



### PACE NSC 2017 - Round 13 - Tossups

1. None of the title group of these people pay attention to a devotional image of Mary hanging on a tree on the right-hand side of a painting depicting these people at a *kermis*. In that painting, one of these people with a peacock feather in his hair looks intently at the bagpipe player seated next to him. Another painting titled for these people shows two wheat sheaves held together by a rake above a man with a spoon in his hat. In a painting titled for these people, two of them carry some (\*) soup on an unhinged door. Vienna's Kunsthistorisches (KOONST-hiss-TOR-ish-is) Museum has a painting of these people dancing by an artist who showed a paper-crowned bride not feasting in another painting of them. For 10 points, a genre painting by Pieter Bruegel the Elder depicts a wedding attended by what lower-class people?

ANSWER: peasants [accept *The Peasant Dance* or *The Peasant Wedding*; prompt on farmers; prompt on serfs; prompt on things such as poor people] <Bentley>

2. This king briefly appointed the conciliatory Luis de Requesens to administer one of his rebellious territories. A duke serving this king imposed the hated "tenth penny" tax on commerce. His half-sister Margaret of Parma resigned as governor after one of this king's dukes executed the Count of Horn and Count of Egmont on charges of heresy. To crush a rebellion against this king, the (\*) Council of Blood was founded by the Duke of Alba. Pirates known as "sea beggars" supported a revolt against this king that intensified after his mutinous troops sacked Antwerp in the "Spanish Fury." William the Silent led a largely successful 16th-century rebellion against him in the Netherlands. For 10 points, name this Spanish king who sent the Spanish Armada.

ANSWER: Philip II [or Felipe II; prompt on Philip or Felipe] <Wang>

3. The "open-cup" and "closed-cup" methods are used to measure the temperature at which this process occurs. This process occurs industrially in an RTO line. Inerting prevents this process by lowering the concentration below the LEL. This process is done to a sample during carbon-nitrogen-hydrogen elemental analysis. The Zeldovich mechanism shows how this process forms (\*) NO<sub>x</sub> (NOCKS) species. This process is isochoric (eye-so-CORE-ick) in an Otto cycle and isobaric in a Diesel cycle. A reaction's enthalpy is estimated by subtracting the enthalpy of this process for the products from that of the reactants. Catalytic converters mitigate the "incomplete" form of this process, which makes carbon monoxide. For 10 points, name this reaction in which a hydrocarbon is oxidized to water and CO<sub>2</sub> in the presence of fire.

ANSWER: combustion [or word forms; or burning; or thermal oxidation; or flashing; or flash point; or explosion; or word forms; prompt on heating; prompt on oxidation or word forms] <Silverman>

4. Gazing into this city's sculpture *Eternal Silence* will supposedly give viewers a vision of their own death. That sculpture was made by Lorado Taft, who also commemorated a century of peace between the U.S. and Great Britain with this city's *Fountain of Time*. This city is also home to a video installation designed by Jaume Plensa (ZHOW-muh PLEN-suh), which projects images onto two glass-brick towers that stand in a black granite reflecting pool. This city is home to an unnamed (\*) Picasso sculpture often called "The Picasso" and a sculpture said by its creator to have an "omphalos" on its underside and was inspired by the flow of liquid mercury. Anish Kapoor's *Cloud Gate*, a reflective sculpture often called "The Bean", sits in the Millennium Park in, for 10 points, what Midwestern city?

ANSWER: Chicago, Illinois <Jose>

5. A man who engages in this activity with "pure Teutonic pleasure" is one of the two subjects of John McPhee's "double profile" *Levels of the Game*. A tool used in this activity gives its name to a theorem stating that under certain conditions, an object cannot stably rotate around its intermediate axis. The modern variety of this activity evolved from a "real" version that itself is descended from the older *Jeu de (\*) paume* (zhuh de POHM). The essay "Derivative Sport in Tornado Alley" describes David Foster Wallace's youth playing this sport. This sport's "Battle of the Sexes" was contested by Bobby Riggs and Billie Jean King. For 10 points, name this sport played at the Roland Garros complex in France and at Wimbledon in Britain.

