

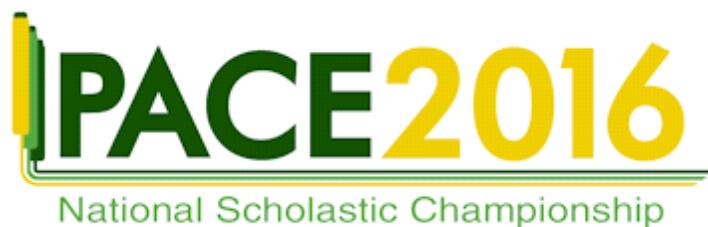
**2016 NSC - Official Scoresheet**

Round	03	Room	
Bracket			
Reader			

Team									Team								
Player Names																	
Q#					Bonus	Steals	Ques. Total	Run. Score						Bonus	Steals	Ques. Total	Run. score
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OT																	
Player 20s																	
Player 10s																	
Point totals																	
Final score																	
	Substitutions before Tossup 11								Substitutions before Tossup 11								
	Out:				In:				Out:				In:				
	Out:				In:				Out:				In:				

Circle winning team above. Clearly mark if game goes to OT/SD. Fill out "Point totals" row completely. If there are substitutions, please note tossups by each player in "20s" and "10s" rows. Below is for Tab Room use only:

RH	RS	BH	BS	Left	Right	BH	BS	RH	RS
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PACE NSC 2016 - Round 03 - Tossups

1. Solutions of this ion turn green after adding ammonium heptamolybdate. During Maxam-Gilbert sequencing, this ion is radioactively labeled and incorporated into cells. Two of these ions linked together are given the prefix "pyro." Salts of this *anion* and chloride compose a common biological buffer that's isotonic to blood. This fully deprotonated molecule has three (\*) pKa values at 2.1, 7.2, and 12.7. This ion is called "inorganic" when it's a monomer. The first step of glycolysis attaches this tetrahedral ion to glucose through the enzyme glucokinase. It comprises the polar head groups in the cell membrane, and it links sugars in the backbone of DNA. For 10 points, name this ion with a negative-three charge and four oxygen atoms bonded to a central phosphorus.

ANSWER: phosphate ion [or PO<sub>4</sub><sup>3-</sup> until "phosphorus" is read] <Silverman>

2. This figure shares his name with a historian from Halicarnassus whose *Romaike Archaeologica* is a source of Etruscan mythology. The Rhodope Mountains were sacred to this figure, who was worshiped in an ancient temple now found at Baalbek. This god's attributes include the *kantharos*, a two-handled cup, as well a *bassaris* fox skin, which is why his followers are sometimes called *bassarids*. (\*) Dithyrambs were songs that honored this god, whose followers carried a pinecone-topped staff called the *thyrsus*. This god was born after his mother foolishly asked to see Zeus in all of his glory; after the resulting death of Semele, he was stitched into Zeus's thigh and reborn. Liber and Bacchus are alternate names of, for 10 points, what Greek god of revelry and wine?

ANSWER: Dionysus [or Dionysius; accept Bacchus until it is mentioned; accept Liber until it is mentioned] <Jose>

3. Papers detailing a plan to raid this city and kill its leader were found on the body of Ulric Dahlgren. In this city, a politician threw all of the money in his pockets at a group of women protesting high prices during this city's "bread riot." A month after fleeing this city, a man was arrested in Georgia, allegedly while wearing women's clothes, and had his bail paid by Horace Greeley. After a leader left this city on a train to (\*) Danville, retreating troops set fire to its strategic locations, resulting in the destruction of large parts of this city. This city was captured after the fall of Petersburg. Because of its superior industry, this city replaced Montgomery as the capital. For 10 points, name this Virginia city that served as the capital of the Confederacy.

ANSWER: Richmond, Virginia <Weiser>

4. TS65Dn mice share many of the genes found on this structure. The most common form of ALS is caused by a defect of this genetic structure, since it encodes the superoxide dismutase SOD1. Because the amyloid precursor protein is encoded by this structure, over-expression from it nearly always causes Alzheimer's disease. This genetic structure found in all humans is the smallest object observed in a Giemsa stain. It acquires an extra (\*) long arm in the most common Robertsonian translocation. A disease of this structure is often accompanied by small white spots on the irises and a flat face. Aneuploidy of this structure, as seen in a karyotype, leads to the most common mental retardation in children. For 10 points, name this chromosome that is trisomic in Down Syndrome.

