



NASAT 2016
Round 5

1. When this process occurs during nucleophilic addition of Grignard (green-YAHR) reagents to alpha-chiral carbonyls, it results in the product having opposite stereochemistry to that predicted by the Anh-Eisenstein stereoelectronic model. This process can be exploited to template ethylene glycol oligomers for efficient crown ether synthesis. Like the macrocyclic effect, this process can be considered as a result of a higher degree of ligand (LIG-ind) set preorganization. This process requires ligands that can have a denticity of two or greater. A manifestation of this process is the displacement of ammonia by ligands such as TMEDA and ethylene diamine. This process explains the effectiveness of EDTA as a ligand. Multiple sites on a ligand bind to a single guest in it. For 10 points, a type of therapy named for what process is often used to treat heavy metal poisoning?

ANSWER: chelation [or chelate effect; or word forms] <MacAulay>

2. In a book titled for the "visual text" of this poet, Henry M. Sayre compared the artistic merit of one of his poems to that of Duchamp's *Fountain*, noting the importance of its "banal, trivial" nature. This poet wrote of the "twiggy stuff" of bushes and trees, "They enter the new world naked, cold, uncertain of all save that they enter". One of his short poems describes a cat that "climbed over the top of the jamclove" and "into the pit of the empty flowerpot". This author of "Poem" and "Spring and All" wrote a poem whose speaker says, "forgive me they were delicious", after admitting he ate the plums in the icebox. For 10 points, name this poet of "This Is Just to Say" who described an object "glazed with rain water beside the white chickens" in "The Red Wheelbarrow".

ANSWER: William Carlos Williams <Lee>

3. While in prison, this man was aided by former World War II hero Audie Murphy, who tried to persuade this man's accuser, Edward Grady Partin, to recant. He received a commuted sentence from Richard Nixon, probably as part of a deal Nixon made with this person's successor, Frank Fitzsimmons. In 1957, George Meany successfully got this man's organization ejected from a larger group after corruption investigations. On July 30, 1975, he went to the Machus Red Fox Restaurant in Bloomfield Township to meet Anthony Giacalone and Anthony Provenzano. Rumors claim this man is buried somewhere under Giants Stadium, possibly after being killed by the mob. For 10 points, name this leader of the International Brotherhood of Teamsters whose disappearance is still unsolved.

ANSWER: James Riddle "Jimmy" Hoffa <Cheyne>

4. In one of these pieces, the direction "L'istesso tempo" indicates shifts between time signatures like 6/16 and 12/32 in the second movement Arietta. A rapid arpeggio starting with an ascending "G-sharp C-sharp E G-sharp" begins a stormy theme in the Presto agitato third movement of one of these pieces, its composer's Opus 27 No. 2. An Allegro assai in 12/8 time opens an F minor piece of this type, a huge hit from its composer's "middle period". A composer instructed that the damper pedal be pressed the whole way in one of these pieces, whose name was coined by Ludwig Rellstab to evoke a view over Lake Lucerne. For 10 points, name these pieces, such as "Appassionata" and "Moonlight", that Beethoven wrote for a solo keyboard instrument.

ANSWER: **piano sonatas** by Beethoven [prompt on sonatas] <Gupta>

5. Jerry Fodor's rejection of a theory of this property based on inferential roles led him to argue that lexical concepts are "informational atoms". A paper commonly referred to by the acronym PTQ posits that this property is a function of a sentence's syntactic constituents and their combinations; that paper was written by Richard Montague. Donald Davidson proposed a theory of this property in which every sentence in a language corresponds to a Tarskian (TAR-skee-in) T-sentence. Hilary Putnam imagined a "Twin Earth" containing a substance physically identical to water known as XYZ to argue that this property "ain't just in the head". In *Philosophical Investigations*, Wittgenstein argues that this property is determined by a word's use. For 10 points, name this property studied in semantics.

