



NASAT 2015 - Round 14 - Tossups

1. A Platonic dialogue concerning this concept includes the anatomically-bizarre image of a "wind egg" deflating upon a failed childbirth after Socrates compares himself to a midwife for ideas. Plato's working definition of this idea is cited as a precursor to those of A.J. Ayer and Roderick Chisholm, as rebutted in a three-page 1963 paper. The idea that this concept is equivalent to "perception" is rejected in Plato's *Theaetetus*, which later tries to define it as "belief with an account" and "true belief with an account." For 10 points, name this mental ability questioned in the only notable paper of Edmund Gettier, whose definition as "justified true belief" is mostly rejected by a subfield of philosophy that studies it called epistemology.

ANSWER: **knowledge** [or **episteme**; accept **justified true belief** before "perception"] <Jackson>

2. A story by this man ends with its dying protagonist experiencing a vision of running deer. In that story by him, a doctor looks out the bars of a window, seeing only a bone-charring factory and a prison, and tries to escape the title place, but is beaten by his caretaker and has a stroke. A debt-stricken man plans to kill the resident of his garden house near the end of a story by this man, whose experience as a physician informed his story about a mental asylum entitled "Ward No. 6." This author wrote about a lawyer who agrees to receive two million rubles after 15 years of isolated confinement in one story, and about Dmitri Gurov's affair with Anna Sergeyevna in Yalta in another. For 10 points, name this Russian author of "The Bet" and "The Lady with a Dog."

ANSWER: Anton **Chekhov** [or Anton Pavlovich **Chekhov**] <Gupta>

3. One of this composer's symphonies ends with a rondo that quotes the song "In Praise of Lofty Intellect" and includes a second movement to be played "with greatest vehemence." This composer's second symphony includes an alto setting of the song "Primeval Light." A trumpet solo in C-sharp minor introduces the funeral march first movement of his fifth symphony, which includes a frequently excerpted *Adagio*. His eighth symphony sets the final scene of *Faust, Part II* and the hymn "Veni, Creator Spiritus," and is nicknamed for the very large orchestra needed to perform it. For 10 points, name this composer of the *Resurrection Symphony* and the *Symphony of a Thousand*.

ANSWER: Gustav **Mahler** <Kim>

4. Two operations codenamed "Provide Comfort" sought to defend people of this ethnicity. The Soviet-sponsored Republic of Mahabad was a short-lived state for people of this ethnicity. Some people of this ethnicity practice a syncretic religion that worships the Peacock Angel, Melek Taus. Political leaders from this ethnicity include Mustafa and Masoud Barzani. A rebel group that supports a state for these people is the PKK. These people were massacred with chemical weapons at Halabja by the regime of Saddam Hussein. People of this ethnicity formed the peshmerga army, which still fights ISIS forces at cities such as Kirkuk. For 10 points, name this oft-oppressed ethnic group that lives in eastern Turkey and northern Iraq.

ANSWER: **Kurds** [or **Kurdish**; anti-prompt on **Yazidis**] <Golimlim>

5. The first brewery in the United States founded by a female is found in this state's town of New Glarus, which still retains many elements of its Swiss heritage. The "Ruby Slipper" was invented by a farmer in this state for its cranberry industry, the largest in the United States. A cooking method known as "fish boiling" is prevalent on this state's eastern Door Peninsula. Pabst and Miller were both founded in this state's largest city. A clerk for a meat-packing company, Curly Lambeau, names a football stadium in this state. For 10 points, name this state known for its heavy production of cheese.

ANSWER: **Wisconsin** <Golimlim>

6. A Christy Moore song about Irish volunteers who fought in this war was inspired by a 1979 book by Michael O'Riordan. Just before the start of this conflict, outrage followed the summary execution of anyone who owned a gun in the town of Casas Viejas. The losing side of this war surrendered after Juan Negrin's government failed to recapture Tereul. International supporters of one side during this conflict fought in units named for James Connolly and Abraham Lincoln as part of the International Brigades. During this war, the German Condor Legion bombed the Basque town of Guernica. For 10 points, name this war where the Nationalist forces of Francisco Franco defeated the Second Republic of an Iberian nation.