ANSWER: chromosome 21 [or Hsa21] <Silverman>

5. Charles Tilly compared state-making and this behavior to organized crime. James Fearon used a bargaining model to resolve the inefficiency puzzle of why it is pursued despite its cost. Kenneth Waltz examined this behavior through three "images of analysis." A book that sets forth a "fascinating trinity" of this behavior analogized confusion during it to a "fog." A 1973 resolution restricted the (\*) President's ability to engage in this behavior without a congressional declaration. Clausewitz declared this behavior an extension of policy by other means. Thomas Friedman claimed that this behavior has not occurred between two countries with McDonald's. The Geneva Conventions mandate humanitarian treatment during these events. For 10 points, name this kind of armed conflict among states.

ANSWER: war [or armed conflict until mentioned] <Kothari>

6. In a painting by this artist, the sun and the moon are encased in a cloud above an ancient temple and a flag appears in factory smoke on opposite sides of a borderline. A skyscraper inside a volcano is one of the objects floating in a bathtub in this artist's *What the Water Gave Me*. A painting by this artist depicts its subject's body split in two and drilled with nails. Lingering pain from having been (\*) hit by a bus is symbolized in this artist's painting *The Broken Column*. A vein connects the two hearts of two depictions of this artist in one painting. A necklace decorated with a dead hummingbird and a monkey appear in another of this artist's self-portraits. For 10 points, name this Mexican artist, the wife of Diego Rivera.

ANSWER: Frida Kahlo [or Magdalena Carmen Frieda Kahlo y Calderón or Frida Kahlo de Rivera] <Bentley>

7. The protagonist of this novel gives sticks to a statue of Jesus and later smashes the statue when it does nothing with them. The mother of this novel's protagonist dies shortly after witnessing a man using a horse's head as bait while trying to fish for eels. Before becoming an engraver of gravestones in Dusseldorf, this novel's protagonist leads a gang called "The Dusters." The protagonist of this novel writes his (\*) memoirs from an asylum after he finds a bloody finger in the field and confesses to Sister Dorothea's murder. This novel centers on a character who can shatter glass with his voice, and it is the first part of its author's "Danzig Trilogy." For 10 points, name this novel in which Oskar Matzerath refuses to grow up, written by Gunter Grass.

ANSWER: *The Tin Drum* [or *Die Blechtrommel*] <Jose>

8. This composer wanted the Wagnerian soprano Kirsten Flagstad to premiere a set of songs which were collected posthumously by his friend Ernst Roth. One of those four songs about death by this composer is based on Joseph von Eichendorff's poem "Im Abendrot" (ihm AH-bend-roht). This composer wrote an *Olympic Hymn* for the Berlin Olympics in 1936. A piece by this composer uses the D clarinet to depict the title (\*) trickster walking to the gallows before a squawk indicates his death. He used an unresolved high B chord to end the "Song of the Night Wanderer" section of one of his works. The notes C - G - C open the "Sunrise" movement of that work by this composer of *Till Eulenspiegel's Merry Pranks*. 2001: A *Space Odyssey* features, for 10 points, what composer's *Also Sprach Zarathustra*?

ANSWER: Richard **Strauss** (ree-kard strowss) <Alston>

9. At a party in this novel, a pregnant woman socializes with the guests while her husband hides behind a newspaper. A letter rejecting a woman in this novel is accompanied by a lock of the woman's hair that the sender had cut and kissed. A couple in this novel meet when the man helps the woman up after she slips and falls in the rain. A man in this novel is disinherited by his aunt for seducing the fifteen-year old (\*) Eliza Williams. In this novel, Robert, the brother of the proprietress of the Norland estate, marries the gold-digger Lucy Steele. A woman in this novel ends up with the older Colonel Brandon instead of the charming John Willoughby. For 10 points, Elinor and Marianne Dashwood personify the two title traits of what novel by Jane Austen?

ANSWER: ***Sense and Sensibility*** <Gupta>

10. These objects were boiled in wine as part the Mos Teutonicus process. Bohemond of Taranto used a chicken and a box supposedly containing one of these things to escape from Antioch. Pope Stephen IV threw one of these objects in the Tiber after putting it on trial in a namesake synod. The Mongol general Janibeg ordered objects of this type to be thrown over the walls of (\*) Caffa in 1345. In 2013, one of these objects was found in a parking lot on the former site of Greyfriars church; that object of this sort belonged to Richard III. The interiors of these objects were studied by Andreas Vesalius, and the remains of these objects feature in the Danse Macabre artistic motif. For 10 points, name this sort of object, one of which was exhumed for the Cadaver Synod.