ANSWER: **meaning** [prompt on semantics] <Kendrick>

6. An early practitioner of this discipline wrote a student periodical called *The Pen-Viper*. The Wheeler-Kenyon method in this discipline is used to create a "balk" on a grid. An amateur practitioner of it was a German who made a fortune as a Crimean War contractor and in the indigo business. "New perspectives" on this discipline were written by Lewis Binford, a proponent of its "processual" type that emphasizes culture. The seriation method in this discipline was first used by Flinders Petrie. A practitioner of it discovered what would later become known as Linear A and Linear B. Arthur Evans was practicing this discipline when he found Knossos on the island of Crete. For 10 points, what is the study of human activity by analyzing material culture?

ANSWER: **archaeology** [prompt on anthropology, ethnology, or Egyptology] <Cheyne>

7. For a signal, a form of this thing is often used to characterize the "brightness" of the signal and is given as a weighted mean of all the individual frequencies of the signal. The surface area of revolution is equal to the arc length times the distance traveled by this point in a theorem named for Pappus. If an object has uniform density, then this thing will simply be the center of mass. Along with the orthocenter and circumcenter, the Euler line runs through this "geometric center", which divides cevians in a two-to-one ratio. For a triangle, this point is the intersection of medians. For 10 points, name this quantity, which can be thought of as the arithmetic mean of the coordinates of every point in an object.

ANSWER: **centroid** [anti-prompt on barycenter or center of mass until "center of mass" is read and do not accept afterwards] <Jose>

8. In a poem by this man, a boy is bound "with belts and straps" before an angel appears and commands, "Offer the Ram of Pride instead of him", but is ignored. Another of his poems describes a tunnel "scooped through granites which titanic wars had groined". This poet imagined Abraham going through with the sacrifice of Isaac in "The Parable of the Young Man and the Old". A poem by him imagines "the shrill, demented choirs" that mourn men in whose eyes "shine the holy glimmers of good-byes". "An ecstasy of fumbling" follows the call "Gas! Gas! Quick, boys!" in a poem by this man whose title is taken from Horace. For 10 points, name this World War I poet who wrote "Strange Meeting", "Anthem for Doomed Youth", and "Dulce et Decorum Est".

ANSWER: Wilfred Owen [or Wilfred Edward Salter Owen] <Sy>

9. A large one of these objects was taken from Raud the Strong by a king so upset at his refusal to convert to Christianity that he forced a snake down Raud's throat. Charles the Bald's precautions at the Île de la Cité (EEL de la see-TAY) against the use of these objects helped repulse an 885 to 886 siege of Paris. The "clinker" technique for making these objects was later adopted to build "cogs". Examples of these objects include *faerings*, *karves*, or *knarrs*. Several artifacts found inside a buried one of these objects at Sutton Hoo matched descriptions found in *Beowulf*. These objects, exemplified by Olaf Tryggvason's "Long Serpent", were often fit with ornamental dragon heads. For 10 points, name this type of transport used by Leif Erikson and many Viking raiders.

ANSWER: Viking ships [or longships; or boats] <Golimlim>

10. A Daoist commentary from the Chongqing (chung-ching) school reveals that their shamans used this substance with ginseng to predict the future. An armed, nomadic order within Sikhism known as the Nihang use this substance for meditation, doing so in spite of Guru Nanak's proclamation that "Awe of the... Lord God" has taken the place of this substance. Sikh societies usually prepare this substance in a drinkable form known as bhang. Some Hindus believe this substance to be created by Shiva from his own body, and consume this substance during the Holi festival. A new religious movement consumes this substance using Chalices of Wisdom, believing it to be a gift from Jah. For 10 points, give this psychoactive flowering plant, used sacramentally by the Rastafari movement.

ANSWER: cannabis [or obvious equivalents] <Marvin>

11. The *course landaise* (coorse lawn-DEZZ) is a variety of this activity popular in Gascony. Participants in this activity wear an ornate costume known as a "suit of lights". A law concerning this activity failed to cover the similar practice of *correbous* (cor-ruh-BOOZ), a variant of which involves attaching flares to one participant. This activity, described in the book *Death in the Afternoon*, was a major inspiration for the *paso doble* dance. Participants in this activity use lances and *banderillas* before the beginning of the *tercio de muerte*, in which a participant emerges with a red cape. For 10 points, name this activity now banned in Catalonia, in which matadors risk their lives attempting to kill a violent bovine.