ANSWER: lawn tennis <Jose>

6. Poincaré (pwann-kah-RAY) stresses were introduced to explain this phenomenon. Lord Rayleigh failed to see birefringence in light passing through an anisotropic (AN-iso-TROP-ik) tube in a 1902 experiment aiming to disprove this effect. Paradoxes about this effect include one involving three ships held together by a thread, and one where a ladder is carried through a barn. This effect is visualized in Minkowski space as the difference between two sides of a right triangle. It explains why the "square root of one minus (\*)  $v$ -squared over  $c$ -squared" was the ratio of two distances in the Michelson–Morley experiment. That factor, gamma, shares its name with this effect's formulator. For 10 points, name this effect in special relativity in which objects moving near the speed of light appear to get shorter.

ANSWER: length contraction [or Lorentz contraction; prompt on partial answer] <Silverman>

7. One poem by this author is narrated by a man with a "scrofulous French novel / On grey paper with blunt type", and who states "Grr-r-r-there go, my heart's abhorrence" when he sees Brother Lawrence. Another poem by this author, which was also published in *Dramatic Lyrics*, features a speaker is angry that his gift of a "nine-hundred-years-old name" is ranked with "anybody's gift" by the title (\*) figure. This author of "Soliloquy of the Spanish Cloister" wrote a poem whose speaker hired the Claus of Innsbruck to cast a sculpture of Neptune in bronze; that poem opens with the Duke of Ferrara describing a painting of his wife, "looking as if she were alive." For 10 points, name this author of dramatic monologues such as "My Last Duchess".

ANSWER: Robert Browning <Jose>

8. An early commentary on this text was written by the "Riverside Elder" and describes the practice of "dual cultivation". Arthur Waley's translation of this book includes a verse stating "If we stop looking for persons of superior morality" to put in power, "there will be no more jealousies". The fourth verse of this text opines that one of the title concepts is "yet it fills every vessel with endless supply... with it / the sharp edges become smooth". This text is named for a concept often called (\*) "empty" and details the creation of the Three Pure Ones, namely the Grand, Supreme and Jade Purities. This 1st-century text advocates a philosophy of non-action or *wu wei*, and is partly named for a word meaning "The Way". Laozi (LAO-tzuh) authored, for 10 points, what central text of Taoism?

ANSWER: Tao te Ching [or Daodejing; accept Laozi until it is read] <Bentley>

**9. Thomas Francis Carney wrote a 1961 biography of this man, who introduced a law narrowing the passageways that voters walked through to cast ballots that earned him the enmity of his patrons, the Metelli. This man's armies won the battles of Aquae Sextiae and Vercellae, ending the invasions of the Cimbri and Teutones. As a teenager, this man supposedly saw seven eaglets in a nest, which was taken as an omen predicting his seven elections to the (\*) consulship. He introduced a series of policies, including land grants as a reward for twenty years of service, replacing maniples with cohorts, and enrolling the *capite censi* in the legions, as part of his efforts to reform the Roman military. For 10 points, name this *novus homo* who fought several civil wars against his rival Sulla.**

ANSWER: Gaius Marius <Carson>

**10. When asked how he went bankrupt, a cantankerous character in this novel quips: "Gradually, and then suddenly." A woman in this novel is awaiting a divorce from a man whose revolver she used to unload every night. After his magazine fails, a writer in this novel moves to Paris with the social climber Frances Clyne. At the end of this novel, a woman laments: "we could have had such a damned good time together," to which the protagonist replies: "Yes... Isn't it (\*) pretty to think so?" In this novel, whose epigraph quotes Gertrude Stein's declaration that "you are all a lost generation," Robert Cohn beats up the matador Pedro Romero the night before a bullfight in Pamplona. For 10 points, name this novel in which Lady Brett Ashley eludes Jake Barnes, by Ernest Hemingway.**

ANSWER: *The Sun Also Rises* <Gupta>

**11. A composer's 1985 String Quartet No. 3 was adapted from a work in this genre that includes the sections "November 25: The Last Day" and "1937: St. Sebastian". A five-movement suite adapted from one of these compositions contains sections depicting the title character's birth, wedding, and burial, and a sleigh bell-heavy troika. A work in this genre contains sections titled "Cloudscape" and "Pruitt Igoe", and in its short opening section, a *basso profundo* chants a (\*) Hopi word that translates roughly as "life out of balance". "The Ecstasy of Gold" is part of a whipcrack-filled work in this genre, which also includes Sergei Prokofiev's *Lieutenant Kijé* (kee-ZHAY) and Philip Glass's *Koyaanisqatsi* (ko-yah-niss-KAHT-see). For 10 points, name this type of composition, many of which were written by Ennio Morricone and John Williams.**

