Eisenhower Memorial Tournament 2017: Dunning-Kruger? I Hardly Know 'Er! Questions by Vasa Clarke, Ryan Humphrey, Alex Damisch, Jacob O'Rourke, Gabe Guedes, Charles Hang, and Alex Dzurick

Packet 7: Tossups

- 1. In response to one theory of this figure's death, a writer noted "Tis strange the mind, that very fiery particle / Should let itself be snuffed out by an article." The title entity of one of this author's poems "[conspires]...to load and bless / With fruit the vines that round the thatch-eves run;" that entity is a "Close bosom-friend of the maturing sun." Another of this author's works describes Cynthia's love for the title figure and notes that a "thing of (*) beauty is a joy forever." In addition to writing "To Autumn" and "Endymion," this poet wrote that "heard melodies are sweet, while unheard ones are sweeter" in a poem about a "still unravish'd bride of quietness." For 10 points, name this poet of "Ode on a Grecian Urn."

 ANSWER: John Keats <CH, British Lit>
- 2. Geological structures on this astronomical body include the sulci ["SULL-key"] of Tiamat and Ninevah, as well as the similarly named craters of Tammuz, Osiris, and Thoth. It's not Europa, but data from the Hubble Space Telescope in 2015 observing the aurora on this body has supported the theory that this body possesses a subsurface ocean. Along with a larger body, NASA's first fly-by of this entity was on the (*) Pioneer 10 mission. This solid body has the lowest moment of inertia factor in the solar system, and its metallic core makes it the only body of its kind to possess a magnetic field. This moon exists in a 1:2:4 orbital resonance with Europa and Io. For 10 points, name this moon of Jupiter, the largest of the Galilean moons.

 ANSWER: Ganymede <RH, Other Science>
- 3. A holiday of this type apparently sounds similar to the words "sheep's head," so people who celebrate that holiday of this type use a sheep's head for decoration while drinking chhaang. The Wednesday before one of these holidays is celebrated as Chaharshanbe Suri, during which people jump over fires. Several Jewish sects believe that referring to one of these holidays as a name other than Yom (*) Teruah is due to corruption from the Babylonian captivity. During one of these holidays, children traditionally receive red envelopes filled with money. Apples dipped in honey are a traditional food for a holiday of this type which begins the month of Tishrei. For 10 points, identify this type of holiday, examples of which include Nowruz and Rosh Hashanah. ANSWER: New Year [prompt on specific New Year celebrations] < VC, Religion>
- 4. This leader's country was proposed to be partitioned by the terms of the Hoare-Laval Pact. During the Korean War, this leader contributed military support in the form of the Kagnew Battalion. This leader went into temporary exile aboard the light cruiser HMS *Enterprise*, during which time he lived in Fairfield House. This first elected chairperson of the Organisation of (*) African Unity was named *Time* magazine's 1935 Man of the Year shortly before appealing to the League of Nations on the subject of Mussolini's invasion of his country. After his death, this monarch was replaced in power by the Derg. For 10 points, name this Emperor of Ethiopia from the Solomonic dynasty who is regarded as the Messiah by Rastafarians.

ANSWER: Haile Selassie I [or "Ras Tafari" until mentioned] < VC, Misc./Other History>

- 5. In this work's third movement, the soloist bows fast four-note ascending and descending arpeggios across all four strings before plucking all four strings together. The composer of this work wrote out the extended cadenza that unusually interrupts the capitulation, and which requires ricochet bowing. This work's andante second movement continues attaca from the first as a bassoon holds out a B from the first movement's E minor chord. The solo instrument in this (*) concerto begins without an introduction, playing a tune that this work's composer says gave him "no peace." This concerto was written for Ferdinand David, who was concertmaster of the Leipzig orchestra that this work's composer conducted. For 10 points, name this concerto for the highest common string instrument written by the composer of Songs Without Words and A Midsummer Night's Dream.