ANSWER: **corpses** [or dead **bodies**; or **skeletons**; or **cadavers**; or dead **people**; or other obvious equivalents] <Brownstein>

11. A hundred men of "Hyperborean extraction" come to work at this location, from which they ship their product off to places like Bombay and Charleston. A chapter about the "Former Inhabitants" of this place includes Hugh Quoil, a drunkard who fought at Waterloo and occupied Lyman's tenement. While staying at this location, an author wrote the travelogue *A Week on the (\*) Concord and Merrimack Rivers*. The chapter "Where I Lived and What I Lived For" describes the author's residence at this place. That author built a cabin and planted his own bean-field during the two years, two months, and two days he spent living at this location, a experience described in a book subtitled "Life in the Woods." For 10 points, name this pond that titles a book by Henry David Thoreau.

ANSWER: **Walden** Pond <Jose>

**12. A thaumaturge from this country is said to have ascended into heaven by transforming into a sword and then into a pillar of smoke. A religion from this country describes the "Director of Destinies," who lives on one of this country's "Five Sacred Mountains" and is able to shorten and lengthen a man's lifespan. The Queen Mother of the West possesses immortality-granting peaches on this country's (\*) Kunlun. Ancient people in this country often communicated with their ancestors by scrawling prophecies on tortoise shells or scapulae called "oracle bones." The Jade Emperor is said to rule from heaven in a religion from this country whose name translates as "The Way." For 10 points, name this country where birth and death are symbolized by "yin" and "yang."**

ANSWER: China [or People's Republic of China] <Jose>

**13. During this conflict, fighting in the Usaylan region ended with the capture of Saeed. Cyclone Chapala caused significant damage during this conflict, which led one side's government to suspend school operations in the Shabwah and Socotra governorates. A provisional presidential council consisting of five people was set up by a group whose name means "Supporters of God" during this conflict; that group is a (\*) Zaidi Shia movement. Al-Qaeda in the Arabian Peninsula is heavily embroiled in this conflict, whose parties include former president Ali Abdullah Saleh and the Houthis. For 10 points, identify this large-scale conflict against the presidency of Abd Rabbah Mansur Hadi, who fled to Aden from the capital Sana'a.**

ANSWER: Yemeni Civil War [accept answers indicating a civil conflict in Yemen] <Jose>

**14. This man issued the "Decree of Infallibility," which required the *ulama* to recognize him as the arbiter of all religious doctrine. This man rooted out corruption in the army by appointing *mansabdars* who were paid a fixed salary. This man built the *Buland Darwaza*, or "Gate of Victory" to commemorate his conquest of Gujarat. A biography of this man was written by Abu'l-Fazl, one of this king's "nine jewels." This king ordered a "House of (\*) Worship" called Ibadat Khana to be built in Fatehpur Sikri to further the cult of personality he founded called *Din-I-Ilahi*. This emperor won the Second Battle of Panipat, abolished the *jizya* tax on non-Muslims, and was succeeded by Jahangir. For 10 points, name this "great" Mughal Emperor who was the son of Humayun.**

ANSWER: Akbar the Great <Jose>

**15. Hubbard theory is used to describe a type of these materials which have an odd number of electrons per unit cell, which only exist at low temperatures and are named for Neville Mott. One type of these materials have protected spin states on their surface, which allows an exception to their defining characteristic by creating intermediate energy states above the (\*) valence band. Many of these materials can increase the capacitance of a system, a consequence of having high dielectric constants. A sufficiently high voltage will cause these materials to break down, allowing electrons to cross to their conduction band. For 10 points, name these materials that resist the flow of current.**

ANSWER: insulators [accept Mott insulators or topological insulators; prompt on dielectrics until "dielectric" is read] <Wang>