ANSWER: film score [prompt on score or soundtrack; accept synonymous answers like movie soundtrack or music from movies] <Carson>

**12. This city contains a set of nine kinetic art sculptures depicting the Muses by Troy Pillow located at the corners of the namesake intersection of its 9th and 9th neighborhood. This is the closest city to Farmington Bay, where sewage dumps cause a rotten egg-like "stink" that lasts for a few hours every year. This city experiences air quality problems as a result of its position between the Oquirrh (OH-ker) Mountains and the (\*) Wasatch Range. A Bain Capital CEO successfully reorganized this city's plan to host the 2002 Winter Olympics. A Fortune 500 chemical company in this city was founded by Jon Huntsman Sr., whose son later served as governor of this city's state. For 10 points, name this city home to the headquarters of the Church of Jesus Christ of Latter-day Saints.**

ANSWER: Salt Lake City [prompt on SLC] <Shimizu>

**13. Like loops, these things are often unrolled such that the items stored within them fit into a single unit of memory to improve cache performance. In some programming languages, the map function takes two inputs, one of these objects and a function, and then outputs another of these objects. An implementation of these things may make use of sentinel nodes to reduce off-by-one errors. In Python, these objects may be built using a namesake notation that resembles (\*) set-builder notation; also in Python, the "zip" function returns a single one of these objects whose elements are tuples. Pointers that refer to "previous" nodes and "next" nodes are used in the "doubly-linked" variety of these structures. For 10 points, name these objects that consist of a sequential collection of data.**

ANSWER: lists [or linked lists; accept enumerables or iterables until "off-by-one" is read] <Jose>

**14. In this country, a slaughterhouse where the workers drink blood employs Kurt, whose friends share Lola's diary after her suicide. The treatment of Germans in this country is depicted in *The Land of Green Plums* by 2009 Nobel-winner Herta Muller. A play by an author born in this country opens in a café, where the protagonist's friend criticizes his unkempt appearance; after later escaping through the window of an office with a destroyed stair, the protagonist visits that friend, (\*) Jean, whose skin grows greener as they speak. In a French-language play by an author from this country, Daisy leaves Berenger to join the title transformed people. For 10 points, name this Eastern European country, the birthplace of the author of *Rhinoceros*, Eugene Ionesco.**

ANSWER: Romania <Brownstein>

**15. An 1893 book refutes the "happiness hypothesis" and offers explanations for the function, causes, and abnormal forms of one phenomenon affecting this concept. The federal agency EEOC enforces actions that ensure equal access to this concept for all. In a book titled for *When [this concept] Disappears*, William Julius Wilson asserted that long-term structural poverty in inner cities was less due to race and more due to the (\*) lack of this concept. The *Paris Manuscripts* of one thinker describe the capitalist conditions that foster alienation in people engaged in it. Max Weber's "Protestant ethic" refers to the Protestant tendency to seek out more of this activity and operate productively. For 10 points, name this system in which people exchange their labor for money.**

ANSWER: employment [or jobs; or work; or vocation; or occupation; or labor until read; accept division of labor; accept specific types of labor like wage labor; prompt on economic opportunity] <Aggarwal>

**16. Weiss units quantify the activity of this protein. Scr7 inhibits this enzyme during CRISPR ("crisper") gene editing to prevent NHEJ. During standard molecular cloning, this enzyme is added after the phosphatase reaction, immediately before the construct is transformed. The T4 phage is the main source of this enzyme used in the lab. This enzyme can be inefficient when presented with blunt ends, but normally, it rejoins the (\*) sticky ends generated by restriction enzymes. Nucleotide excision repair enzymes express a form of this protein that is also used to fill in double-strand breaks. During replication of the lagging strand, it forms phosphodiester bonds between the short RNA templates and Okazaki fragments. For 10 points, name this enzyme that stitches together DNA.**

ANSWER: DNA ligase [or E.C. 6.5.1.1] <Silverman>

**17. According to the *Iliad*, the ruler of this place also controlled Neritum, Crocylea, Aegilips, and Zacynthus. A cowardly man from nearby Same (SAH-may) paid a huge dowry to marry this place's princess Ctimene (k'tih-MEE-nee). Arcesius began the line of "only sons" that ruled this place, whose continued rule was guaranteed by the sight of a hawk tearing the feathers from a dove, as interpreted by Theoclymenus. A king of this island married Anticleia, the daughter of (\*) Autolycus, and purchased the young Eumaeus. A palace on this island contains a room in which a marriage bed was built into a living olive tree and a room in which its disguised king fired an arrow through twelve ax-heads before slaughtering dozens of suitors. For 10 points, name this island home to Laertes, Telemachus, and Odysseus.**

