



PACE NSC 2017 - Round 21 - Tossups

1. *New York Times* TV critic Jack Gould criticized this person's "lapse in judgment" for appearing in a 1959 Good Luck Margarine commercial. This person secured federal support for the planned community of Arthurdale, West Virginia. Joseph P. Lash won a Pulitzer for the first volume of his two-volume biography of this co-drafter of the Universal Declaration of Human Rights. This columnist "worried... about the Mexican (*) racial situation" in a "My Day" column on the Zoot Suit Riots. Lucy Mercer's affair with her husband was revealed to her in 1918. This person resigned from the DAR following its refusal to allow Marian Anderson to play Constitution Hall. At Campobello, she helped her husband recover from polio. For 10 points, name this four-term First Lady.

ANSWER: Eleanor Roosevelt [or Anna Eleanor Roosevelt] <Bentley>

2. This man stands in front of a blazing sunset studiously examining a rock limpet in a J. M. W. Turner painting created as a counterpart to a depiction of David Wilkie's sea burial. He adopts an *adlocutio* pose while granting a blessing to a crowd of men holding banners and giving Roman salutes in the painting *The Distribution of the Eagle Standards*. This man's mother ahistorically appears in a massive canvas that depicts him receiving a blessing from (*) Pope Pius VII. Rocks engraved with this man's surname and the names of Charlemagne and Hannibal appear below a rearing horse ridden by this ruler in a painting depicting him crossing the Alps by Jacques-Louis David, who often depicted this man with his hand in his waistcoat. For 10 points, name this French emperor.

ANSWER: Napoleon Bonaparte [accept either underlined portion; accept Napoleon I] <Jose>

3. This compound is made by an enzyme with three binding pockets, which are labelled O, L, and T, for open, loose, and tight. Enzymes named for this compound are classified as P-type, V-type, E-type, or F-type. Amino acids must first react with this compound before they add to tRNA acceptor stems. Firefly luciferase reacts luciferin with this compound and oxygen to make light. Most (*) kinases use this compound as a substrate. The enzyme that makes this compound couples its synthesis to rotation of a central stalk driven by protons moving down an electrochemical gradient. A squiggly line is used to represent this compound's labile P–O bond that stores 30 kilojoules per mole. For 10 points, name this compound made by oxidative phosphorylation, the energy currency of the cell.

ANSWER: ATP [or adenosine triphosphate] <Silverman>

4. Hyginus states that Zeus put a pair of fish into the stars after this figure was born from an egg. Theseus set up a temple to the "Pandemos" aspect of this figure to differentiate her from her "Urania", or "heavenly", aspect. In the *Iliad*, this goddess's wounds are treated by her mother, a Titaness named Dione who may have been married to Zeus. The children of this goddess include the personifications of fear and terror, (*) Phobos and Demos. The name of this goddess partly comes from a word meaning "sea-foam", since one account claims she was born from the foam produced when Uranus's reproductive organs fell into the ocean. After this goddess arrived on land riding a scallop shell, she married Hephaestus. For 10 points, name this Greek goddess of love.

ANSWER: Aphrodite [or Venus] <Jose>

5. This character suggests that every man "see to the restoration of his own land" in a refusal to join men with "sheets and hoods and night-galloping horses." This character is dubbed a "man-horse-demon" and an "ogre" by a woman who wears black widow's clothes for forty-three years. This character begins formulating his "Design" as an adolescent after a house slave orders him to deliver a letter through the back door of a plantation. This character's son Henry murders (*) Charles Bon to prevent him from marrying this man's daughter Judith at the gates of a mansion he built at his namesake "Hundred." For 10 points, name this plantation owner whose downfall is discussed by Quentin and Shreve in William Faulkner's *Absalom, Absalom*.

ANSWER: Thomas Sutpen [accept either underlined portion] <Bollinger>

6. The rise of one dynasty in this kingdom reduced the importance of its trading post of Naukratis. The first ruler of one of this kingdom's dynasties seized a corpse that was being escorted by Perdiccas. Zenodotus was the first head of an institution founded in this kingdom. The first ruler of one of its dynasties earned the nickname "savior" for relieving a siege of Rhodes by Demetrius Poliorcetes. A (*) landmark in this kingdom stood over 120 meters tall, was destroyed by earthquakes in the Middle Ages, and was built on the island of Pharos. This kingdom was absorbed into a Roman province following the death, supposedly by asp bite, of a woman who was defeated at the Battle of Actium. For 10 points, name this kingdom ruled over by Ptolemy I and Cleopatra.