ANSWER: bullfighting [or corrida de toros; or tauromachy; do not accept "running of the bulls"] <Golimlim>

12. The camera focuses on this character fiddling with and dropping his hat as he nervously talks to a woman he likes. He abides by his father's motto to "always see life around you as if you'd just come out of a long tunnel". This man punches several reporters for printing a story showing him holding his nose and imitating a birdcall. He is chosen by "Happy" Hopper when a flipped coin lands on its edge. This man starts to scrounge through bins of letters and telegrams, but soon collapses at the end of a twenty-four hour filibuster. The Taylor machine-backed graft scheme to build a dam on Willet Creek threatens this man's bill proposing a national boys' camp. For 10 points, name this naïve senator who, in a Frank Capra film, *Goes to Washington*.

ANSWER: Mr. Smith [or Jefferson Smith; or Jefferson Smith; or Jeff] <Gupta>

13. The first step in producing results from these devices is using a vertex and a tracking detector; examples of the latter are time projection chambers and scintillation detectors. A design of these devices popularized by E. O. Lawrence uses a circular tube split into two back-to-back regions shaped like capital Ds, across which an electric field reverses polarity. The first good example of these devices worked by charging a large bank of capacitors in parallel and was designed John Cockcroft and Ernest Walton. These devices are used for deep inelastic scattering experiments, with some of the first taking place at SLAC. An example of them that collides beams is the Tevatron. For 10 points, identify these devices that use electric fields to speed up particles, such as the LHC.

ANSWER: particle accelerators [or atom smashers; or colliders; anti-prompt on cyclotron] <Voight>

14. In a scene in this play, there is a knock on the protagonist's door immediately after he confides in a doctor his fear that "presently the younger generation will come knocking at my door". This play's title character is tormented by invisible "servers and helpers" that he believes punished him for not fixing a crack in his chimney. This play's protagonist is frequently compared to a "troll" by a girl who mysteriously appears and demands to be given "the kingdom" that she was promised ten years earlier. This play's protagonist, who hopes Kaja Fosli will convince Ragnar Brovik to keep working for him, dies attempting to impress Hilda Wangel by placing a wreath atop his newly built tower. For 10 points, name this Henrik Ibsen play about Halvard Solness, an architect.

ANSWER: *The Master Builder* [or Bygmester Solness] <Kendrick>

15. Until its theft by the Swedes, the largest known medieval manuscript, the Codex Gigas, was kept in this city. This city's Old Town Square is home to twenty-seven crosses that mark the spot of a mass execution. The palindromic number "135797531" represents the exact moment when Charles IV laid the cornerstone of his namesake bridge in this city. A campaign against this city by Holy Roman Emperor Sigismund was repulsed at the Battle of Vitkov Hill. Frederick V, the "Winter King", was defeated at the Battle of White Mountain outside this city. This city, where Jan Hus (yahn hooss) spent much of his life, was where Filip Fabricius and two pro-Catholic counts supposedly fell onto a pile of dung. For 10 points, name this Bohemian city where a 1618 defenestration sparked the Thirty Years' War.

ANSWER: Prague [or Praha] <Golimlim>

16. During a wintertime festival dedicated to this god, amaranth dough idols of him are made and eaten. One of this god's manifestations, Nappatecutli (nappa-TAY-quit-lee), was the creator of tools for trade and hunting, and was one of the four cardinal directions and corners of the universe that this deity presided over. Along with the god of war, this deity was worshiped at the Templo Mayor (mah-YORE). As the third sun, this god destroyed the world out of grief for his kidnapped wife Xochiquetzal (show-chee-KET-sahl). This god ruled over a cosmic domain characterized by vernal plant-life; that domain was the afterlife destination of people who drowned, were struck by lightning, and died of water-borne disease. Many child sacrifices were made to appease this deity. For 10 points, name this Aztec rain deity.

