



NASAT 2016
Round 11

1. In the finale of this composer's *Symphony No. 5*, horns introduce a theme in long half notes that begins: E-flat, up to B-flat, back down to E-flat. The third movement of his violin concerto begins with timpani playing a "short, short, LONG" rhythm against strings playing a "LONG, short, short" rhythm. A scherzo marked "Vivacissimo" continues without pause into the finale of this composer's *Symphony No. 2 in D major*, written two years before his D minor violin concerto. In one of his tone poems, a solo English horn depicts the motion of a bird in the mythical river of death. Another of his pieces initially disguised its patriotic title to avoid Russian censorship. For 10 points, name this composer of *The Swan of Tuonela* and *Finlandia*.

ANSWER: Jean Sibelius [or Johan Julius Christian Sibelius] <Kim>

2. An attack on this country was tested using Canada as a stand-in during Operation Ghost Rider. After violence took place in this country, Margaret Thatcher was asked if she remembered "that two wrongs do not make a right". The United States has petitioned it to return the body of Air Force Captain Paul Lorence, who was shot down near it. Agents of this country were accused of killing two American sergeants and Nermin Hannay, a Turkish woman. It was attacked by the United States in Operation El Dorado Canyon, a strike that supposedly killed this country's leader's adopted daughter, Hanna. This country was blamed for the bombing of the *La Belle* discothèque in West Berlin. For 10 points, the Reagan administration ordered a 1986 bombing of what African country, then led by Muammar Gaddafi?

ANSWER: Libya [or Libyan Arab Republic; or Great Socialist People's Libyan Arab Jamahiriya] <Cheyne>

3. A character created by this author gives a monologue beginning "I always worry that maybe people aren't going to like me". That character of his is a military cadet who commits suicide after revealing that he is half-Jewish. In a play by this author, a waitress is flattered to hear that her older admirer, Gerald Lyman, has been arrested for making sexual advances on children. He expanded his first play, *Farther Off from Heaven*, into his play about the dysfunctional Flood family, *The Dark at the Top of the Stairs*. Bo Decker pursues the nightclub singer Cherie to the title location of a play by this writer, in which a snowstorm forces a group of people to seek shelter in a restaurant west of Kansas City. For 10 points, name this Midwestern American playwright of *Bus Stop* and *Picnic*.

ANSWER: William Inge <Droge>

4. A subcomplex called GINS, or Go-ichi-ni-san, is bound by Cdc45 and another protein to form one of these enzymes called CMG. Branch migration is facilitated by a hexameric one of these enzymes named RuvB. Proteins in "ring breaker" and "ring maker" classes load these enzymes onto their substrates. WRN and Bloom syndrome proteins belong to the RecQ family of these enzymes. One of these enzymes called MCM2 associates with Cdc6 and ORC subunits to license oris as part of the pre-RC. Topoisomerases relieve the tension created by them in front of the replication fork. For 10 points, name these enzymatic protein complexes that unwind DNA during replication.

ANSWER: DNA helicases [prompt on helicases until "DNA" is read and *accept it* afterwards; prompt on ATPase] <Smart>

5. According to one account, an important ritual of this sect involved having a group of twelve year old boys sleep for three days in a luscious garden. Inductees to this sect went through nine degrees of initiation, ending with knowledge of the power of the Lord of the Time. This group was founded by Hasan-i Sabbah, and they were instrumental in founding the Nizari state. This sect declined after Rukn al-Din Khurshah surrendered the fortress of Alamut to the Mongols. Their leader was mysteriously referred to as "The Old Man of the Mountain". For 10 points, identify this sect that was named after their use of hashish, some of whose members carried out covert killings of their enemies.