ANSWER: Egypt [or Ptolemaic Egypt; accept Ptolemaic Kingdom until "Ptolemy" is read] <Bentley>

7. Open economies allow for foreign firms to establish a controlling interest in domestic companies, known as the foreign direct type of this activity. An accounting identity states that in an economy, total savings equals total *this*. Mutual funds and other organizations that pursue this activity on a large scale on behalf of members are called (*) "institutional." This term also denotes one of the primary components of GDP along with consumption, government spending, and net exports. In that context, this term is defined as the purchase of equipment stock to increase production. For 10 points, give this term used in finance to denote the purchase of assets with the hope that they will appreciate and can be sold off later for a profit, assisted by banks like Goldman Sachs.

ANSWER: investment [accept word forms; or foreign direct investment; prompt on FDI; prompt on specific types of investing like purchasing stocks] <Aggarwal>

8. Hans Kelsen argued that a "basic norm" underlies these things in his *Pure Theory* of them. A "rule of recognition" distinguishes these things according to a book on *The Concept of it* by H. L. A. Hart. Ronald Dworkin opposed positivism about these things, which holds that they have no necessary relation to morality, as opposed to belief in the (*) "natural" kind of them. William Blackstone wrote commentaries on these in England. A more codified system of the "civil" type of these things is often contrasted with the precedent-based "common" type. The study of these things includes topics like torts and contracts, and the theory of them is called jurisprudence. For 10 points, name these statutes that are often created by legislators and interpreted by judges.

ANSWER: laws <Kothari>

9. A character advocates this ideology while he and another character lie by a haystack, before nearly attacking the other when he compares a maple leaf to a butterfly. This belief is the main trait of a character who refuses to discuss women's rights while having lunch and champagne at the house of an "emancipated lady." After being seen kissing a housekeeper who is another character's mistress, a character with this ideology nonchalantly participates in a duel, after which he (*) treats his opponent's thigh wound. That man with this ideology often dissects frogs, dies after cutting himself with a typhus-contaminated scalpel, and disrupts life on Nikolai Kirsanov's estate while visiting from university. For 10 points, name this ideology espoused in *Fathers and Sons* by Bazarov, who believes in nothing.

ANSWER: nihilism [accept word forms] <Brownstein>

10. These species increase the absorbance wavelength of an analyte in a bathochromic shift. Ionic liquids and deep eutectics are increasingly being used as these species. Green chemists use high-pressure CO₂ as one of these species. Ethyl acetate and dichloromethane are used as these species in organic chemistry, which classifies them as protic or aprotic. The chromatographic retardation factor is normalized to the (*) distance traveled by this species. This species is enriched in the raffinate during liquid-liquid extraction. In spectrophotometry, the signal from this species is subtracted out as a blank. This species is removed by recrystallization or is boiled away in a rotovap in most chemical syntheses. For 10 points, name these compounds that dissolve solutes.

ANSWER: solvents <Silverman>

11. One of these religious texts describes stanzas written on a wall as part of a contest to succeed Hongren (HONG-run) and become the Sixth Patriarch. Edward Conze translated a phrase found in another of these texts as "Gone, gone, gone beyond, gone altogether beyond, O what an awakening, all hail!" Another of these texts, which illustrates *upaya* (oo-PAH-yuh), or skillful means, through the parable of the burning house, is revered by the (*) Nichiren sect. A question posed by Subhuti (soo-BOO-tee) opens one of these texts which is so-named because it cuts through illusion. Many of these texts are part of the Prajñāparamita (PRAJ-nyah-PAH-rah-MEE-tuh), or "Perfection of Wisdom" genre. For 10 points, name these Buddhist texts, examples of which include ones named "Heart," "Lotus," and "Diamond."

ANSWER: Buddhist sutras [or suttas] <Cheng>

12. This policy was dreamed up by a literal rocket scientist who studied under the co-founder of NASA's Jet Propulsion Lab. A recent book on it by a *Wall Street Journal* reporter chronicled "cluster leaders" who enforced it, such as Green Chrysanthemum. This policy has produced social outcasts known as *shidu* and many "broken branches". People in violation of this policy are usually not registered in the (*) *hukou* (HOO-koh) system. This policy replaced the earlier "later, longer, fewer" policy. A reform to it that went into effect in January 2016 is meant to address the prediction that 34 percent of the population will be over 60 by 2050. As a result of this policy, Feng Jianmei (fung jee-EN-MAY) was forced to have a late-term abortion. For 10 points, name this policy of population control in China.