ANSWER: **Tlaloc** <Marvin>

17. Despite a clause in the Treaty of Paris, a fort of this name, captured by William Johnson in the French and Indian War, was not ceded to the United States until the signing of Jay's Treaty. Two thousand Native American leaders signed a treaty of this name with William Johnson in 1741. A city of this name was the site of the historic Edward Dean Adams Power Plant. The 93rd and 99th Street Schools were built atop a toxic dumpsite in the Love Canal neighborhood of a city of this name. A natural landmark of this name was a favorite site for harrowing tight-rope walks and was descended in 1901 by schoolteacher Annie Edson Taylor in a barrel. For 10 points, identify this name common to a set of magnificent waterfalls in upstate New York.

ANSWER: **Niagara** Falls <Bentley>

18. In a Raphael painting, this man appears in a dark blue robe with a facial expression taken from the recently excavated *Laocoön* (lao-KOH-on) sculpture group. A direct reproduction of a self-portrait by Nicolas Poussin (poo-SANN) points to this man from the bottom-left of another painting, in which he sits above a green-robed woman with an oar. A philosopher touches his gold chain with his left hand while placing his illuminated right hand on a sculpture of this man in a Rembrandt painting. In an 1827 appearance, Molière, Dante, and Shakespeare are among those who watch as this man is crowned by Nike. For 10 points, name this subject of an "Apotheosis" by Ingres (AANG), in which he is flanked by personifications of the *Iliad* and the *Odyssey*.

ANSWER: **Homer** <Golimlim>

19. These structures are sensitive to IKur inhibitors, which prolong their effective refractory period. A namesake molecule secreted from these structures promotes renal sodium release in opposition to aldosterone and is closely related to brain natriuretic peptide. The embryonic sinus venosus is bounded by a region that becomes the pectinate muscles of these structures. They are depolarized at the start of the PR interval, and the right one of them contains the SA node, which initiates an action potential causing both of them to contract. The mitral valve opens to let blood flow from the left one of these upper chambers. For 10 points, name these cardiac structures that receive blood from the vena cavae and pulmonary vein before passing it to ventricles.

ANSWER: **atria** [or right **atrium**; or left **atrium**; prompt on **heart**] <Smart>

20. In this novel, a character writes love letters for other couples while at the Avenue of the Scribes. After a character in this novel writes "This pussy is mine" in red paint on his lover's belly, that lover undresses in front of her husband, prompting her husband to cut her throat. That character in this novel saves Leona Cassiani from the streets, making her a typist in the telegraph company where he assumes the leadership position of Uncle Leo XII. This novel opens with the suicide of the photographer Jeremiah de Saint-Amour. In this book, a fall down a ladder while chasing an escaped parrot causes the death of doctor Juvenal Urbino. For 10 points, name this Gabriel García Márquez novel about the unrequited passion of Florentino Ariza for Fermina Daza.

ANSWER: *Love in the Time of Cholera* [or *El Amor en los Tiempos del Colera*] <Droge>

21. In the early stages of this campaign, a large number of troops were slaughtered at the Badger's Mouth pass. Opposing sides in this campaign deployed counterweight trebuchets called "Muslim Paos" and used iron chains to lower devastating "thunder-crash bombs". The winning side in this campaign bestowed the title of "maharaja" upon the traitorous last king of Dali. The Toluid civil war derailed this campaign for three years. This campaign as a whole ended after a navy overcame a ten to one numerical disadvantage at the Battle of Yamen. The early stage of this campaign ended with Ögedei overseeing the fall of the Jin dynasty. For 10 points, name this military campaign that ended in 1279, with Kublai Khan's establishment of the Yuan dynasty.

ANSWER: Mongol invasion of China [or Mongol conquest of China; or Mongol conquest of the Western Xia dynasty; or Mongol conquest of the Jin dynasty; or Mongol conquest of the Song dynasty; or obvious equivalents] <Gupta>

1. A king of this city was defeated after an opposing army emerged from the narrow Aruna mountain pass. For 10 points each:

[10] Name this city on the Orontes River, where a later battle between the charioteers of Ramses II and the Hittite king Muwatalli II took place.

ANSWER: **Kadesh**

[10] The Canaanite alliance led by Kadesh was routed by Thutmose III at this battle, which was followed by a lengthy siege after the remaining Canaanites escaped. This battle was the earliest recorded battle in history.