ANSWER: **Spanish Civil** War [or Guerra **civil espanola**] <O'Rourke>

7. Tobacco etch virus protease uses this amino acid as its catalytic nucleophile and has high homology to its serine protease PA clan-mates. Four residues of this amino acid are found in the binding center of HiPIPs. SECIS elements redefine UGA codons to translate a non-standard analogue of this amino acid. Residues of this amino acid may be isomerized by PDI. Ubiquinol is bound by Q-cytochrome c oxidoreductase via the two histidines and two of this amino acid found in its Rieske center. With glutamate and glycine, this amino acid forms glutathione. It coordinates with 2Fe-2S clusters in iron-sulfur proteins using its thiol group. For 10 points, name this amino acid that is distinguished from methionine by its ability to form disulfide bonds.

ANSWER: **cysteine** [or **cys**; or **C**] <Smart>

8. A.R. Luria's empirical studies of modularity inspired the PASS theory of this concept, and John Carroll lent his three-stratum theory of it to a later collaboration with two other psychologists. This concept is actually eight different, mostly independent ones, according to Howard Gardner. Raven's Progressive Matrices are often used in tests for Charles Spearman's "g-factor" on this concept. This phenomenon is constantly increasing according to the Flynn effect. External forces that influence this quality were discussed in the book *The Bell Curve*. A Stanford-Binet test commonly measures this quality. For 10 points, identify this quality that is measured as a "quotient."

ANSWER: **intelligence** [or **IQ** or **intelligence quotient** until "quotient" is read] <Saric>

9. After this character asks his father if dying is hard, his father replies, "I think it's pretty easy," and the narrator notes that this character "felt quite sure that he would never die." This character finds and releases a black grasshopper before contemplating whether he should fish in the deeper waters of a swamp. As a boy, he watches his father use a jack-knife to perform a Caesarean section on a woman whose husband cuts his own throat with a razor. In another appearance, this character warns a Swedish prizefighter named Ole Andreson about the title pair of hit men looking for him. For 10 points, name this recurring character who appears in "Indian Camp," "Big Two-Hearted River," "The Killers," and other stories by Ernest Hemingway.

ANSWER: **Nick** Adams [or Nick **Adams**] <Casalasi>

10. For a flat universe, this quantity results in a late contribution to the integrated Sachs-Wolfe effect. Evidence for this quantity was provided by type Ia (**one a**) supernova with redshifts less than one that were fainter than expected while those at redshifts greater than one were brighter than expected. The value of this quantity predicted by quantum field theory is an unimaginable 120 orders of magnitude larger than the observed value. The standard model of cosmology is named for this quantity and cold dark matter. It was proposed as a fudge factor to allow a static solution for the equations of general relativity. It's the homogeneous energy density of space causing the acceleration of the universe's expansion, making it the best candidate for dark energy. For 10 points, name this quantity symbolized lambda that Albert Einstein called his "greatest blunder".

ANSWER: **cosmological constant** [or **lambda** until it is read; or **dark energy** or **vacuum energy** until "homogeneous energy" is read] <Lee>

11. One song by this musician contains the lyric "the moon has met the sun," metaphorically describing love between races. That track, "Eclipse," was released on "Pre-Bird," later retitled to this musician "Revisited." In New York, this musician cultivated a rotating ensemble called the Jazz Workshop. A stirring guitar solo strikes halfway through "Track C - Group Dancers" on one of his albums, which is reprised in "Mode E - Single Solos and Group Dance." This musician, who released the albums *The Black Saint and the Sinner Lady* and *Pithecanthropus Erectus*, also composed the song "Fables of Faubus" on an album titled himself "Ah Um." For 10 points, name this jazz double bassist who wrote the song "Goodbye Pork Pie Hat."

