10] Identify this Athenian who supposedly told Croesus (KREE-sus), the wealthy king of Lydia, that the happiest man he had ever met was Tellus, a humble statesman with a loving family.

ANSWER: **Solon**

[10] Solon created a new one of these things for Athens, affixing it to the Prytaneion. Draco had created an earlier, much harsher, one of these things that mandated death for stealing a cabbage.

ANSWER: **law** code [or **legal** code; or **constitution** of Athens]

[10] It's doubtful that the Draconian constitution included in the fourth chapter of this author's *Athenian Constitution* was really written by Draco. Most of this author's writings come from notes that he gave at the Lyceum, a school he founded.

ANSWER: **Aristotle** [or **Aristoteles**] <Bentley>

5. Quasars and blazars are some of the entities that compose the "active nuclei" at the center of these structures. For 10 points each:

[10] Name these large collections of stars. They come in "elliptical" and "spiral" morphologies.

ANSWER: **galaxies** [accept **galaxy**; accept spiral **galaxies** or elliptical **galaxies**]

[10] Some active galactic nuclei contain these features, which are ejections of plasma at relativistic speeds along the rotation axis of the nucleus. The pointing of these structures toward Earth is thought to be a defining feature of blazars.

ANSWER: relativistic **jet**s

[10] In active galactic nuclei, material forms a disc through this process of accumulating mass. Protogalaxies become galaxies after they have acquired enough mass through this process.

ANSWER: **accretion** [or **accrete**; or **accreting**] <Jose>

6. The *yajna* is a ritual of Vedic origin in which oblations are offered into this phenomenon. For 10 points each:
[10] Name this phenomenon that also receives offerings during the *homa* ritual, which has been adopted by practitioners of Shingon Buddhism in Japan. In Vedic mythology, Agni was the god of it.
ANSWER: **fire** [accept obvious equivalents like **flame**]
[10] During Hindu weddings, the marriage is sealed when the bride and groom take seven steps around a consecrated fire or walk around a consecrated fire seven times. Give the name of *either* of those two rituals.
ANSWER: **saptapadi** or **saat phere**
[10] On the first day of this holiday, a bonfire is lit to celebrate the burning of a demoness who was asked by Hiranyakashipu (HEER-ahn-yahk-SHEE-poo) to help kill his son Prahlada.
ANSWER: **Holi** [accept **Festival of Colors**] <Cheng>

7. Answer some questions about the sociology of family, for 10 points each:
[10] Sociologists have noted the evolution of society away from the extended family, in which several generations may live together in one household, to this family structure that is generally held to include an adult couple and their children.
ANSWER: **nuclear** family [or **elementary** family; or **conjugal** family]
[10] Because the members of a family have a set of roles they are expected to adhere to, the family is classified as the social types of these entities. These entities are generally defined as self-perpetuating and enduring social forms, patterns, and behaviors.
ANSWER: social **institution**s
[10] Family sociologists from this movement assert that modern notions of the proper family are entirely socially constructed. This philosophical and cultural movement claims that much of what we believe about reality is not objective but is instead a product of culture and society.
ANSWER: **postmodern**ism <Aggarwal>

8. The C allele in this organism epistatically regulates the expression of color from the Bz (B-Z) locus, which has a purple dominant phenotype and a brown recessive phenotype. For 10 points each:
[10] Name this model organism. Its Ac ("ack") gene regulates the expression of Ds (D-S), a gene that can temporarily dissociate from this organism's chromosomes.
ANSWER: **corn** [or *Zea mays*; or **maize**]
[10] Barbara McClintock's studies in corn led her to hypothesize the existence of these so-called "jumping genes," which are capable of cut-and-paste or copy-and-paste moves.
ANSWER: **transposon**s [or **transposable element**s; or **TE**s]
[10] The majority of transposons in corn encode a version of this enzyme. RNA sequencing relies on a form of this enzyme to generate a library of cDNAs.
ANSWER: **reverse transcriptase** [or **RT**] <Silverman>