ANSWER: **One Child** policy [prompt on Chinese family planning policy] <Bentley>

13. A bronze copy of this statue was erected in place of a planned Giovanni Dupre statue of its artist in a Piazzale now named for the artist. Unless an earthquake-proof base is added to this sculpture, it will collapse at its ankles if an earthquake hits the rotunda in the Accademia where it's displayed. This work was salvaged from Agostino di Duccio's failed attempt. Because it was originally intended to be displayed on a church roof, the subject's hands are unusually large. The (*) 17-foot-tall subject of this work has a furrowed brow. It was originally located outside Florence's Palazzo Vecchio (VEK-yo), and it is unclear whether it depicts a scene before or after the subject's triumph with a slingshot. For 10 points, name this Michelangelo sculpture of a Biblical hero.

ANSWER: **David** <Bentley>

14. The brother of the title character of Roddy Doyle's novel *Paddy Clarke Ha Ha Ha* is nicknamed for this character, whose daughter Yasmin falls in love with an American called "Somebody" in a John Barth novel. After escaping some cannibals who feed their victims madness-inducing herbs, this character is thrown into a cave due to the death of his wife, where he survives by stealing the rations of other widowed spouses dropped into the cave. This character tells a poor porter of the (*) same name about how he used wine to defeat an old man who forced him to carry him around on his shoulders. This character visits a valley of diamonds after grabbing onto the leg of a giant roc bird. For 10 points, name this sailor whose seven voyages are recounted in *The Arabian Nights*.

ANSWER: **Sinbad** [or Sindbad] <Brownstein>

15. A group of left-leaning rebels in this country launched such humane offensives as Operation Kill All Your Family and Operation Kill Every Living Thing. For most of the 1970s and '80s, this country was dominated by Siaka Stevens, whose parents came from its competing Temne and Mende ethnic groups. Resentment of this country's Krio elite was exploited by Foday Sankoh, the leader of the Revolutionary United Front, whose use of (*) cocaine-addicted child soldiers is attested in Ishmael Beah's *A Long Way Gone*. After the American Revolution, the British settled black loyalists in this modern-day country. For 10 points, name this coastal country in West Africa whose decade-long civil war was funded by "blood diamond" sales.

ANSWER: Republic of **Sierra Leone** <Bollinger>

16. "Ward, the Pirate" is quoted in both of Ralph Vaughan Williams's (rafe von Williams's) compositions in this genre, which set Norfolk folk songs. A vocal piece in this genre based on Goethe's "Harzreise im Winter" (HARTS-rye-zuh im VIN-ter) was written for Julie Schumann's wedding by Johannes Brahms. A collection of works titled for this genre includes a piece nicknamed "Héroïde-élégiaque" (ay-roh-EED ay-lay-ZHAHK) that breaks from the "sad lassan (LAW-shawn), fast friska (FREESH-kah)" binary structure inspired by the (*) csárdás (CHAR-dahsh) dance. A concertante work titled for this genre includes a D-flat major section that inverts the A minor theme on which it is based, taken from the last of an earlier composer's 24 caprices. For 10 points, what word titles both a set of 19 "Hungarian" piano pieces by Franz Liszt and a set of variations by Sergei Rachmaninoff "on a theme of Paganini"?

ANSWER: rhapsody [or rhapsodies; accept Norfolk Rhapsodies, Alto Rhapsody, Hungarian Rhapsodies, or Rhapsody on a Theme of Paganini] <Carson>

17. In the second stanza of a poem addressed to one of these things, the speaker says "I would, before my time to go, / Sing of old Eire and the ancient ways." Yeats wrote to one of these things "upon the Rood of Time," and the speaker of another poem titled for one of these things pledges to "come again... Tho' it were ten thousand mile." One of these things is told "The invisible worm, / That flies in the night / In the howling storm: / Has found out thy bed" in a Blake poem about a (*) "sick" one. Another poem compares one of these objects to "my love... That's newly sprung in June." The addressees are advised to gather these things "while ye may" in Herrick's "To the Virgins, to Make Much of Time." For 10 points, Robert Burns wrote about "A Red, Red" one of what type of flower?