ANSWER: Assassins [or Nizari before read] <Droge>

6. This man advised Bill Clinton to "claim and achieve record deportations of criminal aliens" after succeeding George Stephanopoulos in one role. Hidden fees and glitches plagued the rollout of Ventra, a combination metro/debit card created by this man's administration. This mayor's schools CEO, Barbara Byrd-Bennett, resigned amidst a kickback scandal. His administration was protested by a group which shut down part of the Magnificent Mile on Black Friday, 2015. This mayor antagonized Karen Lewis, head of his city's teach union, by closing 50 public schools. His second term has been plagued by the video of a police officer shooting Laquan McDonald. For 10 points, name this former Chief of Staff to Barack Obama, the Mayor of Chicago.

ANSWER: Rahm Emanuel [or Rahm Israel Emanuel] <Bentley>

7. A book on this concept argues against the "semantic sting", which holds that argument over this concept is only possible when certain criteria are shared. A thinker used the example of a bank robbery to refute John Austin's command theory of this concept, and argued that the rule of recognition decides what counts as it. A hypothetical figure capable of arriving at the best moral justification of this thing is dubbed "Hercules" in a book partly titled for this concept. Differing views on this subject's connection to morality separates the positivist and "natural" conceptions of it. H. L. A. Hart wrote about the "concept" of this subject, the "Empire" of which titles a Ronald Dworkin book. For 10 points, name this subject interpreted by judges, which is the system of rules enforced by governments.

ANSWER: law [or legal thought; or Law's Empire; or *The Concept of Law*] <Brownstein>

8. An example of these places employed poet Marianne Moore from 1911 to 1914 in departments such as bookkeeping. A model resident of these places hated wearing the mandatory red flannel underwear, served as an intern for John Wanamaker, and was highly respected by institutional founder Richard Henry Pratt. A 2004 book by Ward Churchill describes the "genocidal impact" of these places. In 1900, an example of these places had a football team coached by Pop Warner, whose star player was Jim Thorpe. That example of these institutions at Carlisle, Pennsylvania, was founded by a person who wanted to "save the man" by killing an old, savage culture. For 10 points, what late 19th century institutions were intended to force assimilation on as well as educate indigenous peoples?

ANSWER: American **Indian** boarding **schools** [or **Native American** boarding **schools**; prompt on indigenous boarding **schools**; do not accept or prompt on "native schools" or "reservations"] <Cheyne>

9. In a novel by this author, a former masseuse of Pauline Bonaparte begins massaging Canova's *Venus Victrix* in the Borghese Palace. This author created a character who is forced to carry bricks made with bull's blood to the top of a mountain during the construction of the Citadelle Laferrière. This author created a character who believes that geese do not value one individual over another, but is rejected by them after transforming into one. In a novel by this author, a mass poisoning of animals and white people is led by the one-armed houngan (hoon-gahn) Mackandal. After the suicide of Henri Christophe in a novel by this author, the mulattoes take control of Haiti. For 10 points, name this author who created the slave Ti Noel in *The Kingdom of This World* and hails from Cuba.

ANSWER: Alejo **Carpentier** [or Alejo **Carpentier** y Valmont] <Collins>

10. This color of light can be produced either by using helium-cadmium lasers, or frequency doubling the ground-state transition for neodymium-doped YAG, in which case you have a quasi-three-level gain medium, instead of a four-level. In a quasar's spectral energy distribution, thermal emission from gas in an accretion disk creates a big bump named for this color. LEDs of this color use indium gallium nitride or gallium nitride substrates. Horizontal-branch stars, common in globular clusters, are often alternately named for a "loop" of this color. Stars of this color typically have a spectral type of O, B, or A, and are plotted on the left side of an HR diagram, in contrast to red stars on the right. For 10 points, identify this color, which Rayleigh scattering imparts to the Earth's atmosphere.

ANSWER: **blue** [or **violet**; or obvious equivalents] <Voight>

11. During a psychiatric examination, this character is asked whether radium is heavier than lead and responds that he has not weighed them. For one assignment, this character only packs copies of the first part of a novel, although its second part was being used to decipher telegrams. After this man loses his documents, he begins walking west instead of south to the front at České Budějovice (CHESS-keh BOO-jeh-YO-vit-seh). At the beginning of the novel this character appears in, he sells mongrel dogs before being arrested for insulting Emperor Franz Josef I. This character is eventually captured by his own forces when he tries on a Russian uniform. For 10 points, name this "feeble-minded" Czech, the title "Good Soldier" of a Jaroslav Hašek (YAH-roh-slav HAH-shek) novel.

