

**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 11: Tossups**

1. **Three figures representing justice, temperance, and fortitude overlook an enclosed garden from a circular cloud in the upper-right of this artist’s *Triumph of the Virtues*. A potted plant rests precariously on a thin bar in another work by this artist that also features several portraits of Roman emperors on its roundels. Four Corinthian columns divide three scenes connected by hanging garlands in this artist’s *Saint Zeno Altarpiece*. Anachronistic Roman ruins are visible behind a contrapposto figure (\*) tied to a column and pierced by arrows in another work by this artist. The central figure’s hands and feet are propped up to show his wounds while resting on a marble slab in an extremely foreshortened work by this artist. For 10 points, name this Mantuan artist of *St. Sebastian* and *The Dead Christ*.**

ANSWER: Andrea Mantegna <RH, Painting>

2. **Mutating one copy of a gene responsible for the production of one of these specific compounds leads to the accumulation of a red pigment in the red/white yeast color assay. A certain de-aminase enzyme catalyzes the formation of IMP from one of these compounds in the first step of a cytoplasmic pathway that generates fumarate from aspartate, and is named for this class of compound. Another one of these compounds is acted upon by its namesake oxidase in the biosynthesis of hydrogen peroxide. That enzyme, (\*) xanthine oxidase, is also the target of the anti-gout medication Zyloprim because the common end product for the catabolism of these compounds is uric acid. These compounds are formed from the fusion of an imidazole ring to a similar class of cyclic compounds. For 10 points, name these aromatic heterocycles exemplified by adenine and guanine.**

ANSWER: purines [prompt on “nucleotides” or “nucleobases”; anti-prompt on specific purines like “adenine”, “guanine”, or “xanthine”] <RH, Biology>

3. **These people founded the city of Waterford and were defeated by the forces of Brian Boru at the Battle of Clontarf. Ancestral memories about these people were preserved as myths about the Kald·lun·ait. When one of these people died after being thrown into a snakepit, his sons led these people to ransack (\*) Northumbria as part of the Great Heathen Army. These people were fond of looting monasteries, most infamously in a bloody raid against Lindisfarne. Anglo-Saxon kings raised tribute for these people through the Danegeld. The spread of Christianity among these people can be seen by changing inscriptions made in these people’s runestones. For 10 points, name these Scandinavian seafarers who terrorized Europe during the early Middle Ages.**

ANSWER: Vikings [or Norsemen] <VC, European History>

4. **When another character doubts this man’s identity, he asks her to compare a lock of hair that was cut in mourning with the hair on his head before advising her to look upon the creatures in her weaving and control her joy. This character believes that he is represented by a snake in a dream in which it sucks out milk and clots of blood from his mother’s breast. In one scene, this character formulates a plan in which he speaks a (\*) Parnassian dialect outside of a man’s house and slays him before he can ask who he is and where he is from. This character returns home with Pylades after threats of punishment from Apollo if he does not agree to avenge the murder of Agamemnon. For 10 points, name this character who kills Aegisthus and Clytemnestra in *The Libation Bearers*.**

ANSWER: Orestes <GG, World/Other Lit>

5. **In an amusing incident reported by *Harper’s New Monthly Magazine*, this man got so tired of a preacher talking about extravagance that he put his bare foot on a stump that served as a podium and declared “here’s your primitive Christian!” The farm of Richard and Phyllis Algeo in Nova, Ohio contains the last surviving part of this man’s work. This man was called the “American Dionysus,” since he brought “the gift of (\*) alcohol to the frontier,” in Michael Pollan’s book *The Botany of Desire*. This man served as a missionary for the Church of the New Jerusalem, which was founded by Emanuel Swedenborg. For 10 points, name this American pioneer who encouraged the growth of certain types of food orchards.**

ANSWER: Johnny Appleseed [or John Chapman] <JO, American History>

6. **One novel by this author begins with the protagonist’s mother wailing “how can you?” while waving around a note from a bell-boy. In that novel by this author, Ralph Marvell tries to comfort the protagonist as**

she sobs upon realizing she is pregnant and will lose “a whole year out of life.” Another character created by this author laughs maniacally in front of his sister Janey after discovering that Mrs. (\*) Manson Mingott has approved moving up the date of his wedding in a telegram sent to Ellen Olenska. Along with a work about Newland Archer, this author wrote a work in which a woman discovers that her pickle dish has been broken before her husband and Mattie attempt suicide by sledding into a tree. For 10 points, name this author of *The Age of Innocence* and *Ethan Frome*.