ANSWER: Battle of **Megiddo**

[10] This father of Ramses II briefly captured Kadesh, but was forced to abandon the city under continuing Hittite pressure. This pharaoh's tomb was the longest and deepest of all the tombs in the Valley of the Kings.

ANSWER: **Seti I** [prompt on Seti] <Golimlim>

2. The remains of these animals were used as fertilizer a year after they were tossed into rock chasms at the Thesmophoria festival. For 10 points each:

[10] Identify this sort of animal, which Odysseus's crew were turned into by the sorceress Circe.

ANSWER: **pigs** [or **swine**; or **hogs**; or **boars**]

[10] The pig sacrifice at the Thesmophoria festival commemorates the loss of a herd of pigs by Eubelios during this event. This event occurred after a chariot burst out of the ground where its victim was picking flowers.

ANSWER: **abduction** of **Persephone** [or obvious equivalents indicating Hades or Pluto taking **Persephone** to the **underworld**; or **Kore** for "Persephone"]

[10] This seer died of grief after he was unable to predict how many piglets a sow would give birth to, a challenge given to him by his rival Mopsos. This seer called for Briseis (bry-SEE-iss) to be returned to her father to stop a plague.

ANSWER: **Calchas** <Brownstein>

3. Integrating with respect to one of these functions is equivalent to a bounded linear functional on a space of functions with compact support, according to the Riesz (REESE) representation theorem. For 10 points each:

[10] Name these types of non-negative functions from a sigma-algebra into the extended real line. They intuitively assign a volume or area to a set.

ANSWER: **measure**

[10] Both the rationals and the Cantor set are "measure-[this number]" sets with respect to the Lebesgue (luh-BEG) measure. This number is also equal to the area of a point or line in three dimensions.

ANSWER: **zero**

[10] This man lends his name to a measure that is defined on the sigma-algebra generated by a space's open sets. Along with Eduard Heine, he showed that any closed and bounded subset of the reals is compact.

ANSWER: Émile **Borel** <Hothem>

4. This thing is "heard in the chilliest land" and has "kept so many warm", according to a poem that says it "perches in the soul". For 10 points each:

[10] Name this thing that, in the aforementioned poem, is called "the thing with feathers".

ANSWER: Hope

[10] This reclusive author of "Hope is the thing with feathers", nicknamed "The Belle of Amherst", also wrote "Because I could not stop for Death".

ANSWER: Emily Dickinson

[10] This thing is compared to a bee in a Dickinson poem because it has "a song", "a sting", and "a wing". In other Dickinson poems, this thing is called "a fickle food" and "the one that does not stay".

ANSWER: Fame <Sy>

5. Tony Palmer produced a documentary about this family, whose second generation was beset by the marital trouble of the English-born Winnie and her openly bisexual husband. For 10 points each:

[10] Name this family, several generations of which directed the Bayreuth (BYE-royt) Festival, co-founded by Franz Liszt's daughter Cosima.

ANSWER: Wagner (VOG-nuh)

[10] At the inaugural Bayreuth festival in 1876, these four Wagner operas were performed together for the first time as a cycle.

ANSWER: Ring Cycle [or *Der Ring des Nibelungen*; or *The Ring of the Nibelung*]

[10] Wieland (VEE-land) Wagner's direction of *Parsifal* at the first post-World War II Bayreuth Festival controversially stripped almost all the scenery, and omitted the dove that appears at the end after this sorceress is released from her curse.

ANSWER: Kundry [or First Sorceress; or Urteufelin; or Hell's Rose; or Hollenrose; or Gundryggia; or Herodias] <Cheyne>

6. The two ferromagnetic layers in a pseudo spin valve must have different values of this quantity. For 10 points each:

[10] Name this quantity that is equal to the horizontal intercept of a hysteresis (hiss-ter-EE-siss) loop.

ANSWER: coercive field [or magnetic coercivity; or coercive force]

[10] Hysteresis loops plot applied field against this quantity, which is equal to the magnetic dipole moment per unit volume.