ANSWER: Josef **Švejk** (YO-sef sh-VAKE) [or The Good Soldier **Švejk**; or **Josef** Švejk] <Raje>

12. This musician improvised a solo in the style of Bach's *Inventions and Sinfonias* during a rendition of "Love Me or Leave Me". An album titled for this musician's first name *at the Village Gate* includes a cover of "The House of the Rising Sun" predating the version by The Animals. This musician reinterpreted the Screamin' Jay Hawkins ballad "I Put a Spell on You" as a straightforward love song. This musician won early fame for her chart-topping 1958 recording of "I Loves You, Porgy". She is better known for a protest song written in response to the killing of Medgar Evers. For 10 points, name this musician whose songs "Mississippi Goddam", "To Be Young, Gifted, and Black", and "Old Jim Crow" made her a voice of the civil rights movement.

ANSWER: Nina Simone [or Eunice Kathleen Waymon] <Gupta>

13. A 2006 controversy involved artwork created by these people offending students when posted to an online MIT course about "Visualizing Cultures". Milton Caniff created a pamphlet that instructed readers about how to spot these people. Their devastation is chronicled in John Dower's book *Embracing Defeat*. A pamphlet made by the artist of the *Terry and the Pirates* comic strip claims these people shuffle and never smile. A book about these people emphasizes their situational ethics and use of "shame culture" as opposed to American "guilt culture". That book about them was written in 1946 at the behest of the Office of War Information. For 10 points, what people's culture were the subject of Ruth Benedict's book *The Chrysanthemum and the Sword*?

ANSWER: Japanese people [or Nihonjin] <Cheyne>

14. Kolmogorov's three-series theorem gives conditions for when a set of random variables will have this property. If the limit superior of the x th derivative of f -of- x is greater than f -of- x , then an extended real-valued function will have the "hypo-" form of this property. The Stolz–Cesaro theorem can be used to show that the quotient of two functions will have this property if they are monotone and unbounded. The Riemann rearrangement theorem states that the terms of a function can be rearranged to sum to any value if they only possess the "conditional" form of this property. On the other hand, the "absolute" form of this property can be determined by performing the root test, ratio test, and Cauchy's (koh-SHEE's) test. For 10 points, name this property such that a series sums to a finite value.

ANSWER: convergence [or convergent] <Jose>

15. In this province, Julian and Pappos were legendarily executed after giving themselves up to spare a town. The "Thunderbolt Twelfth Legion" lost its eagle standard during an ambush in this province, and this province was the site of the Kitos War. This province contained a location only accessible by a pathway called the "Snake". While not governor of it, Quirinus famously carried out a census of this newly-created province. The Sicarii (sick-CAR-ee) assassins operated in this province. The Arch of Titus commemorates a siege in this province. The Bar Kokhba revolt was fought in this province, where the siege of Masada and the destruction of the Second Temple also occurred. For 10 points, what Roman province was the site of the Great Jewish Revolt?

ANSWER: Judea [or Syria Palaestina; or Roman Syria until "Snake" is read] <Cheyne>

16. Salts of this element are the most common co-catalysts for atom-transfer radical polymerization. This element's phthalocyanine complex is the most commonly studied organic photovoltaic material. High-temperature superconductors often contain flat sheets of oxygen and this element. This element catalyzes the formation of 1,4-disubstituted triazoles from alkynes and azides in a classic "click" reaction. Like chromium, this element's plus-two hexa-aquo ions are not octahedral, owing to a Jahn–Teller distortion. Two atoms of this element bind oxygen in hemocyanin. A red precipitate of this element's oxide indicates the presence of reducing sugars in Benedict's test. This element gives malachite a green color, but its sulfate is deep blue. For 10 points, name this metal that is alloyed with tin in bronze.