**16. This author wrote "I'll go out in the frosty dark and sing most terribly" in a poem whose speaker refuses to sing a "May song." This author described "two who are Mostly Good, two who have lived their day" in a poem in which "plain chipware on a plain and creaking wood" is used for the "casual affair" of dinner. This author of "The Crazy Woman" fictionalized her youth in the (\*) Bronzeville neighborhood in her poetry collection *Annie Allen*. This one-time Poet Laureate of Illinois wrote the collection *The Bean Eaters*, which includes a poem set at the Golden Shovel in which the title figures "skip school," "jazz June," and "die soon." For 10 points, name this first African-American author to win the Pulitzer Prize in poetry, the author of "We Real Cool."**

ANSWER: Gwendolyn Brooks <Jose>

**17. People of this type were led by a drummer boy named Hans Bohm in a bonfire of vanities. Several movements of these people used a flag depicting the "bound shoe." A call for "everyone who can [to] smite, slay, and stab" these people was issued during a war in which they were briefly led by a knight with an iron prosthetic hand. The abolition of the death tax was demanded in the Twelve Articles issued by these people. Before the Battle of Frankenhausen, a movement of these people in (\*) Swabia was led by Thomas Muntzer. A revolt of these people was condemned in a pamphlet about "murderous and thieving hordes" by Martin Luther. For 10 points, name this class of agricultural laborers who name a 15th-century war in Germany.**

ANSWER: German peasants [prompt on related terms like serfs, villeins, or farmers] <Brownstein>

**18. Binary space partitioning is often done using the "oct-" variant of these entities. Hidden surface removal can often be done with the "quad-" variant of them. The order of elements varies when performing a depth-first traversal of these things depending on whether the traversal is pre-order, post-order or in-order. They are isomorphic to directed acyclic graphs. Georgy Adelson-Velsky and Evgenii Landis developed the self-balancing (\*) "AVL" variant of these structures, which use "rotations" when a new element is added to one of them. Two "children" can be found at the bottom of every level in the "complete binary" type of these structures. For 10 points, name these data structures which begin with a root node, and whose lowest level nodes are called leaves.**

ANSWER: tree [or octree or quadtree or AVL tree or complete binary search tree] <Jose>

**19. The "Dutch Process" for preparing a pigment of this color involved heaping buckets of animal manure around clay pots full of metal and acetic acid; that pigment of this color was used to make Venetian Ceruse, a cosmetic that often gave women lead poisoning. Beeswax was used in a Jasper Johns painting using this color only to depict the U.S. flag. Because of its large collection of Bauhaus buildings, part of Tel Aviv is nicknamed the "city" of this color. Joanna (\*) Hiffernan appeared in a dress of this color in three "symphonies" created by James Whistler. James Hoban designed a building named after this color whose address is 1600 Pennsylvania Avenue. Neoclassical buildings and sculptures made use of, for 10 points, what color that describes the "House" of the American President?**

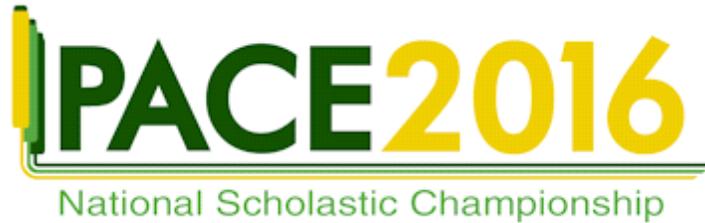
ANSWER: white <Jose>

20. In this work's preface, a man purchases a writing desk at a second-hand store and hacks it open to find two manuscripts. A person in this work asks "Who deserves to be the unhappiest?" in a section addressed to the *Symparankromenoi* (SIM-pah-rah-neh-KRO-meh-noi), a club that writes posthumous papers. It asks "What is a poet?" in its group of aphorisms, *Diapsalmata*. The (\*) narrator of one section of this book advocates staving off boredom with "crop rotation." *Stages on Life's Way* is a follow-up to this book, in whose second section Judge Vilhelm tries to convince "A" of the validity of marriage. The aesthetic life view is contrasted with the ethical and religious in this 1834 work, which is attributed to Victor Eremita. For 10 points, name this two-volume book by Søren Kierkegaard.

ANSWER: *Either / Or* [or *Enten-eller*] <Jose>

21. Aciclovir is built from a hydroxymethyl group bound to this compound. Cisplatin prevents a "suicide enzyme" methyltransferase from binding this compound. It can be formed by reductive amination of xanthine. This compound's namesake exchange factors, which oppose GAPS, add a phosphate group to a (\*) di-phosphorylated derivative of this compound. The 5-prime cap is formed from a ribosylated, methylated form of this compound. This compound, which has an imidazole ring, donates two hydrogen bonds and accepts one. A class of proteins named for this compound act as molecular switches after receiving signals from GPCRs. This purine is rich in very stable DNA sequences. For 10 points, name this nitrogenous base that pairs with cytosine.