ANSWER: rose [or rosebuds; sick rose; or a red, red rose; prompt on flower until mentioned] <Bentley>

18. Cancers of this organ are assessed by the RMI score, which depends on the concentration of the biomarker CA-125. Like the pancreas, this organ names a disease treated by metformin and clomiphene that causes hirsutism and obesity. Cysts in this organ form from theca lutein (THEE-kah LOO-tee-in) cells that are surrounded by granulosa cells. Testosterone levels are elevated in a (*) "polycystic" syndrome named for this organ. Breast cancer and cancer of this organ are often caused by BRCA-1 (BURR-kah "one") mutations. Surges in FSH and LH around day 14 cause a hole to develop in this organ's follicle, coincident with its synthesis of progesterone. For 10 points, name this female reproductive organ, found at one end of the Fallopian tubes, where oocytes (OH-uh-sites) are formed.

ANSWER: ovary [or ovarian cancer; or polycystic ovarian syndrome] <Silverman>

19. One city in this modern-day country had an elite society known as the geomori. A wealthy colony in this modern-day country awarded prizes to star chefs and was known as Sybaris. One city in this modern-day country reached its apogee under a tyrant originally from Gela named Gelon. The colonies that formed Magna Graecia (GRY-kee-uh), or Great Greece, were located in this modern-day country. Before a campaign to this modern-day country departed, its commander was (*) accused of mutilating some statues of Hermes. After a disastrous Athenian expedition to an island in this modern-day country, Alcibiades defected to the other side of the Peloponnesian War. For 10 points, name this modern-day country where Greeks established a colony at Syracuse on Sicily.

ANSWER: Italy <Bentley>

20. Three types of this property are represented by the basis states of the most commonly-used space obeying SU(3) symmetry. The Cabibbo angle is defined relative to two eigenstates of this property. Hypercharge is the sum of the five numbers quantifying this property, one of which is isospin. The CKM matrix gives the probability that this property changes due to the weak force. "Truth" and "beauty" were the (*) original names for two new options for this property introduced in the Standard Model's third generation. Neutrino oscillations change this property. Murray Gell-Mann's Eightfold Way describes how combinations of it can lead to symmetry for mesons. For 10 points, name this property that distinguishes the six known quarks, examples of which include up, charm, and strange.

ANSWER: quark **flavor** [or **flavour**] <Silverman>

21. Description acceptable. As part of this campaign, the South Korean businessman Jee Ick-Joo was kidnapped by the PNP. This campaign's leader vowed not to make the same mistakes committed by former head of state César Gaviria, who wrote a *New York Times* op-ed criticizing it. For opposing this campaign, Leila de Lima was told to "hang herself" and was eventually arrested. Photos of the death of Michael Siaron were used to criticize this campaign, which seeks to reduce the trade of (*) *shabu*. This campaign's leader justified it by noting that "Hitler massacred three million Jews," and enabled vigilante "death squads" as mayor of Davao. Over 7,000 lives have been claimed by, for 10 points, what specific anti-crime campaign led by Rodrigo Duterte, the president of the Philippines?

ANSWER: the war on **drugs** in the **Philippines** [or Rodrigo **Duterte**'s war on **drugs**; prompt on answers that do not mention the **Philippines** or Rodrigo **Duterte** until they are read, after which they are no longer required; prompt on any answers that only mention a war against **crime**; accept equivalents for "war on drugs" that indicate a campaign involving killing drug users and/or dealers] <Shimizu>



PACE NSC 2017 - Round 21 - Bonuses

1. Packaging labels for transition metal salts like copper sulfate and cobalt chloride include the number of molecules of this compound that co-crystallized with the salt, separated from the formula by a single dot. For 10 points each:

[10] Name this compound that is removed from a reaction using desiccants, also known as drying agents.

ANSWER: water [or H₂O]

[10] The simplest way to determine the water of crystallization for a given hydrate is to heat it up, measure the change in mass, then divide the difference by this integer, which is very close to the molecular weight of water in daltons.

ANSWER: 18 [or eighteen]

[10] However, if the water is *covalently* bonded to the transition metal, it forms this type of coordination complex, not a hydrate. These compounds are often Lewis acids.