ANSWER: copper [or Cu] <MacAulay>

17. When desperate for food, the protagonist of this novel steals a bone from a crippled dog and a sugar cube from a child's grave. A character in this novel has a dream in which he is unable to find a door at the end of a long hallway and decides that he will kill one man in every local village unless they help him track down an outlaw. The protagonist of this novel is brought food and taught Morse code by Coral Fellows while he is hiding out in her family's barn and laments that he has neglected his estranged daughter, Brigida. The "mestizo" is a stand-in for Judas in this book, in which the "lieutenant" uses the premise of a dying gringo's confession to lure the protagonist into a trap. For 10 points, name this novel about a whisky priest by Graham Greene.

ANSWER: *The Power and the Glory* <Droge>

18. Johan Zoffany painted a group portrait in which members of this institution crowd around two nude male models. This institution courted controversy when *Myra*, a portrait of a female child-killer, was shown at its "Sensation" exhibition. Its permanent collection includes a relief sculpture in which John the Baptist gives the bird toward Christ, who is sprawled out on Mary's lap; that sculpture is Michelangelo's *Taddei Tondo*. *Thor Battering the Midgard Serpent* was completed by Henry Fuseli as a "diploma work" for this institution. Annual "Discourses on Art" presented at this institution lay the foundation for the "grand style" of its first president, Joshua Reynolds. For 10 points, name this art institution founded in 18th-century Britain.

ANSWER: Royal Academy of Arts [or RA] <Gupta>

19. A wise sage with this profession shrewdly flatters the guardians Dumuzi and Gishzida in order to avoid a hefty punishment from their master. A Japanese god with this profession is born without bones and unable to walk, so he is set adrift in a boat at the age of three. In his adult form, the "leech-child" Hiruko has this profession, and is depicted as a laughing man with crippled legs named Ebisu. While engaging in this activity, Thor and Hymir mistakenly summon the Midgard Serpent. The poet Finn Eces (FINN-uh-GUSS) spends seven years performing this action, but his efforts are wasted when a young Finn MacCool cooks its end product to obtain all the wisdom in the world. For 10 points, name this activity used to capture the Salmon of Knowledge.

ANSWER: fishing [or fisherman] <Kim>

20. At one meeting, this man claimed that he performed "not bad" despite having to sit between two world leaders he compared to Jesus Christ and Napoleon. This man fiercely responded to accusations that he lied about reducing troop strength during the Maurice Debate. Due to his poor handling of the Chanak Crisis, Conservative leaders convened the Carlton Club meeting in order to discuss the option of leaving this man's coalition government. This man gave the Mansion House speech opposing Germany's role in the Second Moroccan Crisis. This "Welsh Wizard" opposed the plans of Vittorio Orlando and Georges Clemenceau to impose extreme punitive measures on a defeated Germany. For 10 points, name this Prime Minister who represented Britain at the Paris Peace Conference.

ANSWER: David **Lloyd George** [do not accept or prompt on "Lloyd" or "George"] <Lou>

21. In an engraving by this man, a man perched on a tree branch sticks his rifle through foliage. This artist was elected to the National Academy on the strength of a popular painting of two men pensively cooking over a fire, listening to a band play a nostalgic song. His painting of four former slaves icily meeting a white woman borrows from the composition of a canvas in which this artist painted four officers being captured by an enemy general. His paintings *A Visit from the Old Mistress* and *Prisoners from the Front* draw from his experience as a Civil War correspondent. In a grim painting, this artist painted a black man in a rudderless boat beset by waves in shark-filled waters. For 10 points, name this American artist of *The Gulf Stream*.

ANSWER: Winslow **Homer** <Cheyne>

1. The protagonist of this novel realizes that he does not love Imogen Graham after helping the Bowens out first during a carriage accident. For 10 points each:

[10] Name this novel that begins with Theodore Colville traveling to Europe to escape his failed American newspaper business.

ANSWER: Indian Summer

[10] This author of *Indian Summer* told the story of Tom Corey's relationships with the members of a family in the painting business in *The Rise of Silas Lapham*.