 ANSWER: Violin Concerto in E Minor, Opus 64 by Felix Mendelssohn [or any reasonable combination of those descriptors] <AWD, Music>
- 6. It's not Mesopotamia, but in a myth from this region, a snake which found a magic herb helped to bring back to life a child who had drowned in a cask of honey. A king of this region slew the Amazon warrior Bremusa, but his journey home to this place ended in tragedy after he was forced to sacrifice his own son to

fulfill a promise. This place was guarded by a bronze giant with only one blood vessel named (*) Talos. The only sister of Cadmus was seduced by Zeus and taken to this place on the back of a white bull. Seven boys and seven girls were sent to this place every year as sacrifices until Ariadne helped a visiting hero traverse the labyrinth. For 10 points, name this island home of Idomeneus, Europa, and Minos, located south of the Greek mainland. ANSWER: **Crete** <VC, Myth>

7. It's not epinephrine, but the increased release of this hormone is tested for in the clonidine test. Placental lactogen is a fetal analogue of this hormone. Insensitivity to this hormone results in Laron syndrome. This hormone's release is triggered when it's secretagogue GPCR binds to (*) ghrelin. This hormone stimulates the production of IGF-1 in the liver, and its release is inhibited by somatostatin. Peak-release of this hormone occurs roughly one hour after the start of non-REM sleep. Excessive amounts of this hormone lead to acromegaly, and insufficient amounts of this hormone result in dwarfism. For 10 points, name this pituitary hormone also known for its use as a performance-enhancing drug.

ANSWER: human growth hormone [or HGH] or somatropin or somatotropin] <RH, Biology>

8. The leader of a rebellion in this state attempted to reassemble his forces on Acote's Hill near Chepachet ["chuh-PATCH-it"], where they wanted to reconvene the People's Convention. Samuel Ward King and the namesake of a rebellion were elected as governor of this state before an 1842 rebellion in support of universal male suffrage. John Tyler refused to send troops to intervene in this state's Dorr's Rebellion. Anne (*) Hutchinson founded a haven for Antinomians in this state, which was the last of the original 13 colonies to ratify the Constitution. The founder of this modern-day state wrote *The Bloody Tenet of Persecution* and purchased the land for it from the Narragansetts. For 10 points, name this state, where Roger Williams set up a haven for dissidents at Providence

ANSWER: Rhode Island [or Rhode Island and Providence Plantations] <JO, American History>

9. One section of this work is painted in monochrome and bears an inscription from Psalms that translates to "For he spoke, and it came to be; he commanded, and it stood firm." In 2014, Oklahoma Christian University student Amelia Hamrick transcribed music that is written on the ass of a "tortured denizen" lying face-down in this work. This work depicts both God and several ornate (*) fountains in pink. A man is trapped inside a giant clamshell in this work, which also depicts people in boats made of giant berries. This work depicts the earth as a bubble-like sphere in grisaille ["griz-EYE"] when closed, and when opened the triptych depicts Adam and Eve in Paradise, humans enjoying sensual pleasures, and Hell. For 10 points, name this work full of tiny naked people by Hieronymus Bosch.

ANSWER: The Garden of Earthly Delights <AWD, Painting>

10. While walking in this novel on a path named Méséglise ["mez-eg-LEEZ"], a character sees the daughter of the composer Vinteuil having a lesbian encounter. Robert de Saint-Loup helps this novel's protagonist understand his relationship with a character who often titles two sections of this novel named *The Prisoner* and *The Fugitive*. That character who secretly has lesbian affairs is (*) Albertine, who also expresses disdain for the aristocratic Guermantes family in this novel. The namesake of this novel's first section falls in love with the prostitute Odette de Crecy. This novel's protagonist is reminded of his childhood in Combray by the taste of a teasoaked madeleine, which occurs in this work's first section *Swann's Way*. For 10 points, name this seven volume novel by Marcel Proust.