9. In a novel titled for this character's "People," he attempts to convince his chief antagonist to defect to the West and join an organization nicknamed the Circus. For 10 points each:
[10] Identify this character who squares off against the head of the Thirteenth Directorate, Karla, in a series of novels.
ANSWER: George **Smiley** [or **George** Smiley]
[10] George Smiley was created by this one-time MI6 member who wrote *The Spy Who Came In from the Cold* and *Tinker Tailor Soldier Spy*.
ANSWER: John le **Carré** [or David John Moore **Cornwell**]
[10] Many critics have contrasted the flawed and unflashy George Smiley with James Bond, who first appeared in this author's novel *Casino Royale*. He also wrote *Chitty Chitty Bang Bang*.
ANSWER: Ian **Fleming** [or Ian Lancaster **Fleming**] <Bentley>

10. This man's minister of health, Jorge Lemus, saved his life after he nearly choked on a fake mustache while impersonating Freddie Mercury at his wedding. For 10 points each:
[10] Name this leader, whose "Plan Belgrano" seeks to improve the infrastructure of his country's ten northern provinces. He defeated Ernesto Sanz and Elisa Carrió in a primary election to represent the Cambiemos coalition in 2015.
ANSWER: Mauricio **Macri**
[10] Macri is the current president of this South American country, where he served from 2007 to 2015 as the chief of government of Buenos Aires.
ANSWER: Republic of **Argentina** [accept **Argentine** Republic or República **Argentina**]
[10] Macri is also the leader of this economic bloc consisting of multiple South American countries. In 2016, Venezuela was suspended from this group for human rights violations and issues with its democracy.
ANSWER: **Mercosur** [or **Mercosul**; or **Mercado Comun del Sur**] <Jose>

11. In 2014, musicologist Sylvie Bouissou (bwee-SOO) discovered evidence supporting the contention that the music for this song was written by Jean-Philippe Rameau. For 10 points each:
[10] Name this folk song that is often sung as a repeating canon. A solo double bass plays a D minor rendition of this song in the style of a funeral march to open the third movement of a certain composer's 1889 first symphony.
ANSWER: "**Frère Jacques**" [accept "**Brother John**," "**Bruder Jakob**," or "**Bruder Martin**"]
[10] That symphony, sometimes nicknamed "Titan," is by this Austrian Romantic composer of *The Song of the Earth* and the *Symphony of a Thousand*.
ANSWER: Gustav **Mahler**
[10] The last movement of Mahler's sixth symphony features either two or three climactic, though dull-sounding, interruptions from one of these unconventional instruments. The sound produced by these handheld objects punctuates the refrain of the Verdi aria "Vedi! Le fosche" (FOH-skeh).
ANSWER: **hammer**s [accept synonyms like **mallet**s; do not accept or prompt on "anvils"] <Carson>

12. Doping phosphorus into silicon increases the concentration of these species in the silicon. For 10 points each:
[10] Name these charge carriers that are more common in n-type semiconductors than intrinsic and p-type semiconductors. The energy of these species is described by semiconductor band theory.
ANSWER: free **electron**s
[10] The band gap in these materials is so large that there is essentially no probability that an electron added to the system will be in the conduction band. As a result, these materials don't conduct electricity.
ANSWER: **insulator**s
[10] This quantity is defined as the energy level, usually between the two bands of a semiconductor, that an electron added to the semiconductor has exactly a 50 percent probability of occupying.
ANSWER: **Fermi** level <Silverman>