ANSWER: William Dean Howells

[10] *Indian Summer* is set primarily in this country. The second half of *Daisy Miller* is also set here.

ANSWER: Italy <Droge>

2. Answer the following about Ignaz Semmelweis (SEM-muhl-vice), for 10 points each.

[10] In the 1840s, Semmelweis proposed this extremely controversial practice as a way to reduce the incidence of puerperal (pyoo-er-per-uhl) fever in clinics.

ANSWER: washing hands with chlorinated lime solutions [or obvious equivalents]

[10] Semmelweis's theories were not truly accepted until this Frenchman proved germ theory. This scientist helped disprove the theory of spontaneous generation and created the first vaccines for rabies and anthrax.

ANSWER: Louis Pasteur

[10] In 1843, this professor at Harvard Medical School argued that puerperal fever was contagious, an idea ridiculed by the professor Charles Meigs. This longtime medical reformer coined the term "anesthesia", but may be better known for his literature.

ANSWER: Oliver Wendell Holmes Sr. <Cheyne>

3. The overconfident yet inexperienced Megareus and Hyperbius, who carries a shield emblazoned with an image of Zeus, are two members of this group. For 10 points each:

[10] Name this group that also includes Melanippus, Polyphontes, Actor, Lasthenes, and their commander. Each member of this group stands by a different gate.

ANSWER: the seven defenders of Thebes [or the people who guard Thebes; or obvious equivalents]

[10] The defenders of Thebes are led by this man, who broke his power-sharing agreement with his brother Polynices by seizing control of the city.

ANSWER: Eteocles

[10] In a play by Sophocles, this king curses his sons Polynices and Eteocles to kill each other in battle. Earlier, he had married his mother Jocasta and killed his father Laius.

ANSWER: Oedipus <Gupta>

4. A photograph of Omayra Sánchez half-submerged in mud circulated after the deadliest lahar in history destroyed this country's town of Armero. For 10 points each:

[10] Name this country where Nevado del Ruiz erupted in 1985.

ANSWER: Colombia [or Republic of Colombia; or República de Colombia]

[10] Nevado del Ruiz lies within the northern volcanic arc of this mountain range. Other recent eruptions in this mountain range occurred at Chaitén and Calbuco, both in Chile.

ANSWER: Andes

[10] The tragedy at Armero was part of the second deadliest eruption of the 20th century, after the eruption of this stratovolcano in 1902 that killed 30,000 residents of Martinique.

ANSWER: Mount Pelée <Golimlim>

5. The vetoing of this project would later inspire James Polk's vetoing of the Rivers and Harbors Bill. For 10 points each:

[10] Name this project effectively vetoed by Andrew Jackson on May 27, 1830. It was a proposed construction project in Kentucky linking Lexington to another city on the Ohio River, part of a proposed national transportation system.

ANSWER: Maysville Road project [prompt on answers involving national roads]

[10] Federal roads were part of this generically named economic plan proposed by the Whig Party that advocated internal improvements, tariffs, and a national bank.

ANSWER: American System

[10] The veto, which blocked the federal purchase of stock in the venture, was considered a personal attack against this Kentucky politician, Jackson's nemesis. This Whig leader lost the presidency to both Jackson and Polk and was known as the "Great Compromiser".

ANSWER: Henry Clay <Cheyne>

6. This film, the only production of the short-lived Buddhist-inspired studio Prana Film, includes a scene in which numerous sailors leap out of a ship whose captain ties himself to a wheel. For 10 points each:

[10] Name this 1922 "symphony of horror", in which Count Orlok uses a plague as cover to murder his victims with impunity. It was directed by F. W. Murnau.

ANSWER: Nosferatu [or Nosferatu, *eine Symphonie des Grauens*; or Nosferatu: *A Symphony of Horror*]

[10] *Nosferatu* was an unauthorized film adaptation of this Gothic horror novel, the best-known English adaptation of which stars Bela Lugosi.