ANSWER: <u>In Search of Lost Time</u> [or <u>Remembrance of Things Past</u>; or <u>À la recherche du temps perdu</u>; or <u>Swann's Way</u> until the second sentence] <CH, European Lit>

11. A bombmaker for this organization was nicknamed "the Engineer" and was assassinated when the director of Shin Bet remotely detonated a phone while he was talking to his father. A leader of this group proposed a ten-year truce, or *hudna*, with its main opponent; that leader of this group, al-Rantissi, was later killed in a targeted air strike. This group often competes with a rival political group founded by Yasser Arafat, which is called Fatah. This group was founded shortly after the start of the First (*) Intifada as an offshoot of Egypt's Muslim Brotherhood. The Al-Qassam Brigades, the military wing of this group, were targeted in 2008 by Operation Cast Lead, an Israeli defense effort. For 10 points, name this Palestinian group that governs the Gaza strip.

ANSWER: Hamas [or Harakat al-Muqawamah al-Islamiyyah] <JO, Misc./Other History>

12. These products are invested in by $R \cdot E \cdot M \cdot I \cdot Cs$ and investments based on them are the most common ones divided into $P \cdot O$ and $I \cdot O$ tranches. The "Alt-A" type of these products is contrasted the "conforming" type of these products, which is also known as the "agency" type because it can be guaranteed by the $G \cdot S \cdot Es$. The book Liar's (*) Poker describes Lewis Ranieri's invention of a method to securitize these products. Varieties of these products known by the acronyms $S \cdot I \cdot S \cdot A$ and $N \cdot I \cdot N \cdot A$ are derogatorily called the "liar" type. Some individuals who obtain these products may have to pay points or buy insurance, especially individuals with FICO scores below 660 who are only eligible for their subprime variety. For 10 points, name these loans which are taken out to purchase a home.

ANSWER: <u>mortgage</u> [accept <u>mortgage</u>-backed <u>securities</u> or <u>MBS</u> or <u>mortgage bonds</u> or any other answer containing <u>mortgage</u> that indicates a fixed income investment; prompt on "loans" or "home loans" or similar answers] < CH, Social Science>

13. A book dedicated to these specific events begins with the one-sentence foreward, "I have nothing more to say", and was written by satirist Travis Rosenberg. One article attempting to exonerate the central figure in these events describes how he must be "a stand-up guy" because he checks "DailyBibleVerse.com" and was "sorted into Gryffindor" by a Buzzfeed quiz. Speculation regarding one these events prompted forward Connar Tava to tweet "can't stop, won't stop". The first of these events also involved (*) Raymond Spalding, and the most recent of these events resulted in their central figure receiving a technical foul and an "indefinite" suspension for one game. For 10 points, name these events in which a certain Duke basketball player might have elected to "sweep the leg".

ANSWER: Grayson Allen tripping people [prompt on less specific answers mentioning just Grayson Allen or tripping people, but not both; the book in question is "Grayson Allen's Trip Advisor 101", which... unfortunately exists.] <RH, Trash>

- 14. This cause was championed by the Kensington Society. An organization that argued in support of this cause had a motto of "Deeds, not words." A proponent of this cause slashed Diego Velazquez's *Rokeby Venus*, and another supporter of this cause stepped in front of the king's horse at the Epsom Derby. The NUWSS was formed by Millicent (*) Fawcett, another supporter of this cause. The Cat and Mouse Act targeted the hunger strikes used by the WPSU, a group that was dedicated to this cause. For 10 points, name this cause campaigned for by Emmeline Pankhurst, which sought to expand the right to vote in the U.K.
- ANSWER: <u>women's suffrage</u> [or any answer that indicates that <u>women</u> gained the <u>right to vote</u>; or the <u>enfranchisement</u> of <u>women</u>; prompt on "suffrage"] <JO, European History>
- 15. This scientist is the alphabetically second namesake of a phenomenon that results in the formation of right hexagonal cells in the absence of turbulence. With Plateau, this scientist names the phenomenon of a falling fluid stream dividing into smaller pockets while preserving volume and losing surface area. A dimensionless number named for this scientist describes buoyancy-driven flows, and is the product of the (*) Grashof and Prandtl numbers. This scientist also co-names a type of fluid instability that forms namesake "fingers", and occurs at the interface of a low-density and a high-density fluid with G. I. Taylor. For 10 points, name this physicist whose non fluid-based discoveries include a namesake form of elastic scattering that explains why the sky is blue.