ANSWER: guanine [or guanosine] <Smart>



### PACE NSC 2016 - Round 03 - Bonuses

1. Gordon Allport's book titled for the "The Nature of" this concept introduced the idea of ethnic stereotyping to the field of psychology. For 10 points each:

[10] Name these positive or negative attitudes towards individuals simply based on their membership in some group. Its name literally means "pre-judgment."

ANSWER: **prejudices**

[10] Gordon Allport is often credited with introducing this theory, which states that prejudice towards a group decreases as one interacts more with that group.

ANSWER: **contact** hypothesis [or intergroup **contact** theory]

[10] Robert Butler coined this term to describe acts of prejudice against the elderly. One example of this type of discrimination is "benevolent prejudice," in which the elderly are treated as friendly but incompetent.

ANSWER: **ageism** [or **ageist**] <Jose>

2. Answer the following about some influential political cartoons in American history, for 10 points each.

[10] An early color cartoon from *Puck* magazine lampooned this presidential candidate as the "tattooed man" whose body was covered in a sea of scandals. His namesake amendments barred government funding for parochial schools.

ANSWER: James G. **Blaine** [or James Gillespie **Blaine**]

[10] This rival of Blaine in the 1884 election was himself attacked with cartoons where an infant asks, "Ma, Ma, where's my Pa?" This Democrat served two non-consecutive terms as President.

ANSWER: Grover **Cleveland**

[10] A *Puck* cartoon depicting anthropomorphized money-bags as the "Bosses" of this group, as well as David Graham Philip's writings on its "Treason," helped inspire the reform of this institution by the 17th Amendment.

ANSWER: the United States **Senate** [prompt on **Congress**] <Bentley>

3. Leonid Brezhnev engages in a "fraternal" form of this action in an image spray painted onto the Berlin Wall by Dmitri Vrubel. For 10 points each:

[10] Name this action, which is also the subject of a Francesco Hayez painting in Milan. Paolo and Francesca engage in it in an Auguste Rodin sculpture.

ANSWER: kissing [or obvious equivalents; prompt on embracing or similar]

[10] Long hair is one of the few features distinguishing the woman from the man in a sculpture by this artist titled *The Kiss*. He created the *Table of Silence* for a complex at Targu Jiu.

ANSWER: Constantin Brâncuși (brin-KOOSH)

[10] In Andy Warhol's film *Kiss*, this pop artist can be seen kissing Marisol Escobar. This artist created *LOVE* sculptures, which consist of four letters stacked on top of each other.

ANSWER: Robert Indiana <Bentley>

4. For 10 points each, name the following writers who created detectives.

[10] Mervyn Bunter is the valet of amateur sleuth Lord Peter Death (**DEETH**) Bredon Wimsey, who solves bizarre crimes in *The Nine Tailors* and *Gaudy Night*, two novels by this author who was also acclaimed for her translation of Dante.

ANSWER: Dorothy Sayers [or Dorothy Leigh Sayers]

[10] This author's novel *The Moonstone*, commonly considered the first detective novel in English, popularized the "locked room" trope, in which a crime is committed under seemingly impossible circumstances.

ANSWER: Wilkie Collins [or William Wilkie Collins]

[10] Hercule Poirot (**her-KYUEL pwah-ROW**), who deduces that a whole group of people were responsible for the death of Mr. Ratchett, appears in this author's novel *Murder on the Orient Express*. She also created the sleuth Miss Jane Marple.

ANSWER: Agatha Christie [or Dame Agatha Mary Clarissa Christie; or Agatha Mary Clarissa Miller] <Jose>

5. Eduardo Constantini largely funded a museum of Latin American art in this city named MALBA. For 10 points each:

[10] Name this so-called "Paris of the South," which is home to the world's largest opera house, the Teatro Colón. The Pink House, or La Casa Rosada, in this city houses its country's president.

ANSWER: Buenos Aires

[10] Buenos Aires is the largest city of this country, which is bordered to the west by Chile. It sits at the mouth of the Río de la Plata.

ANSWER: Argentina

[10] The La Recoleta neighborhood in Buenos Aires is home to a Neo-Gothic/Art Deco location of this type. Legend has it that Sara Braun gave everything she had to build one of these places in Punta Arenas in Chile.