ANSWER: Edith Wharton <GG, American Literature>

7. When solving one equation named for this scientist in spherical coordinates, Bessel functions with half integer orders are obtained. That equation named for this scientist relates the system’s Laplacian with the negative “wavenumber squared”. One quantity named for this scientist may be found by multiplying negative  $kT$  times the natural log of the partition function, or by taking the (\*) Legendre transform of internal energy with respect to entropy. That quantity named for this scientist may also be calculated as internal energy minus the product of absolute temperature and entropy. That quantity named for him describes the amount of useful work obtainable from a closed system. For 10 points, name this German physicist who names a type of “free energy”.

ANSWER: Hermann von Helmholtz <RH, Physics>

8. This artist depicted his eventual lover Dorothy Norman holding a telephone; in turn, Norman depicted this artist with a collaborator who had colored a Flatiron photograph with gum bichromate. A horse-drawn carriage plows through deep snow in an early photograph by this artist titled *Winter* – (\*) *Fifth Avenue*; later, this artist converted Edward Steichen’s former studio on Fifth Avenue into their joint Gallery 291. This photographer published a photograph of travelers on a steamer from New York to Germany next to a Cubist drawing of Picasso in this artist’s photography journal *Camera Work*. For 10 points, name this Photo-Secessionist and photographer of *The Steerage*.

ANSWER: Alfred Stieglitz <AWD, Other Art>

9. One of these events occurred in the region of Decapolis after its instigator put his fingers in a man’s ears and said “ephphatha” [“ef-A-thuh”], or “be opened.” A Capernaum man was lowered through a hole in a roof in order to participate in one of these events, after which he was told to take his mat and go home. The subject of one of these events was a hemorrhaging woman who caused someone to ask (\*) “who touched my clothes?” After several of these events happens to ten lepers between Samaria and Galilee, only one former leper is thankful, to whom the initiator of these events said “your faith has made you well.” For 10 points, name these Biblical events where Jesus alleviated ailments from various people.

ANSWER: Jesus’ healing miracles [prompt on just “(Jesus’) miracles,” do NOT accept or prompt on people being resurrected/brought back from the dead] <AWD, Religion>

10. Patrick Renison commissioned a report on the origins of an event in this country; that report was written by Frank Corfield. Rawson Macharia was the main witness in the trial of the Kapenguria Six, who were leading nationalists of this country. General China and Operation Anvil were part of a rebellion in this country, which ended with the death of Dedan Kimathi. Daniel(\*) arap Moi succeeded the founding father of this country, who advocated “Harambee,” or coming together. This nation’s native Kikuyu people led the Mau Mau Rebellion against British rule. For 10 points, name this East African country, whose first post-independence president was Jomo Kenyatta.

ANSWER: Kenya [or Republic of Kenya; or Jamhuri Ya Kenya] <JO, World History>

11. This mineral’s uniaxial, hexagonal crystals are classified by the space group R-3c and the point group D<sub>3d</sub> [“D-sub 3-D”]. Synthetic examples of this mineral may be created by reacting barium fluoride with its main constituent in a flame-fusion process named for Verneuil. When this mineral possesses an orange-red color, it is referred to as “padparadscha”. The presence of (\*) titanium and iron give this hematite-group mineral a blue appearance, and chromium impurities in this mineral result in it gaining a distinct red color. For 10 points, name this aluminum oxide-based mineral with a Mohs hardness of 9 that is found in gemstones like rubies and sapphires.

ANSWER: corundum [prompt on sapphires or rubies] <RH, Other Science>

12. One play by this author opens with a character looking for a pair of scissors to cut out an article from last Sunday’s newspaper. In that play by this author, a woman agrees to stay in London and work as a prostitute for three men while her husband returns to America. In another play by this author, two men circle each

**other with chairs raised above their heads after one of them kicks a man in the stomach, but they are interrupted by a woman with a (\*) toy drum.** This author of *The Homecoming* wrote a play in which two characters argue about the phrase “light the kettle” before it is revealed that one of them has been hired to assassinate the other. For 10 points, name this author of *The Birthday Party* who wrote about Gus and Ben receiving food via the titular conveyance in *The Dumbwaiter*.