ANSWER: magnetization [prompt on M]

[10] These materials, which contain unpaired electrons, display linear plots of magnetization against applied field, and hence have a coercivity of zero.

ANSWER: paramagnets [or paramagnetic materials] <MacAulay>

7. Former Conservative chairperson Sayeeda Warsi criticized this politician's opponent for employing "dog-whistle" racism. For 10 points each:

[10] Name this politician who resigned as MP for Tooting after winning a May 2016 election over the environmentalist Zac Goldsmith.

ANSWER: Sadiq **Khan** [or Sadiq Aman **Khan**]

[10] Sadiq Khan became the first Muslim mayor of this capital city, succeeding Boris Johnson.

ANSWER: **London**

[10] In June 2016, Khan vowed to ban "body-shaming" advertisements from these places, such as one that asked "Are you beach body ready?".

ANSWER: public **transport** vehicles [or specific types, such as London **Underground**, the **Tube**, **buses**, **trains**, etc.] <Golimlim>

8. This man was stabbed to death by John Felton, a disgruntled officer who had served under him at the Siege of Saint-Martin-de-Ré, part of his failed campaign to relieve La Rochelle. For 10 points each:

[10] Name this nobleman who unsuccessfully attempted to arrange the "Spanish Match" between Henrietta Maria and Charles I.

ANSWER: George **Villiers** (VILL-erz), 1st Duke of **Buckingham** [accept either underlined portion]

[10] The Duke of Buckingham was the court favorite and possible gay lover of this king dubbed the "wisest fool in Christendom". This first Stuart king of England was the target of the Gunpowder Plot.

ANSWER: **James I** [or **James VI** of Scotland]

[10] Buckingham's plan to burn the Spanish treasure fleet in this port went awry after English soldiers got drunk on captured wine. Francis Drake led an earlier raid on this port that was described as "singeing the King of Spain's beard".

ANSWER: **Cádiz** <Kendrick>

9. In one story, these animals are killed by wolves and lions sent by Zeus, who refuses them as a sacrifice. For 10 points each:

[10] Name this group of four animals, whose names are Podargos, Lampon, Xanthos, and Deinos. Their temperament greatly improves after they feast on their master and are then easily taken back to King Eurystheus to complete Heracles's eighth labor.

ANSWER: **Mares of Diomedes** [or the **Mares of Thrace**]

[10] In some accounts, the mares of Diomedes munched on this favorite companion of Heracles, which got Heracles sufficiently angry at their owner. Possibly the son of Hermes, this character became the namesake of a Thracian city that banned chariot racing out of respect to his death.

ANSWER: **Abderus** [or **Abdera**]

[10] On his way to retrieve the Mares of Diomedes, Heracles stopped at Pherae, where he repaid his debt of hospitality to this king by wrestling with death to force the release of this man's wife Alcestis.

ANSWER: **Admetus** <Cheyne>

10. Like many of its author's works, this play ends with a character tiptoeing out to get away from a disagreeable situation. For 10 points each:

[10] Name this 1941 comedy by Noel Coward in which the eccentric Madame Arcati inadvertently summons the ghost of an author's temperamental ex-wife, leading to all sorts of hijinks.

ANSWER: Blithe Spirit

[10] The title of *Blithe Spirit* comes from a line in this poet's "To a Skylark", which begins "Hail to thee, blithe Spirit! Bird thou never wert".

ANSWER: Percy Bysshe Shelley

[10] This Coward play deals with a divorced couple honeymooning with new spouses at a hotel, but discovering that they both still have feelings for each other. A love scene in the second act of this play was judged to be risqué by British censors.

ANSWER: Private Lives <Cheyne>

11. A surge of these two anterior pituitary hormones during the midcycle stimulates ovulation. For 10 points each:

[10] Name either of the two gonadotropic hormones that are released in response to GnRH. One stimulates growth of namesake cells containing an oocyte while the other promotes formation of the corpus luteum.

ANSWER: FSH or LH [or follicle stimulating hormone; or luteinizing hormone; or FSH; or lutropin; or lutrophin]

[10] GnRH triggers the release of LH and FSH by causing an influx of this cation. This divalent ion is also stored in the sarcoplasmic reticulum of muscle cells.