 ANSWER: John William Strutt Lord Baron Rayleigh [accept Rayleigh-Benard convection/instability/cells, or Rayleigh-Taylor Instability, or Rayleigh-Plateau instability] <RH, Physics>

16. In the first and last chapters of one of his novels, this author featured a street preaching family led by Asa. In that novel by this author, Sparser hits a girl while driving a stolen car in Kansas City, leading the protagonist to move to Chicago, where he meets an uncle who gets him a job in the factory town of (*) Lycurgus, New York. A girl is hit in the face with a camera, leading to her drowning, in that novel by this author which sees Roberta Alden's death cause the execution of Clyde Griffiths. This author also wrote a novel about a girl who becomes a Broadway actress after discarding her lovers Charles Drouet and George Hurstwood. For 10 points, name this author of *An American Tragedy* as well as *Sister Carrie*.

ANSWER: Theodore Herman Albert **Dreiser** <CH, American Lit>

- 17. One politician from this country, Tareck El Aissami, has been accused of selling passports to individuals from the Middle East, including members of Hezbollah. The murder of beauty pageant contestant Monica Spear in this country set off massive protests in January 2014. In this country, the murder of Robert Serra led to raids on the headquarters of colectivos, which are community organizations in this country. The oil company (*) PDVSA is struggling to meet demand despite having the world's largest oil reserves in this country, where inflation struck 800% in 2016 and a food crisis has been ongoing. For 10 points, name this South American country where Nicolas Maduro defeated Henrique Capriles in a 2013 election after the death of Hugo Chavez. ANSWER: Bolivarian Republic of Venezuela [or República Bolivariana de Venezuela] <GG, Current Events>
- 18. This composer wrote a patter-duet for Dandini and Ramiro in which the latter repeats *piano* ["PYA-no"], *piano*. One of this composer's signature devices was to build up drama by repeating a phrase, usually louder and higher each time, in his namesake "crescendo." This composer of *La* (*) *Cenerentola* got so sick of bel canto divas over-embellishing his arias that he painstakingly wrote out versions in his own ornaments, such as for the aria *Una voce poco fa* ["OO-na VOH-chay POKE-oh FAH"]. In another work by this composer, Gesler seizes the title character's son Jemmy and forces the protagonist to shoot an arrow through an apple placed on Jemmy's head. For 10 points, name this composer of operas like *William Tell* and *The Barber of Seville*.

 ANSWER: Gioachino Rossini <AWD, Other Art>
- 19. One character created by this author sent his son to manage his family estate to spite his wife, which leads to that son's death when he joins the Republicans in the Spanish Civil War. That character created by this author marries Catalina after being imprisoned with her brother Gonzolo Bernal. The title protagonist of one of this author's novels shoots a corpse-eating pig instead of a rebel, which leads to his mistress being blackmailed into a relationship with a rebel general. That novel by this author features the tutor (*) Harriet Winslow as well as the self-proclaimed general Tomas Arroyo. This author wrote about the last days of a founder of the PRI in one novel and about the last days of Ambrose Bierce in another. For 10 points, name this author of *The Old Gringo* and *The Death of Artemio Cruz*.

ANSWER: Carlos Fuentes Macias < CH, World/Other Lit>

20. In one reaction, these compounds may lose a carbon upon addition of iron acetate and 30% hydrogen peroxide. The Mills projection is useful when these compounds possess multiple rings. In another reaction these compounds experience a chain contraction upon addition of sodium methoxide and hydroxyl-amide. A cyano-hydrin intermediate is produced in one reaction named for (*) Kiliani and Fisher that lengthens these compounds while preserving chirality. An anomer is a specific type of stereo-isomer encountered in these compounds, which are the reactants in the Wohl and Ruff degradations. Alternative nomenclature exists for when these compounds possess aldehyde or ketone groups. These compounds are typically depicted with Hayworth or Fischer projections. For 10 points, name these compounds exemplified by arabinose and glucose.