ANSWER: Harold Pinter <GG, British Lit>

**13. Jared Diamond, in *Guns, Germs, and Steel*, questionably asserts that this man achieved victory over an enemy because this man’s civilization had access to writing while his opponent was illiterate. An expedition led by this man established the settlement of San Miguel de Piura. This leader appealed to his men by giving a speech after drawing a line in the sand, winning him the support of the Famous (\*) Thirteen. After a rival of this leader hit a priest and threw away a Bible, this man ordered an attack. This leader captured a monarch who offered a ransom of a roomful in gold, then strangled that monarch anyways. For 10 points, name this Spanish conquistador who overthrew Atahualpa in his campaign against the Inca Empire.**

ANSWER: Francisco Pizarro [or Francisco Pizarro González] <VC, Misc/Other History>

**14. Near the end of this film, a cell phone plays a video where this film’s title character is told, “let’s go home.” After carrying out an execution, a character in this film informs the title character where a certain helicopter is preparing to take off. A character in this film claims that he is “just sorting some stuff out” when visited by a police officer who can clearly see multiple (\*) dead bodies.** The title character of this film, who sometimes lives at the Continental, legendarily once killed three men with a pencil. The Tarasov crime family is wiped out in this film after the theft of a car and the murder of a dog. For 10 points, name this action film starring Keanu Reeves as a retired hitman, which had a sequel released in February 2017.

ANSWER: John Wick <VC, Trash/Other>

**15. In a *Mother Jones* article about these laws, Samantha Michaels identified a network of lawyers called the Alliance Defending Freedom as an influential promoter of them. A study by the Williams Institute found that the targets of these laws were much more likely to be victims than aggressors. Senator Lois Kolkhorst held up a notebook of stories during a speech advocating for one of these laws in Texas. The Department of Justice sued Governor (\*) Pat McCrory over one of these laws due to claims that it violated Title IX and the Violence Against Women Act. Director of the National Center for Transgender Equality Mara Keisling was arrested protesting one of these laws. For 10 points, name these anti-trans pieces of legislation such as North Carolina’s HB2 that limit access to public facilities.**

ANSWER: bathroom bills [accept any mention of legislation regulating restroom usage] <GG, Geography/Current Events>

**16. One poem by this author asks its addressee to “stay asleep on the Hudson’s banks / with your beard toward the pole” and claims that he gives “boys / drops of foul death with bitter poison.” That poem by this author describes a man with “thighs pure as Apollo’s” who is “enemy of the satyr.” In another poem by this author, the speaker orders “tell the moon to come” after the cry “I will not see it!” That poem by this author repeats that a certain event took place at (\*) “five in the afternoon.” Another poem by this author repeats “O city of the gypsies! Who could see you and not remember?” and describes how the “Civil Guard depart / through a tunnel of silence.” For 10 points, name this poet of “Lament for the Death of a Bullfighter” who was executed by Nationalist forces during the Spanish Civil War.**

ANSWER: Federico García Lorca <GG, Euro Lit>

17. This book suggests that disarming the population is always a bad idea except in newly conquered territories. Part of this book strongly criticizes the criminal Agathocles of Syracuse, who is used as an example of excessive brutality. This book claims that both borrowed auxiliary soldiers and mercenaries are completely useless. A section of this book criticizes Julius Caesar for unnecessary (\*) generosity, in contrast to the example of Pope Julius II. This book's author may have been deliberately exaggerating the rhetoric of this book, considering his later writings such as the *Discourses on Livy*. The author of this book declared that for most rulers, it is better to be feared than loved. For 10 points, name this political treatise by Niccolo Machiavelli.

ANSWER: The Prince [or Il Principe] <VC, Philosophy>

18. This country's second-highest mountain is haunted by a Big Grey Man who stalks climbers. Long-forgotten memories of African slaves taken to this country may be the origin of this country's "Blue Men of the Minch." The southern part of this country is home to violent monsters which kill people and stain their (\*) hats with blood. Because she is not scared of frightening transformations, a woman from this country rescued Tam Lin from the faeries. This country's border region is home to stories about spirits called redcaps and horses which drown people called kelpies. The "surgeon's photograph" was taken in this country, documenting a famous aquatic creature with a long neck. For 10 points, name this country where folklore enthusiasts are still searching for the Loch Ness Monster.