ANSWER: Charles **Mingus** [or Charles **Mingus** Jr.] <Prieto>

12. Three brothers that steal these objects escape from lightning-throwing ospreys by transforming into swans. The retrieval of these items is the first task that Lugh (**LOO**) assigns to the sons of Tuireann (**TOOR-an**). While cooking an ox over a fire, a god that angrily strikes an eagle with a stake is lifted into the air until he agrees to summon a keeper of these objects. A guardian of them is transformed into a nut and kidnapped while Thjazi (**thee-AH-zee**) is away. Absence of these items causes the Aesir to grow old until the return of their keeper, Idunn. Heracles takes the place of Atlas in holding up the heavens to obtain these objects for his eleventh labor. For 10 points, name this precious fruit grown in the Garden of the Hesperides.

ANSWER: **golden apples** [or **apples of the Hesperides** until "Hesperides" is read; prompt on **fruits** until "fruit" is read; prompt on **apples**] <Kim>

13. The attribution of this painting in the British Royal Collection was corrected by Theophile Thore, who nearly singlehandedly reintroduced its artist. Inspired by David Hockney's camera obscura thesis, Tim Jenison attempted to duplicate this painting in a 2013 film. The brightest object on the right side of this painting is a white porcelain pitcher on an elaborately draped table. The downward-slanted mirror in this painting reflects the tiled marble floor as well as a young girl in yellow, who is being supervised by a man carrying a stick. A tenor viol lies unused on the floor of this painting, whose title event takes place at the virginal. For 10 points, name this painting by Vermeer depicting a girl learning an instrument.

ANSWER: *The **Music Lesson*** <Gupta>

14. Soldiers during this war sang the marching song "Little Black Face." A man known as the "Eagle of Harlem," Hubert Julian, headed an air force composed of three planes during this war. The occupation begun during this war was later opposed by the Gideon Force. This war was sparked by the shooting of several askaris during the construction of a fort in the Wal-Wal incident. One side of this war was secretly offered two thirds of another country in exchange for peace in the Hoare-Laval Pact. Mustard gas was used during this war by General Pietro Badoglio. The aggressor in this war sought to reverse the humiliating Treaty of Wuchale, which was signed decades earlier after its loss at the Battle of Adowa to Menelik II. For 10 points, name this conflict in which an African country under Haile Selassie was invaded by Benito Mussolini.

ANSWER: **Italian** invasion of **Ethiopia** [or Second **Italo-Ethiopian** War; or obvious equivalents; accept **Abyssinia** for Ethiopia; prompt on partial answers] <Brownstein>

15. Modules are distinguished from vector spaces because their scalar coefficients come from one of these structures. If a certain type of descending chain in one of these things terminates, then it is referred to as Artinian. If one of these things is a PID, then all ideals are generated by only one element. The set of polynomials with real coefficients is referred to as one of these things, because the product and sum of two polynomials is itself a polynomial. Real square matrices of a given dimension form a non-commutative example of these things. For 10 points, identify these algebraic structures, of which the integers are an example, which have addition and multiplication but do not require multiplicative inverses.

ANSWER: commutative **rings** [anti-prompt on **integral domain**, **unique factorization domain**, **UFD**, **principal ideal domain**, **PID**, or **Euclidean domain**; do not accept or prompt on "field"] <Schindler>

16. In this play's opening, two cousins discuss the dispensation they need from a bishop in order to marry. This play's second act opens with four girls walking in on the main character and offering him eggs, butter, a boiled chicken, and a piece of cake. In this play, an offstage mule race which the protagonist wins is narrated by Jimmy and the Widow Quinn. At the end of this play, a mob puts a noose around the title character's neck, but he is saved by his father, whom he had claimed to have clubbed to death. Part of this play was performed in dumbshow during its premier at the Abbey Theater after crowds rioted in protest of its portrayal of peasants. For 10 points, Pegeen calls Christy Mahon the title phrase in what play by J. M. Synge?