ANSWER: Dracula

[10] This actor played Count Dracula in a 1979 remake of *Nosferatu* truer to Stoker's novel. This actor, whose violent outbursts are captured in the film *My Best Fiend*, plays a man obsessed with hauling a steamship over a mountain in a 1982 film.

ANSWER: Klaus Kinski [or Klaus Günter Karl Nakczynski] <Cheyne>

7. Critics have commented on how this character plays the role of the "social taunter" to the protagonist. For 10 points each:

[10] Name this character who rudely brings up the fact that the protagonist apparently lost a swimming contest to Breca, but eventually respects the protagonist enough to lend him a sword.

ANSWER: Unferth

[10] Unferth is initially very contemptuous of this hero who goes on to kill both Grendel and Grendel's mother.

ANSWER: Beowulf

[10] In the epic poem, Beowulf is a member of this Germanic tribe and leaves his homeland to visit Hrothgar, the king of the Danes.

ANSWER: Geats <Cheyne>

8. This proof technique is often compared to a sequence of falling dominoes. For 10 points each:

[10] Name this technique that can be used by first proving that a base case is true, then showing that a statement that is true for a natural number n must be true for n plus one.

ANSWER: induction [or inductive proof; or proof by induction; or similar answers]

[10] Transfinite induction is used on this kind of construct with a well-order. In another context, the number of entities within this kind of construct can be measured using the cardinality.

ANSWER: sets

[10] This mathematician playfully suggested that induction was invalid by giving an inductive proof showing that "all horses have the same color". He also wrote the wildly popular book *How to Solve It*.

ANSWER: George Polya <Collins>

9. This man ordered the execution of Andres Bonifacio, the founder of the Katipunan, for taking supplies from some unwilling villagers. For 10 points each,

[10] Name this leader who established the first republic in his country, after returning from voluntary exile in Hong Kong. After the overthrow of the republic, he fought a guerrilla war until his capture by Frederick Funston.

ANSWER: Emilio Aguinaldo

[10] Aguinaldo established a republic in this country, where he also fought against both the Spanish and the Americans.

ANSWER: Philippines

[10] Two battles of Bud Dajo were among the fighting during this over ten-year rebellion against American rule of the Philippines. It was launched by a namesake group of Muslims who were also pirates in the region.

ANSWER: Moro Rebellion [or Moro Pirates] <Droge>

10. This composer's *Unstern!* (OON-shtairn) climaxes with a series of highly dissonant augmented chords, but ends in a serene B major coda. For 10 points each:

[10] Name this composer who penned two versions of his *La lugubre gondola* and experimented with quartal harmony in *Nuages gris* (nyoo-AHJ gree).

ANSWER: Franz **Liszt** [or Franz Ritter von **Liszt**; or **Liszt** Ferenc]

[10] Liszt's *La lugubre gondola* is an homage to the barcarolles (bar-ca-ROLLS) sung by gondoliers in this Italian city, which titles many "Boat Songs" found in Mendelssohn's *Songs Without Words*.

ANSWER: **Venice** [or **Venezia**]

[10] This composer's *Barcarolle in F-sharp major* is frequently paired with his *Berceuse* (bair-SUHZ) in *D-flat major*. He used rounded binary form for his popular *Nocturne in E-flat major*.

ANSWER: Frédéric **Chopin** [or Frédéric François **Chopin**; or Fryderyk Franciszek **Chopin**] <Kim>

11. Let's go to a bookstore in 1962, for 10 points each.

[10] Rachel Carson's *Silent Spring* was a bestseller warning of the dangers of unrestricted pesticide use. Ten years after publication, its popularity led to a nationwide ban on agricultural usage of this pesticide.

ANSWER: **DDT** [or **di·chloro·di·phenyl·tri·chloro·ethane**]

[10] This Barbara Tuchman classic was also a bestseller. Its title refers to the first month of the World War I, in which all the major powers miscalculated that the conflict would be a quick one.