**ANSWER: Ithaca** <Carson>

**18. Magazine editors Edwin L. Godkin and George William Curtis were both leaders of a league devoted to this cause. Dorman Bridgman Eaton studied Great Britain to draft the first national legislation passed supporting this cause. The 1912 Lloyd–La Follette Act further strengthened this platform by requiring just cause in removals. A 1978 act named for this cause created the OPM, an institution that was hacked in 2015. The first bill advancing this cause banned (\*) alcoholics. It was supported by James G. Blaine and the Half Breeds but opposed by Charles Guiteau, assassin of James Garfield. For 10 points, name this cause partially achieved with the passage of the 1883 Pendleton Act, ending the spoils system.**

**ANSWER: civil service reform** [accept ending the spoils system before the end] <Bentley>

**19. One of this group's signature weapons is the "leg-breaker" mine, activated by pressure on a syringe filled with sulfuric acid. It grew out of the "Southern Bloc," which escaped the destruction of the Marquetalia Republic under Plan Lazo. Government intelligence agents disguised as journalists executed a helicopter rescue of Senator Íngrid (\*) Betancourt (bay-tahn-KOOR) from this group. Comically evil death squads like CONVIVIR were authorized to fight this group, which effectively controls nearly 200,000 miles of jungle in its home country. Its leader, code-named "Timoshenko," participated in talks in Havana to end a 50-year civil war with over 170,000 victims. For 10 points, name this drug trade-funded revolutionary group in Colombia.**

**ANSWER: FARC** [or Fuerzas Armadas Revolucionarias de Colombia – Ejército del Pueblo; or Revolutionary Armed Forces of Colombia – People's Army] <Bollinger>

**20. This character describes helping a group that "had no way in which they could rely on marking winter, or flowery springtime, or fruitful summer." 19th-century scholars questioned the attribution of a play titled for him since it treated his chief antagonist differently than *The Suppliants*. In that same play, he's guarded by Kratos and Bia and advised by a chorus of Oceanids to be more obedient. This character foretells the future wanderings of a woman who's been (\*) transformed into a cow, Io. One play ends with a giant earthquake that sends him into an abyss. He warns that "the curse of father Kronos" will soon be fulfilled on the deity that is tormenting him, Zeus. For 10 points, name this Titan who is "Bound" in an Aeschylus play after giving Man fire.**

**ANSWER: Prometheus** <Bentley>

**21. Another writer's essay "The Art of Translation" picks apart a translation of the first line of one of this writer's poems as "I remember a wonderful moment." This man wrote that poem for his lover Anna Kern. Another of this man's works opens with the protagonist wondering "When will the devil take you?" while sitting by his dying uncle. This author's (\*) fourteen-line iambic tetrameter stanzas were preserved in a precise four-volume translation of one of this author's works by Vladimir Nabokov. This writer created the prototype of the "superfluous man" with a character who kills his friend Lensky in a duel, then falls in love with Tatyana, whom he had earlier rejected. For 10 points, name this Russian poet who wrote *Eugene Onegin*.**

ANSWER: Alexander Sergeyevich Pushkin <Kothari>



### PACE NSC 2017 - Round 13 - Bonuses

1. Answer the following about the Norse goddess Gefjon (**GEFF-yun**), for 10 points each.

[10] This king of Sweden offered an old woman as much land as four oxen could plow in a day; little did he know the woman was Gefjon in disguise, and the oxen plowed up the entire island of Zealand. That story of this king's "beguiling" opens, and titles, the first section of the *Prose Edda*.

ANSWER: **Gylfi** (**GILL-fee**) [accept **Gylfaginning**]

[10] The *Heimskringla* (**hymes-KRING-la**) says that Gefjon was sent on that task by this one-eyed Norse "Allfather", the leader of the Aesir.

ANSWER: **Odin** [accept **Woden** or **Wotan**]

[10] The *Heimskringla* also details Gefjon's marriage to a version of this legendary Danish king, whose lineage and status as the great-grandfather of Hrothgar is discussed in the opening sections of *Beowulf*.

ANSWER: **Scyld** the Scefing [or **Skjoldr**; accept **Shield** Sheafson] <Carson>

2. This practice was introduced into Medieval Europe by Robert II the Pious of France, who ordered that it be carried out on 16 people from Orleans. For 10 points each:

[10] Identify this practice, a common means of execution for heretics and witches.