ANSWER: metal aquo complexes <Silverman>

2. Two separate characters independently opine that "There is something in [this name] that seems to inspire absolute confidence." For 10 points each:

[10] Give this name that Jack Worthing uses while impersonating his fictional, miscreant brother. He and Algernon Moncrieff resolve to get re-christened with this name in order to marry Gwendolen and Cecily, respectively.

ANSWER: Ernest

[10] Jack discovers the "vital importance of being earnest" in a play by this flamboyant Irish author, who was the subject of a trial for gross indecency over his relationships with Alfred Douglas and other men.

ANSWER: Oscar (Fingal O'Flahertie Wills) Wilde

[10] Algernon first suspects that Jack is lying about his name being Ernest when he sees the words "from little Cecily, with her fondest love to her dear Uncle Jack" inscribed inside one of these containers owned by Jack.

ANSWER: a cigarette case [or obvious equivalents of a container for cigarettes] <Brownstein>

3. Name some ways of introducing mutations into DNA, for 10 points each.

[10] One easy way is to just shine light from this part of the spectrum onto DNA. Melanomas are caused by overexposure to this energetic form of radiation.

ANSWER: **ultraviolet** light [or **UV** light]

[10] Site-directed mutagenesis can be accomplished using PCR with one of these sequences that has been mutated. In general, this term refers to a short oligonucleotide that gets laid down at the initiation point for replication; replication of the lagging strand of DNA uses them too.

ANSWER: **primers**

[10] Genetic recombineering takes advantage of this process, in which a cell will spontaneously swap out parts of its genome for foreign DNA, provided that the swap site is flanked by regions of identical sequence. The efficiency of CRISPR gene editing usually depends on how efficient this step is.

ANSWER: **homologous recombination** [or **HR**; or **homology-directed recombination**; or **HDR**; prompt on chromosomal **crossover**] <Silverman>

4. A type of intercontinental ballistic missiles with this name makes up most of the United States' land-based nuclear capacity. For 10 points each:

[10] Identify these people, some of whom served under John Parker during the morning of April 19th, 1775.

ANSWER: **minutemen** [or **minuteman**; or **minnit men**]

[10] This silversmith, along with William Dawes, warned minutemen companies in towns such as Lexington of the imminent British approach during his namesake Midnight Ride.

ANSWER: Paul **Revere**

[10] Some of the first Revolutionary-era minutemen units were formed when General Thomas Gage removed some of this material from a building in Somerville, Massachusetts in 1774, sparking a namesake alarm amongst colonists.

ANSWER: **gunpowder** <Bentley>

5. According to a text called the *Dabistan*, this event did not occur, since if it did "all of the inhabitants of the world" and not just the "Mussulmans" would have seen it. For 10 points each:

[10] Name this event, which is described in the Al-Qamar section of the Qur'an. Some believed that this astronomical event hasn't occurred, and will take place on Judgment Day.

ANSWER: **splitting** of the **Moon** [accept equivalents indicating that Muhammad split the **Moon** into **two** parts]

[10] The Splitting of the Moon is one of these acts performed by Muhammad. In Christianity, Jesus fed the multitude by performing one of these acts to pretty much endlessly supply fish and bread.

ANSWER: **miracles**

[10] During the miraculous Night Journey, Muhammad and Moses successfully negotiated the daily prayer requirement down to five. Those five daily prayers make up this pillar of Islam.

ANSWER: **salat** [or **salāh**] <Jose>

6. This woman was put under house arrest after calling for democracy in front of the Shwedagon Pagoda in the aftermath of the 8888 Uprising. For 10 points each:

[10] Name this founder of the National League for Democracy whose efforts to democratize her home country were opposed by the State Peace and Development Council, a military junta.

ANSWER: Aung San **Suu Kyi** [do not prompt on "Aung" or "San" or "Aung San"]

[10] Aung San Suu Kyi (**ong sahn soo chee**) was unable to travel to Norway to accept this award, which she won in 1991, since the junta threatened to bar her from re-entry if she traveled overseas.

ANSWER: Nobel **Peace** Prize [prompt on **Nobel** Prize]

[10] Aung San Suu Kyi was arrested in 1988, the year that this autocrat stepped down from power. This man instituted a dictatorship in Burma after having the ineffectual U Nu removed from office.