ANSWER: *The **Guns of August*** [or **August 1914**]

[10] This controversial bestseller by Helen Gurley Brown encouraged young women to work and have casual relationships with men. Its success led to Brown taking over as editor of *Cosmopolitan* magazine, although Betty Friedan called it "obscene and horrible".

ANSWER: ***Sex and the Single Girl*** <Cheyne>

12. This god was worshiped by eunuchs called the Galli. For 10 points each

[10] Name this Phrygian god conceived when Nana eats an almond from a tree grown from the blood of Agdistis.

ANSWER: **Attis**

[10] Attis was loved by this Phrygian mother goddess, who transforms the ships of Aeneas into nymphs when they are set on fire. She turns Atalanta and Hippomenes into lions for copulating in her temple.

ANSWER: **Cybele** [or **Magna Mater**]

[10] Cybele was said to be the mother of this king, whom Dionysus rewarded with the golden touch for his hospitality toward the lost satyr Silenus.

ANSWER: **Midas** <Nagari>

13. After witnessing a joust between the avaricious and the prodigal, this character discusses the nature of Fortune, which is the arbiter of the rise and fall of nations. For 10 points each:

[10] Name this character who resides in Limbo, the first circle of a realm through which he guides Dante in the *Inferno*.

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

[10] This other author fictionalized the Roman poet in his novel *The Death of Virgil*. He wrote about Marius Ratti's influence on the village of Kuppron in *The Spell* and two novels about Joachim von Pasenow (yo-AH-kim fon PAH-zeh-noh) in *The Sleepwalkers*.

ANSWER: Hermann **Broch**

[10] Broch hails from this country, whose other novelists include the author of *The Loser*, Thomas Bernhard, and the author of *The Man Without Qualities*, Robert Musil.

ANSWER: Republic of **Austria** <Mehr>

14. This device allows a spacecraft to reach faster-than-light speeds by causing the space in front of it to contract and the space behind it to expand. For 10 points each:

[10] Name this warp travel drive developed by a Mexican physicist.

ANSWER: **Alcubierre** (al-koo-bee-AIR-ray) drive [or **Alcubierre** metric]

[10] In 2011, physicists at the OPERA collaboration in Italy *thought* that they had observed these particles traveling faster than the speed of light. Flavors of these particles comprise the leptons with the electron, muon, and tau.

ANSWER: **neutrinos**

[10] These hypothetical particles with imaginary mass would always travel faster than the speed of light—if they existed.

ANSWER: **tachyon** <Nagari>

15. One side in this battle had Admiral Ehrenskiöld taken as a prisoner of war aboard the *Elefanten* after his refusal to surrender. For 10 points each:

[10] What Russian naval victory led by Admiral Fyodor Apraksin featured the defeat of Swedish forces near the Hanko Peninsula?

ANSWER: Battle of **Gangut**

[10] The Battle of Gangut took place during this conflict in which Peter I claimed a decisive defeat over Charles XII at the Battle of Poltava.

ANSWER: **Great Northern** War

[10] Much earlier in the Great Northern War, the Swedes under Charles won a victory during a blizzard at this battle, which was fought to relieve a siege of the namesake city.

ANSWER: Battle of **Narva** <Pari>

16. Feminist critics in the 1970s admired this artist's portrayal of the sexually assertive "New Woman" in paintings like *Mr. and Mrs. I. N. Phelps Stokes*, in which the wife emasculates her husband by covering his crotch with her hat. For 10 points each:

[10] Name this American-born portraitist who trained in Paris, where he exhibited his *Portrait of Madame X* at the 1884 Salon to great uproar.

ANSWER: John Singer **Sargent**

[10] This specific detail from the *Portrait of Madame X* scandalized the viewers at the Salon, as it hinted at the promiscuity of the subject, Virginie Gautreau. Sargent later repainted this detail and held onto the painting for thirty years.

ANSWER: her right shoulder **strap** is **falling** off [or obvious equivalents]

[10] In this playful painting by Sargent, a young Englishwoman in a white dress lounges with her arm around one of her sisters, as her other sister eyes the viewer flirtatiously.