ANSWER: calcium [or Ca²⁺]

[10] This hormone, synthesized in Sertoli cells, causes the regression of its namesake ducts in males during sexual differentiation. Its production by granulosa cells can be used to measure the reserve for IVF procedures.

ANSWER: Anti-Müllerian hormone [or AMH] <Nagari>

12. After being fired from his job, a character in this story jokes, "I been sellin' canned goods and now I'm canned goods myself". For 10 points each:

[10] Name this story in which the barber Whitey entertains his client by fondly recalling the mean jokes of the prankster Jim Kendall, who was shot during a duck hunting accident.

ANSWER: "Haircut"

[10] In this story by a different author, the protagonist gets attention from boys such as Warren McIntyre after proposing a haircut, which she goes through with after being accused of bluffing by her cousin Marjorie.

ANSWER: "Bernice Bobs Her Hair"

[10] After being impregnated with twins by a prince, this fairy tale character has her long hair cut off by a sorceress that locked her in a tower. She is named after a plant her father was stealing from the sorceress.

ANSWER: Rapunzel <Collins>

13. A "Pastorale ad libitum" ends the eighth piece in this composer's Opus 6 concerti grossi. For 10 points each:

[10] Name this Italian composer whose Opus 5 is a series of twelve violin sonatas, the last of which is in the form of a theme-and-variations on "La Folia".

ANSWER: Arcangelo Corelli

[10] Corelli's best-known piece is a concerto titled for this winter holiday, during which the ballet *The Nutcracker* is set.

ANSWER: Christmas [or obvious equivalents]

[10] Tomaso Antonio Vitali featured a solo violin in his G minor piece in this genre similar to the passacaglia. A rather lengthy one closes J. S. Bach's second partita for solo violin.

ANSWER: chaconne (shack-UN) <Kim>

14. Answer the following about people who gave really, really long filibusters in the Senate, for 10 points each.

[10] This Senator has the modern record for longest filibuster, speaking for over 24 hours nonstop in opposition to the 1957 Civil Rights Act. In 2003, it was revealed that he had a mixed-race daughter with his family maid.

ANSWER: James Strom Thurmond

[10] This Louisiana Senator spoke for fifteen hours in 1935 against the National Industrial Recovery Act. Also the governor of his state, he was known as the "Kingfish" and was assassinated in 1935.

ANSWER: Huey Pierce Long Jr.

[10] The third-longest modern filibuster was given by Wayne Morse, a senator from this state. Morse, who was succeeded by Bob Packwood, joined Alaska's Ernest Gruening as the only two senators to vote against the Gulf of Tonkin Resolution.

ANSWER: Oregon <Cheyne>

15. This event was memorably incorrectly predicted by Harold Camping multiple times. For 10 points each:

[10] What event, as part of a significant amount of Christian End Times prophecies, will feature believers called up to Heaven? It is believed by some to take place simultaneously with the Second Coming of Jesus.

ANSWER: The Rapture

[10] The Great Disappointment happened in 1844 after this man's various incorrect predictions for the Second Coming never came to pass. The Seventh-day Adventist Church evolved out of this man's followers.

ANSWER: William Miller

[10] A best-selling 1970 book by Hal Lindsey suggested that the End Times might come in the 1980s. That book is named for this "late, great" object.

ANSWER: Earth [or *The Late, Great Planet Earth*] <Cheyne>

16. This character becomes disenchanted with her life after attending a ball held by the Marquis d'Andervilliers (mar-KEE don-dare-vee-YAY) at Vaubyessard (vohb-yay-SAR). For 10 points each:

[10] Name this woman who cheats on her husband Charles with Rodolphe Boulanger (boo-lon-JAY) and Léon Dupuis (doo-PWEE).

ANSWER: Emma **Bovary** [or **Emma** Bovary; or Madame **Bovary**]

[10] Charles's mother seeks to improve Emma's attitude by trying to prevent her from engaging in this activity, which causes her to be dreamy and idealistic.

ANSWER: **reading** novels

[10] *Madame Bovary* ends with this unscrupulous pharmacist receiving the Legion of Honour.