ANSWER: cemetery [or necropolis] <Jose>

6. This type of inversion is comparable to taking the mirror image of an object. For 10 points each:

[10] Name this quantity that was found to not be conserved in the beta decay of cobalt-60.

ANSWER: **parity** [prompt on p]

[10] Though parity conservation sometimes does not exist, the laws of physics are symmetric with a combination of parity inversion, time reversal, and the conjugation of this quantity.

ANSWER: **charge** [prompt on c]

[10] Parity is not conserved in this fundamental force whose carrier particles are the W and Z bosons and which allows quarks to change flavors. In 1979, the Nobel Prize in Physics was given for the unification of this force with electromagnetism.

ANSWER: **weak** interaction [or **weak** nuclear force; prompt on electroweak interaction]

<Reinstein>

7. In a modified formulation of Raoult's Law, this quantity times the liquid phase mole fraction times the vapor pressure equals the fugacity. For 10 points each:

[10] Name this dimensionless quantity which represents the non-ideal interactions between two components in a liquid solution.

ANSWER: **activity coefficient** [do not accept or prompt on "activity"]

[10] If the activity coefficients are not unity, then activities and not molarities should be used in this equation, which sets the equilibrium constant equal to the product of each species' concentration raised to its stoichiometric coefficient.

ANSWER: law of **mass action** [or **mass action** expression]

[10] A common example of an activity coefficient less than one is observed in the mixture of chloroform with this simplest ketone, the major component of nail polish remover.

ANSWER: **acetone** [or **dimethyl ketone**] <Silverman>

8. Answer the following about notable 216-hour periods in Greek mythology, for 10 points each.

[10] After Hephaestus was thrown off of Mount Olympus, he fell for nine days and nine nights before landing on this island. Philoctetes was left behind on this island during the Trojan War due to a festering wound.

ANSWER: **Lemnos**

[10] Leto spent nine days and nights in labor on this floating island before the arrival of Eileithyia finally allowed her to give birth to Apollo and his sister.

ANSWER: **Delos**

[10] Hesiod's *Theogony* states that it would take an anvil nine days and nights to fall from the earth and reach Tartarus, which was actually located below the underworld ruled by, and often named for, this Greek god.

ANSWER: **Hades** [or **Pluto**] <Jose>

9. Millicent Fawcett claimed that this war "found women serfs and left them free." For 10 points each:

[10] Name this war during which British women over thirty gained the right to vote via the 1918 Representation of the People Act.

ANSWER: **World War I** [or the **Great War**]

[10] Along with her sister Christabelle, this leader of the suffragist movement in Britain controversially halted activities of the Women's Social and Political Union to campaign for the war effort.

ANSWER: Emmeline **Pankhurst** [or Emmeline **Goulden**]

[10] 101 British suffragists signed a 1914 open letter of this name calling for the end of World War I. A 1914 "truce" by this name involved widespread but unofficial ceasefires along the trenches of the Western Front.

ANSWER: **Christmas** [or Open **Christmas** Letter; or **Christmas** Truce] <Brownstein>

10. A poem about a woman carrying these things in a paper bag repeats the words "they taste good to her" three times. For 10 points each:

[10] Name this sort of fruit that the speaker of "This is Just to Say" admits to taking from the icebox even though "you were probably saving [them] for breakfast."

ANSWER: **plums**

[10] "To a Poor Old Woman" and "This is Just to Say" were written by this American poet whose other poems include one observing "So much depends upon a red wheelbarrow."

ANSWER: William Carlos **Williams**

[10] Kenneth Koch, a poet from this city, parodied "This is Just to Say" with lines like "I chopped down the house that you had been saving to live in next summer." Poets from a school named for this city include Frank O'Hara and John Ashbery.

ANSWER: **New York** City [or **NYC**] <Brownstein>

11. The main text of this religion, the *Holy Koran*, draws largely on the *Aquarian Gospel of Jesus the Christ* by Levi Dowling. For 10 points each:

[10] Name this religion, started by the self-styled Drew Ali, which held that African-Americans were descended from North Africans. An offshoot of this early 20th century movement developed into Nation of Islam.

ANSWER: **Moorish Science** Temple of America

[10] After Wallace Fard split from the Moorish Science Temple, he founded the more militant Nation of Islam, and was succeeded by this man, a mentor to Malcolm X.