ANSWER: *The **Playboy of the Western World*** <Brownstein>

17. Generalized forces computed as the square of time derivatives in Lagrangian mechanics are named for this other force. The m term in Clairaut's formula is the ratio of this force to gravity. Most industrial pumps pressurize fluids by means of this force. The first Lagrange point is balanced by gravity and this force. Its magnitude equals mass times angular velocity cross angular velocity cross radius. It is experienced by an observer on Earth due to distant stars in a common statement of the Mach principle. The effect of artificial gravity is really governed by this force. It arises in rotating reference frames only, perpendicular to the angular velocity. For 10 points, name this fictitious, outward-directed force oriented opposite the centripetal force.

ANSWER: **centrifugal** force [do not accept "centripetal force"] <Silverman>

18. This politician split with Prescott Bush after this man married the divorcee "Happy" Murphy, an action that cost him a crucial California primary. In 1976, he was photographed at the Broome County Airport extending his middle finger to protesters. This man died in the company of aide and possible mistress Megan Marshack. He was heckled at the 1964 Republican National Convention, as Goldwater supporters regarded him as the leader of the "Eastern Establishment" liberal wing of the party. As Governor, this man dealt with the Attica Prison riot. For 10 points, name this Governor of New York during all of the 1960's and Vice-President under Gerald Ford.

ANSWER: Nelson Aldrich **Rockefeller** <Cheyne>

19. A temple in Penang uses incense to hold its population of these animals. The twenty-third tirthankara, Parshvanatha, escapes a storm because he saved one of these creatures as a young man. Along with a pig and a bird, this animal appears in Buddhist images of the "three poisons." In Voodoo, the creator Loa, Damballa, has the body of one of these animals. In Hinduism, young Krishna deals with one of them named Kaliya. In the Book of Mark, Jesus says that his apostles will be known by their ability to handle these animals, inspiring the practice of handling them in Pentecostal churches. For 10 points, name this type of animal that tempts Eve in the Garden of Eden.

ANSWER: **snake** [or **serpent**; or **naga**] <Bollinger>

20. In this book, the author argues that "we learn to prefer imperfect theories...to digested systems which have no one valuable suggestion" after illustrating a point by quoting some stanzas from George Herbert's "Man." This essay's author defines the Imagination as "the use which the Reason makes of the material world" in its ambivalent chapter on "Idealism." The title concept is identified as "the symbol of spirit" in the third proposition explored in this book's chapter on "Language." This essay's author declares, "I am nothing; I see all; the currents of the Universal Being circulate through me," in a passage about becoming a "transparent eyeball" while immersed in the title entity. For 10 points, name this first book by Ralph Waldo Emerson.

ANSWER: **Nature** <Casalaspì>

21. A piece by this musician begins with the pianist's right hand playing the following eighth notes: a descending "A, F" three times, then an ascending "E, F, G." He wrote a track that ends with the pianist playing the "shave and a haircut" motif twice, and begins with musicians clapping in 7/4 time. This composer of "Unsquare Dance" wrote a piece whose opening groups beats into units of 2 + 2 + 2 + 3 to create a 9/8 time rhythm. The third track from an album by this musician's band features a prominent Joe Morello drum solo in its middle section and was written by alto saxophonist Paul Desmond using 5/4 time. For 10 points, name this jazz musician whose namesake quartet included "Blue Rondo à la Turk" and "Take Five" in the album *Time Out*.

ANSWER: Dave **Brubeck** [or David Warren **Brubeck**] <Kim>



NASAT 2015 - Round 14 - Bonuses

1. This woman falls into a deep sleep when she opens a box filled with Proserpina's perfume. For 10 points each:

[10] Name this woman who is aided by a swarm of ants in sorting a roomful of grain, the first of a series of impossible tasks assigned by Venus.

ANSWER: **Psyche**

[10] Only under total darkness is Psyche permitted to gaze upon her husband, this winged Roman god who carries a quiver of love-inducing arrows.