ANSWER: Scotland [or Alba] <VC, Myth>

19. A modified version of these compounds reacts with a Grignard reagent to produce an aldehyde in the Bodroux- Chichibabin reaction. Two equivalents of an aldehyde and aluminum alkoxide generates one of these compounds in the Tischenko disproportionation reaction. Reacting a Pinner salt with water produces these compounds. Another reaction producing these compounds utilizes DMAP as a catalyst and DCC as a coupling reagent, and is named for (\*) Steglich. These compounds are produced from non-cyclic ketones in the presence of peroxyacids in the Baeyer-Villiger oxidation. The best-known synthesis of these compounds is an acid-catalyzed reflux of a carboxylic acid and an alcohol, and is named for Emil Fischer. For 10 points, name these compounds with general formula R-C-O-O-R known for their variety of fruity smells.

ANSWER: esters [accept esterification reactions] <RH, Chem>

20. Benjamin Britten wrote a serenade for tenor, strings, and this instrument. A soli for this instrument opens Mahler's Symphony No. 3. The main theme of the *andante cantabile* ["on-DON-tay con-TAH-bee-lay"] movement of Tchaikovsky's ["chai-KOFF-skis"] Symphony No. 5 is played by this instrument. The final movement of a concerto for this instrument begins with a low B-flat followed by six E-flats; that concerto was one of four that Mozart wrote for Joseph (\*) Leutgeb ["LOIT-geb"], who played this instrument. This instrument's techniques include hand-stopping, and its earlier "natural" version did not have valves. Rising clarinet arpeggios introduce a metrically offset solo for this instrument, which includes a chromatic passing tone between the second and third scale degrees, in Richard ["REE-card"] Strauss' *Till Eulenspiegel's Merry Pranks*. For 10 points, name this curvy brass instrument pitched in F.

ANSWER: French horn [do not accept "English horn"] <AWD, Music>

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**Packet 11: Bonuses**

1. Name some methods and tasks that are helpful in knowledge discovery from data, for 10 points each:

[10] This supervised task in data mining is the process of assigning a label to a new sample, based on a training data set. It can be contrasted with clustering, which is an unsupervised task.

ANSWER: **classification**

[10] This type of graph or diagram can be helpful in visualizing a set of classification or clustering rules. Root nodes in these graphs extend to child nodes, and a childless node is called a leaf.

ANSWER: **tree** [or **dendrogram**]

[10] This common non-parametric clustering method requires calculating distance between every possible pair in the set; for each sample, its cluster is determined by a certain number of closest samples.

ANSWER: k-**nearest neighbor** [prompt on partial answer] <AWD, Other Science>

2. Answer the following about the British Conservative Party. For 10 points each:

[10] The party was once led by this female Prime Minister and “Iron Lady,” who survived a bombing attempt at the Brighton Hotel.

ANSWER: Margaret **Thatcher** [or Margaret Hilda Thatcher, Baroness **Thatcher** of Kesteven]

[10] A group of “rebels” within the Conservative Party refused to sign this 1992 treaty, almost ending John Major’s government. This treaty set up a multinational organization that replaced the European Coal and Steel Community.

ANSWER: Treaty of **Maastricht**

[10] This speech by Enoch Powell, a Conservative MP, criticized the permitting of an influx of “some 50,000 dependants” before proclaiming that “like the Roman, I seem to see the River Tiber foaming.”

ANSWER: “**Rivers of Blood**” speech <JO, European History>

3. The title figure of this poem is seen by the speaker “in yon brilliant window-niche” with “The agate lamp within thy hand” before the poem ends with “Ah, Psyche, from the regions which / Are Holy-Land!” For 10 points each:

[10] Name this poem in which the title woman’s beauty is compared to “Nicean barks of yore” that the “weary, way-worn wanderer bore / To his own native shore.” Its subject, Jane Stanard, was a friend of the poet’s family.

ANSWER: “**To Helen**”

[10] “To Helen” was written by this American poet who more famously described a “fowl whose fiery eyes now burned into [the speaker’s] core” and repeats the word “nevermore” in “The Raven.”