13. This city arose when Pittheus combined the previously-existing cities of Hyperea and Anthea, and named the resulting combination after his late brother. For 10 points each:
[10] Name this Greek city that is also where Aethra conceived a hero by sleeping with Aegeus and Poseidon on the same night.
ANSWER: **Troezen** ("treason")
[10] Aegeus buried his sword and a pair of these items under a huge boulder in Troezen; when his son Theseus came of age, he retrieved them and went to Athens. In preparing to face Medusa, Perseus borrowed a pair of winged ones belonging to Hermes.
ANSWER: **sandal**s [or winged **sandal**s; accept **pedila** or **talaria**; prompt on shoes or footwear]
[10] Girls in Troezen formed a cult around this son of Theseus, who died on the road between Athens and Troezen while fleeing the incestuous love of his stepmother, Phaedra.
ANSWER: **Hippolytus** <Carson>

14. Xuma gets a job in one of these places with the help of the alcohol seller Leah in Peter Abraham's best-known novel. For 10 points each:
[10] Name this sort of institution. In *Cry, the Beloved Country*, John Kumalo gives an impassioned speech advocating for wage equality for workers in these places after many open in Odendaalsrust.
ANSWER: gold **mine**s
[10] Peter Abraham's *Mine Boy* and Alan Paton's (**PAY-ton's**) *Cry, the Beloved Country* depict prejudice against black residents of this African country.
ANSWER: Republic of **South Africa** [or **RSA**]
[10] In *Cry, the Beloved Country*, news of the gold mines disrupts coverage of the trial of this biblically-named son of Stephen Kumalo. This character is found guilty of murdering Arthur Jarvis.
ANSWER: **Absalom** Kumalo [prompt on Kumalo] <Brownstein>

15. William Wilkinson was brought in from England to manage one of the burgeoning iron works in the early 19th century in this region. For 10 points each:

[10] Identify this region that was secured by Prussia following a successful defense of Chotusitz **(KHO-too-zits)** in 1742 during the War of Austrian Succession, which ended with Maria Theresa losing it to Prussia.

ANSWER: **Silesia** [or **Slezsko**; or **Schlesien**; or **Śląsk**]

[10] This Prussian monarch invaded Silesia to spark the War of the Austrian Succession. This enlightened despot was the first to declare himself king of Prussia rather than king in Prussia.

ANSWER: **Frederick the Great** [or **Frederick II**; or **Friedrich der Grosse**; or **Friedrich II**; prompt on Frederick]

[10] This treaty called for a national plebiscite to determine whether Upper Silesia should belong to Poland or Germany. Through another plebiscite mandated by this treaty, northern Schleswig **(SHLESS-vig)** came under the control of Denmark.

ANSWER: Treaty of **Versailles** of 1919 [prompt on Paris Peace Conference] <Bentley>

16. This man introduced the Law of the Tendency of the Rate of Profit to Fall in his *Grundrisse* **(GROONT-riss-eh)**, and discussed it in one of his books subtitled "critique of political economy." For 10 points each:

[10] Name this philosopher who developed a theory of surplus value in his three-volume treatise *Das Kapital*.

ANSWER: Karl **Marx**

[10] In Marxism, this term refers to the group who does not own the means of production. The "lumpen-" portion of this group will never achieve class consciousness.

ANSWER: **proletariat** [accept **lumpenproletariat**]

[10] In *A Contribution to the Critique of Political Economy*, Marx writes that the political form of this construct corresponds to "definite forms of social consciousness." Marxist theory distinguishes the "base" from this construct, which is supported by the base.

ANSWER: **superstructure** <Jose>

17. This prefix is commonly used to describe cyclic compounds like pyrrole and furan, or the specific nitrogen and oxygen atoms that those cyclic compounds contain. For 10 points each:

[10] Identify this six-letter prefix used in organic chemistry to refer to any element that isn't carbon or hydrogen.

ANSWER: **hetero-**

[10] Since the heteroatoms in furan and pyrrole can supply pi electrons from their lone pairs, those compounds have this stabilizing property, which only occurs in planar, cyclic, conjugated compounds with the right number of pi electrons, such as benzene.