ANSWER: **Cupid**

[10] Lulled by her sisters, Psyche sneaks up on a sleeping Cupid to ascertain his identity, but accidentally injures him in this manner.

ANSWER: she spills hot **oil** on his shoulder [or obvious equivalents] <Kim>

2. This body was lambasted in a speech in San Diego, whose speaker noted that he was told that they needed "water and pitchers for the Padres." For 10 points each:

[10] Name this Congress that passed the Taft-Hartley act. This Congress was lambasted as "lazy" by the president it served under during the election of 1948.

ANSWER: "**Do-Nothing**" Congress [or the **80th** United States Congress]

[10] This president dealt with the "Do-Nothing" Congress while campaigning in 1948 against Thomas Dewey. He also ordered the bombings of Hiroshima and Nagasaki.

ANSWER: Harry S. **Truman**

[10] Truman was convinced to undertake this action by his former business partner Eddie Jacobson, shortly after Truman initially refused to meet with Chaim Weizmann.

ANSWER: **recognizing** the State of **Israel** [or **recognizing** Medinat **Yisrael**; or answers that include words forms for recognizing, such as **recognition**; prompt on just **recognizing** or other word forms, such as **recognition**; do not prompt on just **Israel**] <O'Rourke>

3. The speaker of this poem praises the title woman by claiming, "A voice so thrilling ne'er was heard." For 10 points each:

[10] Name this poem about a "Highland Lass" who sings while bending "o'er the sickle."

ANSWER: "The **Solitary Reaper**"

[10] This Romantic poet who wrote "The Solitary Reaper" addressed his sister Dorothy at the end of his poem "Tintern Abbey."

ANSWER: William **Wordsworth**

[10] In "Tintern Abbey," Wordsworth described an ecstatic experience of having "the motion of our blood almost suspended" in which we become a "living" one of these things.

ANSWER: **soul** <Sy>

4. A man at the top of this painting reaches out to hold a blue curtain, as if to shield viewers from its central scene. For 10 points each:

[10] Name this allegorical painting by Agnolo Bronzino, in which a mother and son lustfully embrace. The first title figure holds an arrow in one hand and a golden apple in the other.

ANSWER: **Venus, Cupid, Folly, and Time** [or **Allegory with Venus and Cupid**]

[10] *Venus, Cupid, Folly, and Time* is an example of a painting from this broadly-defined art movement that followed the Renaissance and focused on elongated human bodies.

ANSWER: **Mannerism** [accept word forms, such as **Mannerist**]

[10] A more unique Mannerist painter, Giuseppe Arcimboldo, created a portrait of Rudolf II, in which Rudolf is imagined as this Roman god, but comprised entirely of fruits and vegetables.

ANSWER: **Vertumnus** <Lee>

5. The seventh piece in this composer's *Compositions 1960* consists entirely of the dyad B - F-sharp being held "for a long time." For 10 points each:

[10] Name this American composer of *The Well-Tuned Piano*, an improvisatory piece for a solo piano pitched using just intonation, rather than traditional equal temperament.

ANSWER: La Monte **Young** [La Monte Thornton **Young**]

[10] La Monte Young was a pioneer of this highly repetitive musical style that characterizes John Adams's opera *Nixon in China* and Terry Riley's *In C*.

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

[10] This minimalist composer paired a string quartet with a tape recording of interviews with Holocaust survivors in his *Different Trains*, and wrote *Music for 18 Musicians*.

ANSWER: Steve **Reich** [Stephen Michael **Reich**] <Kim>

6. Characters in this play chant a song that Jaeger calls "Bloody Justice," which claims, "masters and men with one accord set on the poor and grind them." For 10 points each:

[10] Name this play in which the title destitute Silesian workers rise up against the rich businessman Dreissiger.

ANSWER: *The **Weavers*** [or *Die **Weber***]

[10] *The Weavers* is a play by this German Nobel laureate and author of *The Sunken Bell*.