ANSWER: **Ne Win** <Jose>

7. A Breton knight named Bran dies of sorrow after being falsely told of the appearance of one of these specific things, which would mean his mother had failed to ransom him. For 10 points each:

[10] Identify this specific type of item. The sight of another of them, which Theseus forgot to take down due to his distress at being forced to leave Ariadne (**air-ee-ADD-nee**) on Naxos, caused King Aegeus (**EE-gee-us**) to leap into the sea.

ANSWER: a **black sail** [prompt on partial answer]

[10] The white sail Theseus *should have* displayed would have indicated that he'd survived his encounter with this half-human son of Pasiphaë (**pah-SIF-ah-ee**), who was imprisoned in the Cretan labyrinth.

ANSWER: the **Minotaur** [accept **Asterion**]

[10] While the Minotaur was commonly depicted as a man with the head and tail of a bull, this river god was often depicted as a bull with the face of a man. He sought Deianira's (**day-ah-NYE-rah's**) hand in marriage until he was out-wrestled by Heracles.

ANSWER: **Achelous** (**ah-kel-OH-us**) <Carson>

8. Answer the following about meaningless words in Ireland, for 10 points each.

[10] After James Daly made a bet that he could popularize a meaningless word in 24 hours, he hired roving gangs of children to scrawl this four-letter word on various parts of Dublin; its meaning refers to the people of Dublin constantly asking about its meaning.

ANSWER: **quiz**

[10] The speaker once said "polite meaningless words" in this author's poem about the Easter Rising, "Easter, 1916." His other poems include "The Second Coming."

ANSWER: William Butler **Yeats**

[10] James Joyce's 100-letter nonsensical "thunder words" are discussed in *A Skeleton Key to Finnegans Wake*, a book co-written by this author, who discussed the idea of a "monomyth" in *The Hero with a Thousand Faces*.

ANSWER: Joseph (John) **Campbell** <Jose>

9. This woman teams up with her roommate Denise to con men into taking the two to dinner in Maureen Gibbon's novel, *Paris Red*. For 10 points each:

[10] Name this redheaded artist who modelled for the nude woman in both *Luncheon on the Grass* and *Olympia*.

ANSWER: Victorine-Louise **Meurent** (murr-ON)

[10] This French artist painted *Olympia* and *Luncheon on the Grass*.

ANSWER: Édouard **Manet**

[10] Meurent wears a purple headscarf under her hat and wields a sword in Manet's portrait of her in the costume of one of these people. Another Manet painting depicts a man working as a different type of these people supine, bleeding out from an abdominal wound and clutching a pink cloth in one hand.

ANSWER: **bullfighters** [accept **matador** or **toreador**, the specific types of bullfighter depicted in the relevant works; accept **torero**] <Bentley>

10. Yambo, the protagonist of a novel by this author, struggles to remember the nature of his pre-coma relationship with his assistant Sibilla after he loses all of his memories except for those acquired through reading. For 10 points each:

[10] Identify this author of *The Mysterious Flame of Queen Loana*. Another of his novels centers on a Franciscan monk and detective named William of Baskerville.

ANSWER: Umberto **Eco**

[10] William Weaver made English translations of many of Eco's novels, which were originally written in this language. Ann Goldstein has translated all of Elena Ferrante's *Neapolitan Novels* in this language into English.

ANSWER: **Italian** [or **italiano**; or lingua **italiana**]

[10] Much of the second half of Eco's novel *Baudolino* concerns the title character's travels to the kingdom of this man, from whom Baudolino once forged a letter. On the way to this man's kingdom, Baudolino claims to encounter mythical sciapods and Blemmyes.

ANSWER: Prester **John** [or Presbyter **Johannes**] <Bentley>

11. The Getty Museum contains one of these photographs depicting Edgar Allan Poe that was taken a few months before he died. For 10 points each:

[10] Name this kind of early photograph, which is made by using a process named for a 19th-century Frenchman. The first image of a solar eclipse was captured using this kind of photograph.

ANSWER: **daguerreotypes**

[10] Daguerreotypes were made by exposing a plate of this metal to the camera. The "sterling" alloy of this precious metal is often used in arts and crafts.

ANSWER: **silver**

[10] This modern artist worked with daguerreotype master Jerry Spagnoli to produce the portraits in his book *A Couple Ways of Doing Something*. This painter of many huge photorealistic portraits suffered a spinal artery collapse in 1988 that he refers to as "The Event".