ANSWER: **burning** at the stake

[10] Polymath Michael Servetus, along with the supposedly last copy of his magnum opus, was controversially burned at the stake in this city in 1553. This city joined a Confederacy with Bern and other cities in the 16th century.

ANSWER: **Geneva** [or **Geneve**; or **Genf**; or **Ginevra**]

[10] When Saint Dominic put a text of this sect and a page from the Bible into a fire, the Bible page miraculously survived. Members of this heretical sect could enter their elite class of ascetics, the Perfects, through the rite of consolamentum

ANSWER: **Cathars** [or **Albigensians**] <Bentley>

3. Answer the following about the thrilling world of doubled haploid plant breeding, for 10 points each.

[10] Doubled haploid breeding speeds up breeding times by creating plants with this property at every locus within two generations. At Hardy–Weinberg equilibrium, the number of individuals with this property is given by " $p$ -squared plus  $q$ -squared."

ANSWER: **homozygosity** [or word forms like **homozygous**]

[10] Industrially, doubled haploidy is often induced by treating haploid cells with this compound, which keeps chromosomes from segregating by inhibiting tubulin polymerization. This compound is also used to treat gout.

ANSWER: **colchicine**

[10] In angiosperms, the cell that is doubled is usually a pollen cell, which represents this haploid phase of the plant's life cycle. During alternation of generations, this phase alternates with the sporophyte.

ANSWER: **gametophyte** <Kothari>

4. *Countdown—Time In Outer Space* and *Jazz at Oberlin* are among the albums by this man's namesake quartet, which also included Jean Wright, Joe Morello and Paul Desmond. For 10 points each:

[10] Name this jazz pianist. With that quartet, he experimented with a number of unusual time signatures on the seminal 1959 album *Time Out*.

ANSWER: Dave **Brubeck** [or David Warren **Brubeck**]

[10] While traveling, Brubeck heard the *aksak* rhythms that inspired this opening track on *Time Out*, whose main theme is in 9/8 time, but broken up into three measures of 2+2+2+3, followed by a measure of 3+3+3.

ANSWER: "**Blue Rondo a la Turk**"

[10] Brubeck and his quartet recorded a number of Rodgers and Hart songs on a 1965 album of this title. Side two of a 1961 album of this title, recorded by a different musician, consists of the Ira and George Gershwin songs "Summertime" and "But Not For Me".

ANSWER: ***My Favorite Things*** [The second album is by John Coltrane.] <Carson>

5. Yukio Ninagawa's staging of this novel, adapted by Frank Galati, sets different scenes in large plastic cubes. For 10 points each:

[10] Identify this novel. The protagonist of the evenly-numbered chapters in this novel becomes friendly with a truck driver named Hoshino and has a knack for finding lost cats.

ANSWER: ***Kafka on the Shore***

[10] *Kafka on the Shore* is a novel by this author of *The Wind-Up Bird Chronicle* and *1Q84*.

ANSWER: Haruki **Murakami**

[10] In *Kafka on the Shore*, Kafka flees his home in order to escape a curse named for this literary character, fearing that he will kill Koichi Tamura like this character killed his father Laius.

ANSWER: **Oedipus** [or **Oedipal** curse] <Bentley>

6. A September 1940 photo of this building surrounded by smoke taken by Herbert Mason of the Associated Newspapers quickly became the iconic image of the Blitz. For 10 points each:

[10] Name this building, which burned during that so-called "Second Great Fire" in World War II. This London cathedral was rebuilt by Christopher Wren in the 17th century.

ANSWER: **St. Paul's** Cathedral

[10] This man controversially stated that "the Luftwaffe... didn't replace [buildings] with anything more offensive than rubble" in his 1987 Mansion House speech. This author of *A Vision of Britain* is known as the Duke of Rothesay in Scotland.

ANSWER: Prince **Charles** [or Charles, **Prince of Wales**; or **Charles** Philip Arthur George]

[10] Old St. Paul's fell into a decrepit state following this action by Henry VIII, which were one of the causes of the Pilgrimage of Grace. Tintern Abbey was shuttered by this action.

ANSWER: **dissolution of the monasteries** [or **suppression of the monasteries**] <Bentley>



7. Answer the following about beta decay, for 10 points each.

[10] If a nuclide with a mass of 50 amu (A-M-U) undergoes beta-minus decay, then what will be its mass in amu after the decay?