ANSWER: sugars [or "carbohydrates", or "carbs", "aldoses", "ketoses" or any of "mono/poly/oligo-saccharides",] < RH, Chemistry>

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Packet 7: Bonuses

1. This character is seen for the first time since being injured encouraging viewers to tune in for season three "in, like, a year and a half," after getting high on painkillers and weirding out a pizza delivery guy. For 10 points each: [10] Name this longtime friend of the Smith family who got himself shot because Beth mistook him for a memory-infiltrating parasite.

ANSWER: Mr. Poopybutthole

[10] Mr. Poopybutthole is a minor character on this animated series. One of this show's main characters uses the catchphrase "wubba lubba dub," which means "I am in great pain, please help me."

ANSWER: Rick and Morty

[10] This character on *Rick and Morty* reveals the meaning of the phrase "wubba lubba dub dub" and has known Rick ever since this guy, Rick, and Squanchy were committing atrocities together against the Galactic Federation. ANSWER: **Birdperson** <VC, Trash/Other>

- 2. The end of this campaign occurred in 1492 with the surrender of the last Muslim ruler of Granada. For 10 points each:
- [10] Name this religious war in which Catholic monarchs such as Ferdinand and Isabella drove the Moors out of Spain.

ANSWER: **Reconquista**

[10] The sword Tizona was wielded by this Spanish nobleman who participated in the Reconquista. He ruled over the city of Valencia until his death in 1099.

ANSWER: El Cid [or Rodrigo Díaz de Vivar; or El Campeador]

[10] In popular tradition, the armored corpse of El Cid carried out a successful cavalry charge against this Moroccan Berber dynasty, which founded the city of Marrakesh in North Africa.

ANSWER: Almoravids [or Imrabden] < VC, European History>

- 3. Although a character in this play is invited to perform a seance so that a man can gain material for his novel about a spiritualist, she actually does manage to conjure the spirit of his first wife. For 10 points each:
- [10] Name this play in which Madame Arcati realizes that it is Charles' maid Edith, and not herself, who is conjuring up the ghosts of his dead wives after his second wife Ruth dies from a booby-trapped car.

ANSWER: Blithe Spirit

[10] Noel Coward took the title *Blithe Spirit* from "To a Skylark," a poem by this British writer who described "vast and trunkless legs of stone" in "Ozymandias."

ANSWER: Percy Bysshe Shelley

[10] At the end of *Private Lives*, once Elyot and Amanda see Victor and Sybil bickering in a way that makes them seem suitable to each other, they then perform *this specific action*, which is commonly done in Coward's plays.

ANSWER: tiptoe offstage [prompt on "going offstage" or equivalents] <GG, British Lit>

- 4. Giddy-up and name some things about equestrian sculptures, for 10 points each:
- [10] Etienne-Maurice Falconet created this sculpture of a man on a rearing horse which stands in Senate Square, St. Petersburg. Its pedestal, the Thunder Stone, is the largest stone ever moved by humans.

ANSWER: The **Bronze Horseman**

[10] The creator of this sculpture was inspired to cast it after he published a drawing of a "pitching" horse in *Harper's Weekly*. The man riding the horse grips its mane with one hand and steadies himself with his right.

ANSWER: The Bronco Buster

[10] This Renaissance sculptor created the *Equestrian Statue of Gattamelata* to honor the Venetian general Erasmo da Narni. This artist also sculpted some saints (not on horses) for the Orsanmichele in Florence.

ANSWER: **Donatello** <AWD, Other Art>

- 5. A relatively large value for this quantity is fundamental to the catalytic step of the Claus process. For 10 points each,
- [10] Name this quantity, high values for which are often possessed by catalytic supports. One example of those is the precursor silica gel in the creation of a Phillips catalyst, which has a high ratio of this quantity to volume.

ANSWER: (high) exposed surface area

[10] The standard method of preparing the Phillips catalysts is by addition of this metal's trioxide to the high surface area gel. This element's trioxide and dilute sulfuric acid can also be found in the Jones Reagent.