ANSWER: Edgar Allan **Poe**

[10] Another Helen, who “All Greece hates / the still eyes in the white face” and “All Greece reviles / the wan face when she smiles” was described by this Imagist poet and author of the novel *HERmione*.

ANSWER: **H. D.** [or Hilda **Doolittle**] <GG, American Literature>

4. Various products produced by this company include a pair of super-heating gloves and the aptly-named Rumbrella, an umbrella for repelling rubble. For 10 points each,

[10] Name this company. In one episode, the boss of this company, played by Alan Tudyk, seeks to join its “Dream Team”. In another episode, the members of this company plan a “Sinking Day” party to entice prospective clients.

ANSWER: **Wayne Security** [accept **Wayne Enterprises**]

[10] Employees of the company Wayne Security feature in this recently-released NBC comedy set in the DC Universe. Danny Pudi, of *Community* fame, plays an R&D worker named Teddy who works under Emily Locke on this show.

ANSWER: **Powerless**

[10] This actress plays Emily Locke on the show *Powerless*. This actress is probably better-known for her time playing Gabriella Montez in the three High School Musical movies.

ANSWER: Vanessa **Hudgens** <RH, Trash>

5. Lili Boulanger was the first woman to win this composition prize, but died at the age of 24. For 10 points each:  
[10] Her older sister Nadia, who taught composers such as Philip Glass, Elliott Carter, and Astor Piazzola, won second place in 1908. This very prestigious scholarship enabled students to study composition in a certain city.

ANSWER: Prix de **Rome**

[10] This child piano prodigy and American composer around the turn of the twentieth century wrote four *Sketches* for piano, as well as a *Gaelic* symphony and 150 songs.

ANSWER: Amy **Beach**

[10] Living American composer Joan Tower wrote a set of five fanfares she titled *Fanfare for the Uncommon Woman*, which uses same instrumentation as this composer's *Fanfare for the Common Man*.

ANSWER: Aaron **Copland** <AWD, Music>

6. Heinrich Hertz conducted an early observation of this effect by comparing a coil's spark gap in a dark box with a quartz lid with a spark gap in the same box with a glass lid. For 10 points each,

[10] Name this effect in which electrons are ejected from metals exposed to high energy photons. Its discovery led to Albert Einstein's Nobel Prize in 1923.

ANSWER: **photoelectric effect**

[10] The photoelectric effect can only occur when this quantity is less than the product of Planck's constant and the frequency of incident light. This quantity is the energy needed to remove an electron from a substance's Fermi level.

ANSWER: **work function** [prompt on W; do not accept or prompt on work]

[10] To calculate the probability of the photoelectric effect occurring, this other quantity can be calculated. It is equal to a constant times atomic number raised to the 5th power divided by energy cubed.

ANSWER: **cross section** of interaction [prompt on sigma] <RH, Physics>

7. The Merry Maidens in Cornwall legendarily suffered this fate for committing the terrible sin of dancing on a Sunday. For 10 points each:

[10] Identify this fate which befell the dwarf Alvis in Norse mythology. Thor successfully kept Alvis from marrying his daughter by talking with him until the sun came up, which resulted in this happening.

ANSWER: being **turned into stone** [or obvious equivalents such as **petrification**]

[10] Four dwarves allegedly created a necklace for this goddess in exchange for sex. This Vanir goddess is the owner of a magic falcon-feathered cloak.

ANSWER: **Freyja**

[10] For 5 points each, and 10 for both, name the two dwarves which succeeded in creating the golden ring Draupnir and Thor's hammer, Mjölnir.

ANSWER: **Brokkr** and **Eitri** [or **Brokkr** and **Sindri**; do not give points for both Eitri and Sindri] <VC, Myth>

8. Because the tournament which you are playing is named for Dwight D. Eisenhower, this bonus is about his foreign policy. For 10 points each:

[10] Eisenhower's cabinet included two brothers with this surname, one of whom became the longest-serving Director of Central Intelligence and the other of which served as Secretary of State and names a Washington, D.C. international airport.

ANSWER: **Dulles**

[10] John Foster Dulles convinced Eisenhower to support a coup in Guatemala on behalf of this corporation, whose activities in the region created numerous "banana republics."