ANSWER: **50** amu

[10] The mass is the same because along with the daughter nuclide, two massless particles are released: an electron and one of these particles. The electron-form of these leptons have a negative charge and are right-handed.

ANSWER: **antineutrinos** [or electron **antineutrinos**; do not accept or prompt on "neutrinos"]

[10] Beta decay does result in an increase in one for this number. It is traditionally symbolized Z, which stands for the German word for "number".

ANSWER: **atomic number** <Silverman>

8. Answer the following about the man who coined the term "scientist," William Whewell (HEW-el). For 10 points each:

[10] In this book, J. S. Mill criticized Whewell's views on induction for claiming that scientific discovery required "fundamental ideas" in the mind, not just observation. This book argues that the semantic value of a name is its referent.

ANSWER: *A **System of Logic***

[10] Along with simplicity, Paul Thagard argued that Whewell's concept of "consilience" describes one of the two main virtues of these things, which are testable sets of scientific ideas that have withstood scrutiny. Examples include evolution and gravity.

ANSWER: scientific **theories** [or **theory**]

[10] Whewell titled one volume for "renovating" this earlier book, which he criticized for insufficient attention to actual scientists' practices. This 17th-century book dismisses four "idols" which can mislead reasoning.

ANSWER: **Novum Organum** *Scientiarum* [or **New Organon** *of Science*] (by Francis Bacon) <Kothari>

9. Answer some questions about the sociological insights of Michel Foucault, for 10 points each.

[10] Foucault belonged to both this late 20th-century linguistic and sociological movement and its successor, both of which examined the ways humans operated within dominant linguistic and cultural systems. This movement had its linguistic origins in Ferdinand de Saussure.

ANSWER: **structuralism** [or word forms; or **post-structuralism**]

[10] In *The Birth of the Clinic*, Foucault conceived of the "medical" type of this concept, the physician's ability to see into a person's depths in order to "save" them. This term is preceded by "male" in Laura Mulvey's theory of movies casting women as erotic objects for a male viewer's pleasure.

ANSWER: **gaze** [or medical **gaze**; or clinical **gaze**; or male **gaze**; or **regard**]

[10] In *Discipline and Punish*, Foucault analyzed the "birth of" these institutions. Jeremy Bentham had a thought experiment about one in which inmates could always be observed, the Panopticon.

ANSWER: **prison** [or **jail**; or **penitentiary**] <Aggarwal>

10. Many European writers set their works abroad. For 10 points each:

[10] Amélie Nothomb's *Fear and Trembling* is narrated by a foreign office-worker in this country who is demoted to a toilet-cleaner. Lafcadio Hearn collected many legends from this country, whose own writers include the author of *The Sound of the Mountain* and the *Palm-of-the-Hand Stories*.

ANSWER: **Japan** [accept Nihon-koku or Nippon-koku]

[10] In this novel by André Malraux, Ch'en Ta Erh (**chen tah-arr**) becomes haunted by death after assassinating a target as part of a left-wing insurrection in Shanghai.

ANSWER: **Man's Fate** [or La *condition humaine*]

[10] The novel *Max Havelaar* influenced Dutch policies towards this country, which was at the time a Dutch colony. Pramoedya Ananta Toer (**pra-MOOD-yah Ananta TOOR**) was a later writer from this country who was imprisoned under the Suharto regime.

ANSWER: Republic of **Indonesia** [or Republik **Indonesia**] <Kothari>

11. In these buildings, a sweet pudding called *karah parshad* is offered to visitors, and free meals are served inside their communal dining halls or *langars*. For 10 points each:

[10] Name these religious buildings. Their main hall is known as the *darbar sahib*, in which the Adi Granth is placed on a bed called a *manji sahib* and is covered by a canopy called a *palki*.

ANSWER: **gurdwaras** [prompt on answers like Sikh places of worship]

[10] The Adi Granth, the chief religious text in Sikhism, is considered to be one of these religious leaders. The first was Nanak, while the fifth, Arjan, was responsible for compiling the Adi Granth.

ANSWER: **Gurus**

[10] The most important gurdwara is the Harmandir Sahib, or Golden Temple, which is located in this city, where it is surrounded by a pool of "nectar."