ANSWER: Gerhart **Hauptmann**

[10] In *The Sunken Bell*, the spurned forest girl Rautendelein eventually marries the creepy water-spirit Nickelmann, who constantly repeats "brekekekex," like the title creatures of this Aristophanes play.

ANSWER: *The **Frogs*** [or ***Batrachoi***] <Yu>

7. The best known textbook about these pieces of software is the "dinosaur book" of Silberschatz and Peterson. For 10 points each:

[10] Name these pieces of software that manage a computer's hardware. They are supposedly designed to allow a user to execute programs in a "convenient and efficient manner", though Windows obviously violates this principle.

ANSWER: **operating system** [or **OS**; or obvious equivalents]

[10] Hardware signals these events to an operating system to indicate they need attention. Most modern operating systems are "driven" by these requests, which are associated with a handler and stored in a namesake vector that also holds the address of their namesake service routine.

ANSWER: **interrupt** [or **interrupt** request; or **IRQ**]

[10] This term denotes the process by which an operating system chooses which of several processes the CPU will run. This term is also applies to the selection of which jobs are brought into memory.

ANSWER: CPU **scheduling** [or word forms; or job **scheduling**] <Voight>

8. This man's death in August 2014 was ruled a homicide, although he was shot 33 years before his death. For 10 points each:

[10] Name this former White House Press Secretary who names an act that requires firearms buyers to undergo federal background checks.

ANSWER: James **Brady** [James Scott **Brady**]

[10] James Brady was wounded when John Hinckley, Jr. unsuccessfully attempted to perform this action to impress Jodie Foster.

ANSWER: **assassinate** Ronald **Reagan** [or obvious equivalents for "assassinate"; prompt on partial answers]

[10] In the moments following the assassination attempt, this man declared "I am in control here" at a White House press conference.

ANSWER: Alexander **Haig** [Alexander Meigs **Haig**, Jr.] <Golimlim>

9. Some males in this class have inverted hemipenes in their tail that alternate use between copulations. For 10 points each:

[10] Name this animal class whose largest order is Squamata. The only extant member of its Rhynchocephalia order is *Sphenodon punctatus*.

ANSWER: **reptiles** [or **Reptilia**]

[10] In male squamates, this organ has a namesake sexual segment that is hypertrophied during mating season. The cells in that segment's secretory granules distinguish it from this organ's collecting duct cells.

ANSWER: **kidney** [or **renal**]

[10] Eversion of hemipenes requires hydrostatic pressure generated by blood and this clearish substance that circulates in a namesake system. This substance carries white blood cells from namesake nodes that swell during infection.

ANSWER: **lymph** [or **lymphatic** fluid; or **lymph** node] <Smart>

10. The syllable-coda /r/ in this phrase was found to be pronounced with greater frequency when subjects were prompted to repeat this phrase a second time. For 10 points each:

[10] Give this two-word phrase which was pronounced differently by employees at Saks, Macy's, and S. Klein in a 1966 experiment by William Labov (**luh-BOHV**).

ANSWER: "**fourth floor**"

[10] The /r/ in "fourth floor" was most often omitted by S. Klein employees, who spoke a dialect low in this level of respect or social status merited by a certain language.

ANSWER: **prestige**

[10] This country's Received Pronunciation dialect of English has higher prestige than regional dialects such as Cockney.

ANSWER: **United Kingdom** [or **United Kingdom of Great Britain and Northern Ireland**; or **England**; or Great **Britain**] <Kim>

11. The narrator of this work is traumatized by a childhood incident in which his father's associate nearly blinded him with grains of fire. For 10 points each:

[10] Name this short story in which Nathaniel falls in love with the mechanical doll Olympia, whose eyes are provided by the suspicious merchant Coppola.

ANSWER: "The **Sandman**" [or "Der **Sandmann**"]

[10] This German author's stories include "The Sandman," as well as "The Nutcracker and the Mouse King." His "tales" were adapted in a Jacques Offenbach opera.