ANSWER: chromium

- [10] Industrially, the Phillips catalyst is involved in most pathways for the production of this common polymer. The Ultra-High-Molecular-Weight version of this polymer is commonly found in the articular portions of implants. ANSWER: **polyethylene** <RH, Chemistry>
- 6. Dost Mohammad ruled as emir of this country twice, and this country had its southern border defined by the Durand Line. For 10 points each:
- [10] Name this country which during much of the 18th century was the home of the Durrani Empire.

ANSWER: Afghanistan

- [10] Under the Treaty of Gandamak, Afghanistan submitted to this foreign empire, which was represented by the diplomat Louis Cavagnari. Dost Mohammad was very careful not to bother this empire during the Sepoy Mutiny. ANSWER: **British** Empire [or obvious equivalents such as "the **British** Raj"]
- [10] British military intervention in Afghanistan is usually considered part of this geopolitical struggle between Britain and Russia over the control of Central Asia.

ANSWER: the **Great Game** <VC, World History>

- 7. The 2014 film *The Imitation Game* highlighted the cryptanalysis career of this English mathematician. For 10 points each:
- [10] Name this author of *On Computable Numbers* and artificial intelligence theorist.

ANSWER: Alan Turing

[10] The film *Travelling Salesman* was a fictional movie about four mathematicians attempting to solve this open computer science problem, which asks whether a problem that can be quickly checked by a computer can also be quickly solved by it.

ANSWER: $\underline{\mathbf{P}} = \underline{\mathbf{NP}}$

[10] In *Hidden Figures*, Octavia Spencer plays Dorothy Vaughan, who at one point tries to check out a book on this programming language from a library. This language's unusual legacy features include strict fixed-field spacing, although it is surprisingly an efficient choice for modern high-performance computing.

ANSWER: Fortran < AWD, Other Science>

- 8. Like its author's *Waiting for Lefty*, this play was produced by the socially conscious Group Theatre troupe. For 10 points each:
- [10] Name this play about Joe Bonaparte, who fears that if he becomes a boxer, it will ruin his hands, thus ending his dream of becoming a violinist.

ANSWER: Golden Boy

[10] Golden Boy and Waiting for Lefty were both written by this American playwright of Awake and Sing!

ANSWER: Clifford Odets

[10] The Group Theatre developed this acting approach in which the actor tries to totally identify emotionally with the part. Actors who use this approach are notorious for doing things like starving themselves and not bathing to get in character.

ANSWER: method acting <CH, American Lit>

- 9. Name some things about practices in Orthodox Christianity, for 10 points each:
- [10] While Catholics usually practice this on Fridays, Orthodox Christians do this on Wednesdays and Fridays, during Lent, and for various other commemorations totaling about half the year.

ANSWER: <u>fasting</u> [prompt on anything involving "<u>not eating</u>" specific foods; fasts involve more than meat]

[10] An Orthodox child's godparents sponsor this ceremony, usually after the 40 day churching. In the Nicene Creed, adherents recite that they "acknowledge" this practice just once "for the remission of sins."

ANSWER: **baptism** [accept word forms]

[10] 1 Thessalonians 5:17 says to "pray without ceasing," and Orthodox ascetics mentally recite this statement throughout the day. The most common version of this meditation asks its namesake to "have mercy on me, a sinner."

ANSWER: the **Jesus prayer** [prompt on partial answer] <AWD, Religion>

- 10. Answer some questions about the origins of evil in ancient myths. For 10 points each:
- [10] Ancient Egyptians identified this ancient primordial snake-bodied monster as the source and physical embodiment of chaos. Ra fought against this evil deity every night at sunset.

ANSWER: **Apep** [or **Apophis**]

[10] The Greek gods screwed over humanity by creating this woman, giving her wondrous gifts, then also giving her enough curiosity to open a box which contained all the evil in the world.

ANSWER: Pandora

[10] Although great evil escaped Pandora's box, she was able to slam the lid shut before this thing managed to get out. It is the last thing left to mankind when all else is lost.