ANSWER: Chuck **Close** [or Charles Thomas **Close**] <Jose>

12. This composer's 25th and 40th symphonies, respectively, are known as the "Little G minor" and the "Great G minor". For 10 points each:

[10] Name this Austrian composer. Johann Peter Salomon likely coined the nickname of his *Jupiter Symphony*.

ANSWER: Wolfgang Amadeus **Mozart** [or Johannes Chrysostomus Wolfgangus Theophilus **Mozart**]

[10] This composition in G minor for string ensemble and organ continuo was either entirely or almost entirely written by the 20th-century musicologist Remo Giazotto (**jah-ZOH-toh**), despite its common attribution to a Baroque Venetian master.

ANSWER: **Adagio** in G minor [accept equivalents of Tomaso **Albinoni**'s **Adagio**]

[10] The eighth of these sixteen orchestral pieces, which were originally written for piano four-hands, is a G minor furiant (**FOO-ree-ont**). Comprising their composer's Opus 46 and 72, they also include several pieces based on sousedskás (**soh-SED-skahs**) and skočnás (**SKOATCH-nahs**).

ANSWER: the **Slavonic Dances** (by Antonin Dvořák) <Carson>

13. This man's book *A History of the Indies* contains descriptions of the Taino and the Ciboney peoples. For 10 points each:

[10] Name this historian, whose book *A Short Account of the Destruction of Indies* chronicled abuses against indigenous inhabitants of the New World.

ANSWER: Bartolomé **de las Casas**

[10] De las Casas's book contributed to the "Black Legend," the idea that this European colonial power committed atrocities against the people it colonized. Its monarchs Ferdinand and Isabella financed exploration of the Americas.

ANSWER: **Spain** [or **Spanish** Empire]

[10] De las Casas argued against the scholar Juan de Sepúlveda's ideas at this "Debate," where he held that the original inhabitants of the Indies should not be enslaved. It is named for the Spanish city in which it took place.

ANSWER: **Valladolid** Debate <Jose>

14. The maximum velocity change in ideal versions of these things can be found by multiplying the exhaust velocity by the natural log of the initial mass over the dry mass. For 10 points each:

[10] Identify these things, the motion of which are governed by an equation named for Konstantin Tsiolkovsky (**tsull-KOFF-ski**).

ANSWER: **rockets**

[10] Due to Earth's gravity, the energy cost of getting a rocket from Earth to this place is much greater than from getting a rocket from this place to the moon. Every non-Apollo human spaceflight has been in the low-earth form of this place.

ANSWER: **orbit** around the Earth

[10] This is the term for the measure of the total mass of a rocket that is used to launch the rocket versus what actually ends up in space. This fraction was 4.33 percent for the Saturn V (**five**) rocket.

ANSWER: **payload** fraction <Bentley>

15. Answer the following about the author José Donoso, for 10 points each.

[10] Donoso's most famous novel, about the increasing alienation experienced by Humberto Peñaloza, is titled for an "obscene bird" of this concept. This time period titles a Tennessee Williams play set in Mexico, in which Reverend Shannon sees a tied-up iguana.

ANSWER: **night** [or **noche**; the second work is *Night of the Iguana*]

[10] Donoso wrote a 1972 essay relating his "personal history" of this literary movement, which swept Latin America in the 1960s and 70s.

ANSWER: Latin American **Boom** [or the **Boom**; or el **Boom**]

[10] In high school, Donoso befriended this Mexican author, who later became a major figure of the Boom. This man's many novels include *Terra Nostra*, *Aura*, and *The Death of Artemio Cruz*.

ANSWER: Carlos **Fuentes** [or Carlos **Fuentes** Macias] <Carson>

16. Information within the "relational" variety of these systems may be organized into tables with columns and rows. For 10 points each:

[10] Name these programs that are often used to store usernames and hashed passwords.

ANSWER: **databases** [accept relational **databases**]

[10] This language is often used to manipulate the contents of a relational database. It uses keywords such as "select," "from," "where," and "order" to display and modify data.

ANSWER: **SQL** (S-Q-L or "sequel") [or **Structured Query Language**]

[10] The NoSQL database MongoDB stores documents formatted in this language's "object notation" and allows queries written in this language. The recent ES6 specification of this language added the "const" and "let" keywords, "for-of" loops, and support for arrow functions.