ANSWER: **aromatic** [or **aromaticity**]

[10] However, because it's aromatic, pyrrole won't donate its lone pairs, making it a poor one of these compounds, even though it's an amine. According to the Brønsted–Lowry definition, these compounds accept protons.

ANSWER: **base**s [or Brønsted–Lowry **base**s; or Lewis **base**s] <Silverman>

18. This artist sculpted her own visage into the severed head of Medusa in her sculpture *Perseus and the Gorgon*. For 10 points each:
[10] Identify this sculptor who took the kneeling female from her groundbreaking sculpture *The Age of Maturity* and reworked it as the standalone sculpture, *The Vanished God*. She also sculpted *The Waltz*.
ANSWER: Camille **Claudel**
[10] Claudel's sculpture of Perseus was produced after the end of her relationship with this other French sculptor of *The Kiss* and *The Thinker*.
ANSWER: Auguste **Rodin** [or François Auguste René **Rodin**]
[10] Claudel's *The Age of Maturity* was originally exhibited in this medium. Britain's Ashmolean Museum contains a large collection of copies of ancient sculptures in this medium, a practice which waned after the pointing machine made it easier to make bronze and marble copies.
ANSWER: **plaster** cast <Bentley>

19. Answer the following about some collections of ancient religious texts, for 10 points each.
[10] Bedouin shepherds first discovered this collection of ancient Jewish texts near Qumran (koom-RAHN) in 1947 on the shore of a namesake body of water. Their authorship is usually credited to members of an ascetic sect called the Essenes (ESS-eenz).
ANSWER: **Dead Sea Scrolls**
[10] Another notable collection of ancient Jewish texts was discovered in the *genizah*, or cemetery for texts, of this city's Ben Ezra Synagogue. The Fatimids constructed this city near the older city of Al-Fustat.
ANSWER: **Cairo** [or Al-**Qahirah**]
[10] The Dunhuang (dwun-HWONG) manuscripts, which include Buddhist, Daoist, Nestorian, and even Jewish texts, were discovered in these Buddhist cave sites located near Dunhuang, a town on the Silk Road.
ANSWER: **Mogao** Caves [accept **Thousand Buddha** Caves or **Qianfo** Dong] <Cheng>

20. The narrator of this story states of its protagonist, "the trouble with him was that he was not able to imagine," then describes what "Fifty degrees below zero" meant to him. For 10 points each:
[10] Name this story about a man who gradually succumbs to the cold while traveling through the snow with his dog.
ANSWER: "**To Build a Fire**"
[10] "To Build a Fire" is a short story by this author, who also used the Yukon as the setting of his novel *The Call of the Wild*.
ANSWER: Jack **London**
[10] The narrator recalls the plot of "To Build a Fire" as "This guy in the Yukon is freezing" in "Where I'm Calling From," a story by this author of minimalist stories like "Cathedral" and "What We Talk About When We Talk About Love."
ANSWER: Raymond **Carver** <Brownstein>

21. This man was rumored to have banned the word "Dracula" in his country after he was taunted with that name on a 1978 visit to the United States. For 10 points each:

[10] Name this leader who promoted protochronism, which absurdly claimed that his country originated various cultural accomplishments attributed to others. This author of the July Theses was kept in power through a secret police known as the Securitate (seh-koo-rih-TAH-tay).

ANSWER: Nicolae **Ceauşescu** (chow-SHESS-koo)

[10] Ceauşescu was the communist dictator of this country. In 1989, Ceauşescu and his wife tried to flee this country's capital of Bucharest, but they were seized and executed on Christmas Day.

ANSWER: **Romania**

[10] A post-Ceauşescu protest in Bucharest was suppressed when the government called in people in this profession from the Jiu (ZHEE-oo) Valley to restore order. Alexey Stakhanov was a massively productive Soviet member of this profession.

ANSWER: **miner**s [or coal **miner**s; accept word forms like **mining**] <Bentley>