ANSWER: **Elijah Muhammad** [or Elijah Robert **Poole**; prompt on **Muhammad**]

[10] Drew Ali was inspired by the magic of this ancient country's gods, such as Thoth and Hathor, to develop some of the history of the Moorish Science Temple.

ANSWER: **Egypt** <Jose>

12. In his *Wissenschaftslehre* (**VISS-en-shofts-LAY-ruh**), this thinker suggested that philosophy focus on the "I" that apprehends both external and mental objects. For 10 points each:

[10] Name this philosopher who argued that revealed religion contributes to the development of humanity in his *Attempt at a Critique of All Revelation*.

ANSWER: Johann Gottlieb **Fichte** (**FICK-tuh**)

[10] Fichte was dismissed from the University of Jena (**YEN-uh**) for arguing that God was just a moral order that pervades the universe, which led his opponents to accuse him of this belief of the nonexistence of God.

ANSWER: **atheism**

[10] In *The Vocation of Man*, Fichte considers the idea that the world has this property, in which the future is set because events are necessitated by physical law. Compatibilists believe that it can coexist with free will.

ANSWER: **determinism** [or **deterministic**] <Jose>

13. This country decided to adopt a "strike south" strategy after losing the Battle of the Khalkhin Gol River. For 10 points each:

[10] Identify this country, whose subsequent military campaigns reached a high point when the code words "Tora! Tora! Tora!" were relayed to indicate an operation had been carried out successfully.

ANSWER: **Japan**

[10] The message "Tora! Tora! Tora!" was relayed following the Japanese attack on this US naval base on December 7, 1941.

ANSWER: **Pearl Harbor**

[10] This Soviet general helped lead the counteroffensive against the Japanese army in Manchuria. He won the Battles of Stalingrad and Kursk and later protected Khrushchev from an attempted coup by the Anti-Party Group.

ANSWER: Georgy Konstantinovich **Zhukov** <Bentley>

14. For 10 points each, answer the following about familiar phrases in ancient literature:

[10] This author discusses a *novus ordo seclorum*, or new world order, in one of his poems sometimes interpreted as a prophecy about the coming of Christ. A poem attributed to him called *Moretum* used a variant of the phrase *e pluribus unum*.

ANSWER: **Virgil** [or Publius **Vergilius** Maro]

[10] Virgil's *Aeneid* begins with the proclamation *Arma virumque cano*, in which the poet claims to sing of these two specific things.

ANSWER: **arms** and the **man** [accept answers in either order]

[10] Virgil's agricultural poem *Georgics* contains the first recorded instance of the remark *tempus fugit*, which translates as *this* abstract concept "flies."

ANSWER: **time** <Jose>

15. The limit superior of a sequence is defined as this function of the set of limit points of the sequence. For 10 points each:

[10] Name this lowest upper bound of a set of numbers. The completeness of the real numbers  $R$  states that every bounded subset of  $R$  has this bound, which is typically larger than the set's infimum.

ANSWER: **supremum** [prompt on least upper bound or LUB]

[10] The supremum is used to define the Lebesgue (**luh-BEG**) type of this operation. Its Riemann (**REE-mon**) form intuitively measures the area under a curve.

ANSWER: **integration** [or taking the **integral**; or equivalent; prompt on antiderivative]

[10] These formulas are useful when performing the Weierstrass (**VYE-er-stross**) substitution to find an integral. One of these trigonometric identities states that the sine of a namesake function of  $x$  is equal to "plus or minus the square root of one minus cosine of  $x$  all over two."

ANSWER: **half-angle** formulas [accept answers indicating **half-angle** functions] <Hothem>

16. This English artist paid a porter to grow out his black beard to serve as his model for *The Death of Cardinal Beaufort*. For 10 points each:

[10] Name this artist of *Sarah Siddons as the Tragic Muse*. He explained how recognizing a pose borrowed from a classical work of art could be pleasurable in the lectures he gave as the first president of the Royal Academy.

ANSWER: Joshua **Reynolds**

[10] Reynolds is the subject of a portrait by Gilbert Stuart, an artist best known for his Lansdowne portrait of this man. Charles Wilson Peale painted this general at the Battle of Princeton.

ANSWER: George **Washington**

[10] Reynolds's paintings of this deity include one where he unfastens a goddesses' girdle. This god features in a painting whose background figures include a boy throwing rose petals and a girl with a serpent's tail holding a honeycomb.