ANSWER: **JavaScript** [or **ECMAScript**; prompt on **JSON**; do not accept or prompt on "Java"] <Jose>

17. Pacific Biological Laboratories founder Ed Ricketts inspired such literary characters as "Doctor Winter" in *The Moon is Down* and "Doc Burton" in *In Dubious Battle*. For 10 points each:

[10] Name the friend of Ricketts who wrote those novels. Ricketts also inspired the Christlike preacher Jim Casy in this man's novel *The Grapes of Wrath*.

ANSWER: John **Steinbeck** [or John Ernst **Steinbeck**, Jr.]

[10] The most famous Steinbeck character based on Ricketts is probably the marine biologist Doc, who appears in both this novel and its sequel *Sweet Thursday*. Lee Chong and Dora Flood are other characters in this novel, set in a location home to many outposts of the sardine industry.

ANSWER: **Cannery Row**

[10] A version of Ricketts's "Essay on Non-Teleological Thinking" appears in a Steinbeck travelogue titled "The Log from" this geographical location, where Steinbeck and Ricketts led a 1940 specimen-collecting expedition.

ANSWER: the **Sea of Cortez** [accept the **Gulf of California**] <Carson>

18. Fraudulent letters linking one man to this crime were exposed when it was observed that the letters misspelled the word "hesitency" in the same way that Richard Pigott always did. For 10 points each:

[10] Name this 1882 crime where Lord Frederick Cavendish and Thomas Henry Burke were stabbed to death by a group of Invincibles.

ANSWER: **Phoenix Park** murders

[10] The Phoenix Park murders took place in the capital of this modern-day country. The Fenians sought to cast off British control of this country, where a potato famine occurred in the 1840s.

ANSWER: **Ireland** [or Republic of **Ireland**; or **Éire**]

[10] Pigott's aforementioned forgery sought to blame the murders on this Irish politician and lover of Katherine O'Shea. This Home Rule advocate is commemorated on Ivy Day.

ANSWER: Charles Stewart **Parnell** <Bentley>

19. This man's brother made a fortune selling diapers.com to Amazon. For 10 points each:

[10] Identify this man lauded in a 2012 *Time* cover as the "top cop" of Wall Street. He was fired from his position as US District Attorney for the Southern District of New York in March 2017.

ANSWER: Preet **Bharara** [or Preetinder Singh **Bharara**]

[10] Bharara once served as an aide to this Senator from New York, the current Senate Minority Leader.

ANSWER: Chuck **Schumer** [or Charles Ellis **Schumer**]

[10] Despite not being in the State Department, Bharara's office investigated the Deputy Consul General from this country. Without advanced warning, this country controversially demonetized its highest value banknotes in November 2016.

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

20. Answer the following about words in philosophy, for 10 points each.

[10] The type-token distinction, in which some words represent abstract concepts and others represent concrete examples of those concepts, was elucidated by this pragmatist who wrote "How To Make Our Ideas Clear" and "The Fixation of Belief".

ANSWER: Charles Sanders **Peirce** (purse) [or Charles Santiago Sanders **Peirce**]

[10] This philosopher asserted that words could be used in performative utterances or illocutionary speech acts to change the reality they are describing, rather than merely describing it, in his aptly-titled book *How To Do Things With Words*.

ANSWER: J. L. **Austin** [or John Langshaw **Austin**]

[10] W. V. O. Quine's book *Word and Object* examines the indeterminacy of this linguistic process, using a thought experiment about its "radical" kind in which a linguist attempts to determine whether the unfamiliar word "gavagai" actually means "rabbit". People who conduct this process have to take care to preserve the semantics of the original language.

ANSWER: **translation** [accept word forms] <Carson>

21. Computer science is often defined as the study of these things. For 10 points each:

[10] Name these step-by-step sets of instructions that output some result. Euclid's one is used to calculate prime factors, and a "binary search" one of these procedures rather efficiently finds an element from a list.

ANSWER: **algorithms**

[10] Algorithms are often expressed in this high-level description language, which resembles a programming language but uses a natural language to express its steps.

ANSWER: **pseudocode**

[10] This man advocates for a natural-language approach to programming languages in his book *A New Kind of Science*. This developer of Mathematica also names an online "computational-knowledge" engine that can "integrate" functions through symbolic manipulation.

ANSWER: Stephen **Wolfram** <Jose>