ANSWER: E. T. A. **Hoffmann** [or Ernst Theodore Amadeus **Hoffmann**]

[10] Sigmund Freud analyzed "The Sandman" in an essay exploring the dual meaning of this German word, which implies unfamiliarity but also implies being out in the open.

ANSWER: **unheimlich** [prompt on **uncanny**] <Sy>

12. This philosopher argued that human beings developed "selves" by advancing through different spheres of life. For 10 points each:

[10] Name this Danish proto-existentialist, the author of *The Sickness Unto Death* and *Fear and Trembling*.

ANSWER: Soren **Kierkegaard**

[10] Kierkegaard envisioned this sphere of life as occurring between the aesthetic sphere and the religious sphere. In *Fear and Trembling*, Kierkegaard asks whether there is a teleological suspension of this concept.

ANSWER: the **ethical** sphere

[10] In *Fear and Trembling*, Kierkegaard compares this type of person to a dancer who leaps on the ground without losing posture; the counterpart to this person leaps perfectly, but lands awkwardly on the earth.

ANSWER: the **knight of faith** <Bollinger>

13. Often contrasted with collision theory, this theory's predictions are often drawn on More O'Ferrall–Jencks plots. For 10 points each:

[10] Name this theory which suggests reactants must overcome an activation energy to connect to each other, and ignores the mechanism of collision. The Eyring equation is used in this theory of kinetics.

ANSWER: **transition state** theory [or **TST**; or **activated complex** theory]

[10] The Eyring equation is the transition state theory analog to this other equation derived from kinetic theory. The frequency of collisions between reactants is modeled by this equation's pre-exponential factor.

ANSWER: **Arrhenius** equation

[10] According to the Hammond postulate, the late transition state usually forms in one of these reactions, indicating the transition state is closer in energy with the product than the reactant.

ANSWER: **endothermic** reaction <Silverman>

14. John Gay used this language to write *The Beggar's Opera*, a satirical ballad opera later adapted into Kurt Weill's *The Threepenny Opera*. For 10 points each:

[10] Name this language used by Henry Purcell to compose the opera *Dido and Aeneas*.

ANSWER: **English**

[10] *Dido and Aeneas* ends with Dido singing this G minor aria, in which she pleads for others to "Remember me, but ah! forget my fate."

ANSWER: "**When I am laid in earth**" [or **Dido's Lament**]

[10] Thomas Adès ("**adiss**") wrote a 2004 English-language opera of this title, which it shares with Beethoven's only D minor piano sonata.

ANSWER: *The* **Tempest** [or *Der* **Sturm**] <Kim>

15. Answer the following about some proposed African infrastructure projects, for 10 points each:

[10] The Inga I and Inga II dams that lie on this river might be replaced by a Grand Inga Dam, which some claim will generate more energy than even the Three Gorges Dam. This river is the second-longest in Africa, only trailing the Nile River.

ANSWER: **Congo** River

[10] This country's is constructing a new mainland capital, Oyala, to replace its current capital, which lies on the island of Bioko. This country is the only one in Africa that officially uses Spanish.

ANSWER: **Equatorial Guinea** [or Republic of **Equatorial Guinea**; or Republica de **Guinea Ecuatorial**]

[10] In contrast, development on the Jonglei Canal through the Sudd swamp in what is now this country has been nonexistent since 1983.

ANSWER: **South Sudan** [or Republic of **South Sudan**] <Golimlim>

16. In this play, David McComber disapproves of Richard Miller's quotations of poetry in Richard's love letters to Muriel. For 10 points each:

[10] Name this play set on the Fourth of July in Connecticut, a rare attempt at comedy by the author of *Long Day's Journey into Night*.

ANSWER: **Ah, Wilderness!**

[10] This American playwright of *Ah, Wilderness!* and *Long Day's Journey into Night* also wrote *The Iceman Cometh*.