ANSWER: **Amritsar** <Cheng>

12. Among the causes of this event were its central figure's inexplicable seven-hour disappearance during the sinking of the ferry MV *Sewol* (**SEH-wull**) and that woman's close relationship with the daughter of Church of Eternal Life cult leader Choi Tae-min (**ch'WAY TEH-meen**). For 10 points each:

[10] Identify this political event whose result, confirmed in March 2017, resulted in Hwang Kyo-ahn assuming the post of Acting President.

ANSWER: the **impeachment** of **Park** Geun-hye [accept synonyms for "impeachment" like "**ouster**"; prompt on but DO NOT REVEAL answers such as the **impeachment** of the South Korean President]

[10] Until her impeachment, Park Geun-hye (**gun-HEH**) was the president of this Asian nation. Under her leadership, relations with its northern neighbor had worsened.

ANSWER: **South Korea** [or **Republic of Korea**; or **ROK**; or **Taehan-min'guk**; or **Han'guk**; prompt on "**Korea**"; do not accept or prompt on "North Korea" or "Democratic People's Republic of Korea"]

[10] Park's successor Moon Jae-in has pledged to reopen the Kaesong Industrial Complex, possibly as a step towards reviving this theory of reconciliatory foreign policy employed by Kim Dae-jung and Roh Moo-hyun.

ANSWER: **Sunshine** policy [or **Haetbyeot** jeongchaek] <Carson>

13. Contact burns with this compound are treated by reacting it with a calcium gluconate gel, because otherwise it starts dissolving your bones. For 10 points each:

[10] Name this extremely toxic compound, which is nevertheless widely used in the semiconductors industry to etch silicon.

ANSWER: **hydrofluoric acid** [or **HF**; or **hydrogen fluoride**; do not accept or prompt on "hydrochloric acid"]

[10] Because of the low energy of the hydrogen–fluorine bond, hydrofluoric acid is the only hydrohalic acid that does *not* have this attribute in water. This type of acid completely dissociates in water to give hydronium ions.

ANSWER: **strong** acid [or word forms]

[10] Since it reacts with glass, HF is usually kept in containers made of this polymer. This polymer is a carbon backbone completely saturated by fluorine atoms.

ANSWER: **PTFE** [or **Teflon**; or **polytetrafluoroethylene**] <Silverman>

14. This object, which was inspired by a drawing the author did with his stepson Lloyd Osbourne, is marked with red ink. For 10 points each:

[10] Identify this object, the discovery of which in Billy Bones's chest in the Admiral Benbow Inn prompts Squire Trelawney to organize a journey with Dr. Livesey and Jim Hawkins.

ANSWER: the treasure **map** [or the treasure **chart**]

[10] The map from *Treasure Island* refers to the island by this name. On the island itself, Captain Flint, left one of these objects to point the way to the heading place of the treasure.

ANSWER: **skeletons**

[10] *Treasure Island* is an adventure novel by this Scottish author of *Kidnapped* and *Dr Jekyll and Mr Hyde*.

ANSWER: Robert Louis **Stevenson** <Brownstein>

15. Identify the following about the controversial Orders in Council, for 10 points each.

[10] One version of the Orders in Council required American ships to pay steep taxes before they were allowed to trade with this country. The Convention of 1800, signed a few years earlier, had ended an undeclared war between the United States and this country.

ANSWER: **France** [or the First **French** Republic; or First **French** Empire]

[10] James Madison once said that he would have delayed declaring this war with Great Britain if he had known that the Orders in Council had been rescinded. The Battle of New Orleans was fought after the peace treaty ending this war was signed.

ANSWER: War of **1812**

[10] In the buildup to the War of 1812, Anglo-American relations were hurt by the British bombardment of this ship in June of 1807 by the HMS *Leopard* off the coast of Norfolk. Thomas Jefferson passed the Embargo Act in retribution for the bombing of this ship.

ANSWER: USS **Chesapeake** <Bentley>

16. These two numbers are the range and integral of the Dirac delta function, respectively. For 10 points each:

[10] Name the two values used as digits in the binary number system.

ANSWER: **zero** AND **one** [accept in either order; accept **unity** in place of **one**]

[10] This other delta function, which is named after a German mathematician, takes two numbers as inputs and returns one if they are equal and zero if they are not. The entries of the identity matrix are equal to this function's output when the indices of the matrix are the inputs.

ANSWER: **Kronecker** delta function

[10] Dummy variables take the values zero and one in this form of statistical analysis that estimates the relationship between a set of input variables and a response variable. Its most common form is ordinary least squares.