ANSWER: **hope** [or **elpis**; or **spes**] <VC, Myth>

- 11. A certain fourteen-line sequence of masculine and feminine endings is known as this work's namesake "stanza." For 10 points each:
- [10] Name this work whose protagonist responds to being tricked into attending a country ball by a friend by flirting with that friend's fiancée Olga. Earlier, this work's protagonist had rejected Olga's sister in a "sermon" named for him.

ANSWER: Eugene Onegin

[10] *Eugene Onegin* was written by this Russian author whose eventual death in a duel was foreshadowed by Onegin's killing of Lensky in that work.

ANSWER: Alexander Sergeyevich Pushkin

[10] This sister of Olga is rejected by Eugene early in the work. At the work's end, he realizes that he actually loves her, but she rejects him because she is now married.

ANSWER: Tatyana Larina < CH, European Lit>

- 12. Answer the following about the Vessot Rocket Clock experiment. For 10 points each,
- [10] To test its central hypothesis, the experiment launched a clock based on the "hydrogen" variety of one these devices into space, and compared it to an identical one on earth. That version of these devices was chosen for its role as the atomic frequency standard.

ANSWER: hydrogen maser [do not accept or prompt on anything involving just clocks]

[10] The goal of the Vessot experiment was to use observed distortions in the masers' readings to test a component of this theory proposed by Albert Einstein, which explains phenomena like gravitational lensing and is contrasted with an earlier, "special" version.

ANSWER: general relativity [or GR; prompt on "relativity", do not accept "special relativity"]

[10] Another test of Einstein's GR theory was this experiment conducted at Harvard's Jefferson Laboratory. This experiment used a helium-filled Mylar bag between two samples of Iron-57, one in a loudspeaker cone and one several floors below, to detect the presence of gravitational redshift.

ANSWER: **Pound-Rebka** experiment <RH, Physics>

- 13. Name some techniques used in European painting after the height of the Renaissance, for 10 points each:
- [10] This term is a portmanteau of the Italian words for "light" and "dark." It characterizes dramatic color contrasts, sometimes from an unseen light source, as in Joseph Wright of Derby's *An Experiment of a Bird in the Air Pump*.

ANSWER: chiaroscuro ["key-ah-ro-SKOO-ro", but be generous]

[10] Leonardo da Vinci used this blending technique to create a soft, blurred look in *Mona Lisa*, particularly around the subject's eyes.

ANSWER: sfumato

- [10] Along with chiaroscuro, sfumato, and unione, this is the other of the four canonical Renaissance painting modes. It describes a deliberate changing from light to dark hues, or vice versa, to emphasize shading and better render shadows. The results of this technique can be seen readily in Michelangelo's works in the Sistine Chapel. ANSWER: **cangiante** [prompt on "cangiare" or "to change"] <AWD, Painting>
- 14. The German genre of "everyday history" is a form of this type of history. For 10 points each:
- [10] Name this genre of history which focuses on the history of an extreme narrow subject, such as a single village or even a single person.

ANSWER: microhistory

[10] The term microhistory originates from a book by George R. Stewart about this Confederate frontal assault which took place on the third day of the Battle of Gettysburg.

ANSWER: Pickett's Charge

[10] Probably the best-known work of microhistory is *The Cheese and the Worms*, a study of a heretical individual in this profession. Members of this profession who were often targeted in food riots used two stones called a bedstone and a runner stone in their work.

ANSWER: miller < CH, Misc./Other History>

- 15. The Gulf of Mannar and Palk Strait separate this island from the mainland. For 10 points each:
- [10] Name this island which was referred to as Ceylon under British colonial rule.

ANSWER: Sri Lanka

[10] This is the majority ethnic group on Sri Lanka. They are mostly Theravada Buddhists and have fought a long war against the Tamil Tigers.

ANSWER: Sinhalese

[10] This is the name of the capital city of Sri Lanka's Northern Province, which also names the peninsula which forms Sri Lanka's northernmost point and a kingdom founded by Kalinga Magha.