ANSWER: *The **Misses Vickers*** <Gupta>

17. This man instituted higher purity standards for the silver content of the denarius, but they were quickly reversed after his death. For 10 points each:

[10] Name this Roman emperor whose short reign began after his predecessor was strangled by the wrestler Narcissus. After he was assassinated, the throne was auctioned off to Didius Julianus.

ANSWER: **Pertinax**

[10] Pertinax succeeded this Roman emperor who had his sister Lucilla killed for conspiring against him and was fond of dressing as a gladiator. He also renamed the months of the calendar after his alternate names.

ANSWER: **Commodus**

[10] Pertinax was the first in a year of this many emperors, meaning that there was one more emperor than in 69 AD. There were also this many "Good Emperors" of Rome.

ANSWER: **five** <Droge>

18. Answer the following about post-exile Israel, for 10 points each.

[10] Haggai and Zechariah argue that failure to construct this type of structure prevented successful restoration of Israel. The center of Hebrew religious life, the first of these was built by Solomon but destroyed by Nebuchadnezzar II.

ANSWER: the **Temple**

[10] This book's title character, a cup-bearer to the king, sets out to rebuild the walls around Jerusalem in order to reform the Israelite community.

ANSWER: Book of **Nehemiah** [or **N'chemyah**; prompt on Book of Ezra-Nehemiah]

[10] This minor prophet emphasized that improper sacrifice has incurred divine resentment, lamenting "polluted food on the altar". Sometimes believed to be Ezra, this prophet claims that God has loved Jacob but hated Esau. He seems to disagree with Ezra regarding the problem of intermarriage.

ANSWER: **Malachi** [or **Malachias**] <Marvin>

19. This country was formed by a movement called the Sons of Jacob. For 10 points each:

[10] What fictional theocracy replaced the United States and employs numerous women as concubines for reproductive purposes? Its residents include a powerful man known only as the Commander.

ANSWER: Republic of Gilead

[10] The Republic of Gilead appears in *The Handmaid's Tale*, a novel by Margaret Atwood, a resident of this country. She has won this country's Governor General's Award two times.

ANSWER: Canada

[10] In this other Atwood novel, the title characters are a brilliant science student who plays the game *Extinctathon* and an Asian girl hired as a prostitute who live in a post-apocalyptic society.

ANSWER: Oryx and Crake <Cheyne>

20. Projections from the lateral magnocellular nucleus of the nidopallium to the robust nucleus of the arcopallium are critical for sensorimotor learning of this behavior. For 10 points each:

[10] Name this typically sexually dimorphic behavior also dependent on the HVC and area X in which a passerine bird produces melodic vocalizations that are longer and more complex than calls.

ANSWER: singing [or bird songs]

[10] Rapidly switching between the two sides of this vocal organ permits male canaries to generate "sexy syllables" during mating displays. This larynx-like organ is also able to lateralize songs due to its position close to both bronchi.

ANSWER: syrinx [or word forms, such as syringeal]

[10] This last stage of song learning is characterized by increased stereotypy of syntax and syllable structure. This stage is preceded by sensory learning, subsong, and plastic song phases.

ANSWER: crystallization [or word forms, such as crystallizing] <Smart>

21. Answer the following about the American homefront during World War II, for 10 points each.

[10] What independent agency, created in 1942, had the power to place ceilings on the amount paid for numerous commodities during World War II? Created to ensure a stable economy and proper rationing, it issued tokens that people could exchange for ration stamps.

ANSWER: Office of Price Administration [or OPA]

[10] "What symbol of feminine strength encouraged American women to work in factories or munitions plants? A famous poster featuring this character shows her flexing her bicep and saying "We can do it!"

ANSWER: Rosie the Riveter

[10] This group, once chaired by George H.W. Bush's father Prescott, was created to raise money for the entertainment and recreation of U.S. troops. It brought such celebrities as Bob Hope overseas to perform for soldiers.

ANSWER: USO [or United Service Organizations Inc.] <Cheyne>