ANSWER: **Cupid** [or **Eros** or **Cupido**] <Bentley>

17. This author published a bizarre treatise using the cities of Bologna and Rome as endpoints on a scale about the effects of love. For 10 points each:

[10] Name this author, whose *Italian Chronicles* contains an adaptation of *The Cenci*. One of this author's protagonists fights for Napoleon at Waterloo and is locked up in a tower for murdering Giletti, despite the influence of Count Mosca.

ANSWER: **Stendhal** [or Marie-Henri **Beyle**]

[10] This novel by Stendhal ends with its protagonist, Fabrizio del Dongo, retiring to the title Italian monastery.

ANSWER: *The **Charterhouse of Parma*** [or *La **Chartreuse de Parme***]

[10] The title of one of Stendhal's novels pairs this color with "Red," where it symbolizes the clergy. Alexander Dumas wrote a novel about a contest to grow a tulip of this color.

ANSWER: **black** [or **noir**] <Jose>

18. In the tango-like first movement of Satie's *Descriptions automatiques*, one of these objects "chuckles" during a quote of a children's song asking if they have legs. For 10 points each:

[10] Name this object in the title of the third movement of Ravel's *Miroirs* (**meer-WAHR**), which begins in dual 2/4 and 6/8 time with a wide left-hand arpeggio tracing out an F-sharp minor seventh. A tam-tam depicts the destruction of one of these objects in *Scheherazade*.

ANSWER: a **boat** [accept equivalents like **ship** or **bark**; accept **barque**, **bateau**, or **vaisseau**; accept any specific kind of **boat**]

[10] This word follows "Petite" in the title of a set of pieces for piano four-hands beginning with "En bateau" (**on bah-TOH**), or "Sailing." This is the first word in the title of a collection that includes "Clair de lune" and "Passepied" (**pahss-pee-AY**).

ANSWER: **suite** [accept *Petite **suite*** or ***Suite** bergamasque*]

[10] This French composer wrote *Petite suite*, *Suite bergamasque*, and *La mer*.

ANSWER: Claude **Debussy** [or Achille-Claude **Debussy**] <Lifshitz>

19. Activated macrophages produce cytokines like interleukin-1 and TNF-alpha to promote this process. For 10 points each:

[10] Name this immune process in which mast cells release histamine to increase blood flow to an injured region, which then gets red and swells.

ANSWER: **inflammation** [or word forms]

[10] Inflammation is an example of innate or nonspecific immunity, as contrasted with this form of immunity. This type of immunity is acquired after exposure to an antigen through, for example, a vaccination.

ANSWER: **adaptive** immunity [prompt on **acquired** immunity]

[10] Cells produce this class of cytokines in response to viral infections. They come in alpha, beta, and gamma types, and their name refers to their inhibition of viral growth.

ANSWER: **interferons** [or **IFNs**] <Yu>

20. This man's election brought about general strikes which led to the Matignon Accords, by which the rights to strike and to collective bargaining were recognized. For 10 points each:

[10] Name this leader of a French Popular Front government from 1936 to 1937.

ANSWER: Leon **Blum**

[10] Blum was a precursor of this French party which formed at the Alfortville Congress and was once led by Francois Mitterrand.

ANSWER: **Socialist** Party [or **Parti Socialiste**]

[10] A bloody assault on Blum led the government to ban Action Francaise, a right-wing organization which had originally sprung up during the "affair" over this Jewish officer accused of selling secrets to Germany.

ANSWER: Alfred **Dreyfus** <Brownstein>

21. Walter Burkert wrote that the tendency towards sacrifice in this civilization's religion was a transference from violence against animals in his book *Homo Necans*. For 10 points each:

[10] Name this ancient civilization, which often sacrificed one hundred cattle or a *hecatomb* before their ancient contests called the Olympics.

ANSWER: **Greek** civilization

[10] In ancient Greek custom, this was the act of sacrificing an animal by burning it in its entirety. It is contrasted with the *thyesthai*, in which half of an animal was burnt.

ANSWER: **Holocaust** [or **Holokautein**]

[10] Dead humans in ancient Greek custom were often buried with a coin called an *obol* placed in this specific location so they can pay Charon in the afterlife.

ANSWER: in the **mouth** [accept equivalents; or **under the tongue**] <Jose>