ANSWER: Monsieur **Homais** (oh-MAY) <Raje>

17. Answer the following about American art that fell through the cracks of the art historical narrative, for 10 points each.

[10] At the ripe young age of 78, this folk artist went on a run painting wildly popular country scenes, such as *Sugaring Off*.

ANSWER: Grandma **Moses** [or Anna Mary Robertson **Moses**]

[10] *Post Mortem* and *His Station and Four Aces* are among the paintings in this kitschy series by C. M. "Kash" Coolidge, of animals performing a human activity.

ANSWER: ***Dogs Playing Poker***

[10] The American Folk Art Museum opened a study center dedicated to this quintessential outsider artist, a reclusive hospital custodian who left behind a 15,145-page single-spaced fantasy novel, *The Story of the Vivian Girls*, illustrated by hundreds of drawings and watercolors.

ANSWER: Henry **Darger** [or Henry Joseph **Darger**, Jr.] <Gupta>

18. In Japanese, this group of people use the personal pronoun "atashi", as opposed to the personal pronouns "boku" and "ore" (OH-ray). For 10 points each:

[10] Name this group of people who paradoxically exhibit higher rates of usage for both established prestige forms of language and new vernacular forms of language.

ANSWER: **women** [or obvious equivalents]

[10] The gender paradox was formulated by this founder of sociolinguistics, who conducted a 1966 study examining the rates with which New York department store employees pronounced the "r" in the phrase "fourth floor".

ANSWER: William **Labov** (luh-BOV)

[10] Word-final "r" is omitted in the non-rhotic English dialect native to this country, whose vocabulary includes the word "outback" and the greeting "g'day mate".

ANSWER: **Australia** [or Commonwealth of **Australia**] <Kim>

19. This technique is only available on LCD or OLED display panels because other displays do not split a pixel into three, horizontally. For 10 points each:

[10] Name this technique that enhances the resolution of a typeface, improving kerning, bolding, and italicizing. It is a superior display technique to anti-aliasing, and its horizontal type is an integral component of Microsoft's ClearType technology.

ANSWER: subpixel rendering [or subpixel anti-aliasing]

[10] The alpha component, or alpha channel, of a pixel can be applied to this quality of a color. At 100 percent, the color would be fully opaque, and at zero percent, it would fully have this quality.

ANSWER: transparent [or transparency; or word forms]

[10] Alpha channels are used in this procedure, in which source and destination layer colors are merged to make a resulting color. In Photoshop, the default namesake mode for this technique is "normal", but other options include "dissolve", "color dodge", "hue", and "saturation".

ANSWER: blending <Smart>

20. The third movement of this piece is based on the rhythm of a traditional folk dance called the *halling*. For 10 points each:

[10] Name this concerto which begins with a timpani roll that dramatically grows louder and louder, until the soloist enters with a crashing A minor chord.

ANSWER: Edvard Grieg's Piano Concerto in A minor [or Grieg's Opus 16; prompt on partial answers]

[10] A solo timpani plays the opening notes of the F major piano concerto by this American composer of *Rhapsody in Blue*.

ANSWER: George Gershwin

[10] This composer wrote a *Concerto Fantasy* for two solo timpanists. His collection *Solo Piano* includes five pieces titled "Metamorphosis" and incidental music for Allen Ginsberg's poem "Wichita Vortex Sutra".

ANSWER: Philip Glass [or Philip Morris Glass] <Kim>

21. An attempted coup during this month aimed to prevent Leopoldo Calvo-Sotelo from becoming Prime Minister. For 10 points each:

[10] Name this month, the 23rd of which names a failed 1982 coup during which members of the Guardia Civil led by Antonio Tejero held the Spanish Parliament hostage.

ANSWER: February [or 23-F]

[10] This Spanish king who succeeded Franco helped prevent the coup by giving a speech in favor of democracy.

ANSWER: Juan Carlos I

[10] At the 2007 Ibero-American Summit, Juan Carlos asked this world leader to "shut up" after he criticized former Spanish Prime Minister Jose Maria Aznar.

ANSWER: Hugo Chavez <Raje>