ANSWER: Eugene **O'Neill** [or Eugene Gladstone **O'Neill**]

[10] Jamie Tyrone reappears in this O'Neill drama, set years after his mother Mary's death. In this play, the Irish woman Josie attempts to help Phil Hogan keep his land by sleeping with Jamie.

ANSWER: A **Moon for the Misbegotten** <Sy>

17. As a student, this man spent hours meticulously drawing Michael Jordan. For 10 points each:

[10] Name this Supreme Leader of North Korea, the son of Kim Jong-Il.

ANSWER: **Kim Jong-un**

[10] In May 2015, Kim Jong-un reportedly executed his defense minister, Hyon Yong Choi, for such offenses as falling asleep in Kim's presence. By what ostentatious method did Kim have the minister slain?

ANSWER: **anti-aircraft** gun [prompt on **firing squad**]

[10] This key policy adviser to Kim Jong-un and his uncle was possibly executed in 2013, although Dennis Rodman, among others, claims to have seen him alive. A discredited rumor claimed he was killed by having 100 dogs devour him.

ANSWER: **Jang** Sung-taek <Cheyne>

18. Timocreon targeted this politician in several drinking songs. For 10 points each:

[10] Name this man who was ostracized a few years after leading the Greek navy to success at the Battle of Salamis.

ANSWER: **Themistocles**

[10] That victory at Salamis came after the Greeks lost two battles in the same day: a naval battle at Artemisium, and this one where Ephialtes's betrayal led to the massacre of Leonidas's troops.

ANSWER: Battle of **Thermopylae**

[10] At Salamis, Xerxes is said to have stated that his men became women and his women became men, alluding to Artemisia, a naval commander and queen who ruled from this city. It was also the birthplace of Herodotus.

ANSWER: **Halicarnassus** <Golimlim>

19. The creation of these particles in QED leads to uncharged plates attracting each other in the Casimir effect. For 10 points each:

[10] Name these particles represented by a wavy line on a Feynman diagram. They are exchanged in static forces.

ANSWER: **virtual** particles [or **virtual** photons]

[10] The Casimir effect provides support for the existence of this energy, which is the energy of a quantum system's ground state.

ANSWER: quantum vacuum **zero-point** energy [or **ZPE**]

[10] The zero-point energy for the harmonic oscillator can be determined using this man's uncertainty principle.

ANSWER: Werner **Heisenberg** <Silverman>

20. These events began when almost 200,000 people gathered in Kennington Park on March 31, 1990. For 10 points each:

[10] Name these 1990 protests in Britain directed against the namesake fee introduced by the Conservative government. These protests targeted a fee otherwise known as the "Community Charge" that were previously maligned by Wat Tyler in the 1380's.

ANSWER: **Poll Tax** Riots

[10] The Poll Tax Riots hurt the reputation of this female Conservative Prime Minister, who was succeeded by John Major in 1990.

ANSWER: Margaret **Thatcher** [or Margaret **Roberts**]

[10] Thatcher's Conservative Party swept to victory in 1979 after a general election in which Conservatives used a poster featuring a massive unemployment line and this three word phrase. The poster was hailed as the best of the century by some analysts.

ANSWER: **Labour Isn't Working** <Cheyne>

21. The masseter, temporalis, and two pterygoids are the classical muscles of this process, and abnormal activity in them at night occurs in bruxism. For 10 points each:

[10] Name this process in which the lateral pterygoid performs contralateral excursion. It is the only one of the four muscles used in this process that can abduct the mandible.

ANSWER: **mastication** [or **chewing**; or **grinding teeth**; or word forms; prompt on **moving the jaw**]

[10] The muscles of mastication are innervated by the mandibular division of this cranial nerve, which also branches into the maxillary and ophthalmic nerves.

ANSWER: **trigeminal** [or cranial nerve **5**; or CN **5**; or **fifth** cranial nerve]

[10] The trigeminal nerve supplies non-gustatory sensation to the anterior two-thirds of this structure, while cranial nerves 7 and 9 provide perception of taste through innervating its taste buds.

ANSWER: **tongue** <Smart>