ANSWER: linear **regression** analysis [or word forms like running **regressions**] <Aggarwal>

17. This man's correspondence with the castrato Farinelli was a major source for the biography of him by Ralph Kirkpatrick, whose namesake K numbers are now used to catalog this man's works. For 10 points each:

[10] Name this Neapolitan Baroque composer whose *Cat Fugue* and thirty *Essercizi* are among his 555 keyboard sonatas.

ANSWER: Domenico **Scarlatti** [or Giuseppe Domenico **Scarlatti**]

[10] A number of Scarlatti's sonatas were recorded by the harpsichordist Wanda Landowska, who also recorded harpsichord versions of many works by this Baroque composer, including the *Goldberg Variations* and the *Well-Tempered Clavier*.

ANSWER: Johann Sebastian **Bach**

[10] Unfortunately for her, Landowska died two years before the premiere of this American composer's *Double Concerto for Harpsichord and Piano*. This composer of *A Symphony of Three Orchestras* wrote more than 60 works between age 90 and his 2012 death at age 103.

ANSWER: Elliott **Carter** [or Elliott Cook **Carter**, Jr.] <Carson>

18. During World War II, the British launched Operation Ironclad to keep Allied control of this modern-day country. For 10 points each:

[10] Identify this country, where Christian missionaries were expelled in the early 19th century under its queen, Ranavalona I.

ANSWER: **Madagascar** [or Republic of **Madagascar**]

[10] Colonial officials from this country were convinced that the 1947 Madagascar Revolt had been backed by either the British or the Americans. This country also colonized Niger and the Ivory Coast.

ANSWER: **France** [or **French Republic**]

[10] The Merina kingdom in Madagascar instituted a form of this practice, later employed by the French to provide labor to build railroads. The mit'a system in the Incan Empire was another type of this system of forced labor.

ANSWER: **corvée** [or **statute** labor] <Bentley>

19. Answer the following about restoring and conserving works of art, for 10 points each.

[10] Restorer may remove layers of this substance from the outer surface of a painting. This type of dissolved resin adds a transparent glossy sheen to oil paintings but usually causes the painting to become darker with age.

ANSWER: varnish

[10] To preserve these types of works, they are sometimes scraped off the wall on which they were painted. Mexican artists such as Diego Rivera helped revive this technique, which involves painting directly onto wet plaster, to create murals.

ANSWER: fresco

[10] In 2014, the Harvard Art Museum used projectors to restore some light-damaged paintings by this artist to their original colors. This artist was commissioned to create the Seagram Murals for the Four Seasons restaurant, though he later backed out of the project.

ANSWER: Mark Rothko [or Markus Yakovlevich Rotkovich] <Bentley>

20. A chapter of this author's best known novel excerpted in the *Partisan Review* in 1954 instructed many readers on how to get sized for a diaphragm like Dottie Renfrew. For 10 points each:

[10] Identify this author of *The Company She Keeps* who told Vassar graduates such as Helena Davison in her best-selling novel *The Group*.

ANSWER: Mary McCarthy [or Mary Therese McCarthy]

[10] McCarthy was a close friend of this intellectual who wrote of the "banality of evil" in covering the trial in Israel of a Nazi official who claimed that he just "doing his job". She also wrote *The Origins of Totalitarianism*.

ANSWER: Hannah Arendt [or Johanna Arendt]

[10] In *The Group*, Hallie Flanagan becomes the head of a Federal Theatre Project established under this US President. Unlike in real life, this Democrat loses the 1940 election to Charles Lindbergh in Philip Roth's alternate history *The Plot Against America*.

ANSWER: Franklin Delano Roosevelt [or FDR] <Bentley>

21. A knight hands over a collection of jewels to secure the safety of his two daughters in this artist's painting *The Ransom*. For 10 points each:

[10] Name this 19th-century artist, whose other paintings include a portrait of Cardinal Henry Newman and his controversially realistic *Christ in the House of His Parents*.

ANSWER: John Everett Millais (MILL-ay)

[10] Millais, William Holman Hunt, and Dante Gabriel Rossetti were the founders of this artistic movement, whose members mocked Sir Joshua Reynolds and sought to return art to a state prior to influence of Mannerism and the High Renaissance.

ANSWER: the Pre-Raphaelite Brotherhood [or the PRB; or the Pre-Raphaelites]

[10] Another portrait by Millais shows this man standing near a waterfall in Scotland. He coined the term "pathetic fallacy" in his multi-volume *Modern Painters*, which champions the work of J. M. W. Turner.

ANSWER: John Ruskin <Jose>