ANSWER: Jaffna < VC, Geography>

- 16. A student of this thinker named Hippasus was apocryphally drowned at sea for his shocking discovery that the square root of two was irrational. For 10 points each:
- [10 Name this ancient Greek philosopher and mathematician whose namesake theorem relates the lengths of a triangle's sides.

ANSWER: Pythagoras

[10] Pythagorean treatises formed the foundation of this concept, which insists that the alignment of the planets form a non-audible but nonetheless beautiful harmony.

ANSWER: <u>music of the spheres</u> [or <u>musica universalis</u>; or <u>harmony of the spheres</u>]

[10] Pythagoras himself refused to eat this food for vague reasons, possibly relating to the soul. He apparently died because he refused to run away from murderers and trample some of these plants.

ANSWER: beans < VC, Philosophy>

- 17. This disease's severity is gauged by the "GOLD" grading system, and patients with this disease are classified as either "blue bloaters" or "pink puffers". For 10 points each,
- [10] Name this common respiratory disease in tobacco smokers, whose different types include emphysema and chronic bronchitis.

ANSWER: **COPD** [or **chronic obstructive pulmonary** disease]

[10] One characteristic sign of COPD in X-rays is a flattening of this sheet of skeletal muscle that lines the bottom of the thoracic cavity.

ANSWER: thoracic diaphragm

[10] Theophylline, a common broncho dilating drug taken by COPD patients, works by raising intracellular levels of this second messenger molecule, which activates protein kinase A in signal cascades.

ANSWER: **cAMP** [or **cyclic AMP**] <RH, Biology>

18. A collection of works from this dynasty was described as having 300 poems in an allusion to the *Classic of Poetry*, even though it contains about 317. For 10 points each:

[10] Name this Chinese dynasty which produced such poets as Li Bai ["lee bye"] and Wang Wei [wahn "way"]. ANSWER: **Tang** dynasty

[10] The most prolific author in *Three Hundred Tang Poems* is this "saint of poetry" who wrote about his experiences in the An Lushan Rebellion in "The Song of the Wagons."

ANSWER: <u>Du</u> Fu [or Zǐměi, or Dù Shàolíng, or Dù Gōngbù, or Shàolíng Yělǎo, or Shīshèng]

[10] Du Fu is known as the "saint of poetry" in this other Asian country which produced a genre of three-line poetry in which the lines have 5, 7, and then 5 syllables.

ANSWER: <u>Japan</u> [or <u>Nippon</u>-koku, or <u>Nihon</u>-koku] <CH, World/Other Lit>

19. Name some things about music written for Notre Dame ["NOTE-ruh DOM"], for 10 points each:

[10] Musicians affiliated with Notre Dame in the early 13th century wrote the first internationally popular music in this style, which uses more than one melodic line. This word literally means "many sounds."

ANSWER: **polyphony** [accept word forms like **polyphonic**]

[10] Musicians at Notre Dame are also credited with inventing this type of composition, which sets upper voices above a borrowed melody called a *cantus firmus*. Unlike madrigals, these pieces were generally sacred, not secular. ANSWER: **motet**

[10] Although it was actually written for a Cathedral at Reims ["RANCE"], this French composer wrote a polyphonic *Messe de Nostre Dame*, maybe the oldest setting of the Mass by one composer. He also wrote the poem *Le Voir Dit* ["LUH VWAHR DEET"]

ANSWER: Guillaume de Machaut < AWD, Music>

20. Members of this movement, led by Walter Waters, were later appeased by the Roosevelt administration's offer of employment in the Civilian Conservation Corps. For 10 points each:

[10] Name this 1932 political protest which petitioned for early payment owed to American veterans of World War I. This protest was swiftly put down with tear gas and bayonets.

ANSWER: Bonus Army

[10] The Bonus Army was put down by a force led by this officer, who was dismissed from his post decades later after proposing using nuclear weapons to end the Korean War.

ANSWER: Douglas MacArthur

[10] This other officer publicly supported the Bonus Army. A retired major general of the Marines, this man published the book *War Is a Racket* and exposed the Business Plot.

ANSWER: Smedley Darlington **Butler** < VC, American History>