ANSWER: **United Fruit** Company

[10] Eisenhower condemned the 1956 Soviet invasion of this European country. This country's "Goulash Communism" was developed by local Communist thinkers in Budapest.

ANSWER: **Hungary** [or **Hungarian People's Republic**] <VC, Misc./Other History>

9. At the end of the novel in which she appears, her cousin Belle Radclyffe hosts a garden party for an unveiling of a statue of the title character that is also attended by Mr. Judd. For 10 points each:

[10] Name this orphan who arrives in New South Wales and meets the title character at the home of her uncle. She in turn adopts an orphan named Mercy and attends a ball in the absence of the title character.

ANSWER: Laura Trevelyan [accept either]

[10] Laura Trevelyan appears in *Voss*, a novel by this author who described the marriage of Stan Parker with a girl named Amy that he meets at a dance in *The Tree of Man*.

ANSWER: Patrick White

[10] White hails from this country, which also produced the author of *Oscar and Lucinda* and *True History of the Kelly Gang*, Peter Carey.

ANSWER: Commonwealth of Australia <GG, World/Other Lit>

10. In Shia Islam, this act can be agreed to temporarily with the use of nikah mut'ah. For 10 points each:

[10] Name this practice, which requires the payment of a mahr and which is celebrated by Christians with an exchange of rings.

ANSWER: marriage [or obvious equivalents such as weddings]

[10] During a traditional Jewish wedding, the rabbi typically oversees this agreement, which is written in Aramaic and which requires two witnesses who aren't related to the couple.

ANSWER: ketubah

[10] Under Lord Hardwicke's Marriage Act, the only valid marriages in England were those performed by the Anglican Church, Jews, or this Christian denomination, who marry without the use of ministers or priests and who were founded after a revelation by George Fox.

ANSWER: Quakers [or the Society of Friends] <VC, Religion>

11. Grigory Mekler asserted that this world leader was a Soviet agent who stole the identity of a World War II anti-Japanese fighter, a claim which literally nobody else takes seriously. For 10 points each:

[10] Name this politician who holds the title of "Eternal President" despite being dead since 1994. He is the central figure of the Juche personality cult.

ANSWER: Kim Il-sung [or Kim Sŏng-ju; prompt on "Kim"]

[10] This other Communist was suspected to have been replaced by a native speaker of Russian due to his unique accent. Mainstream scholarly opinion holds that this founder of the Yugoslav Partisans was actually Croatian.

ANSWER: Josip Broz Tito [or Josip Broz]

[10] Anatoliy Golitsyn claimed that this Labour Party politician was an active agent of the KGB. Despite this, this man became Prime Minister twice, before and after the ministry of Edward Heath. He sent the British military into Northern Ireland as part of Operation Banner.

ANSWER: Harold Wilson [or James Harold Wilson, Baron Wilson of Rievaulx] <VC, World History>

12. This president signed the Organic Act which created the Oklahoma Territory as part of the campaign to assimilate the Native American population. For 10 points each:

[10] Name this president whose foreign policy included the response to a Chilean attack on the USS *Baltimore*.

ANSWER: Benjamin Harrison [prompt on "Harrison"]

[10] Harrison's presidency interrupted the two non-consecutive terms of this Bourbon Democrat who dealt with the Panic of 1893 during his second term.

ANSWER: Grover Cleveland [or Stephen Grover Cleveland]

[10] Cleveland and Harrison disagreed over the use of this metal to back American currency. John Sherman names a bill which authorized an increase in the amount of this metal purchased by the federal government.

ANSWER: silver <VC, American History>

13. Name some things about street photography, for 10 points each:

[10] This Frenchman and co-founder of Magnum Photos is considered one of the first documentary photographers. This man titled his book, *The Decisive Moment*, for the idea that a photographer must have a good instinct for when to take a picture.

ANSWER: Henri Cartier-Bresson

[10] Contemporary photographer Brandon Stanton is best-known for a blog titled for this city, where he captions photos of individuals, such as cancer patients, prisoners, and Syrian refugees, with thought-provoking quotes. Those photos depict people in this city in such places as Central Park.

ANSWER: New York City, New York [or NYC; accept Humans of New York or HONY]

[10] Another street photographer was this woman who took over 100,000 photographs, mostly in New York and Chicago, while working as a nanny. Since her work was discovered at an auction of her possessions in 2007, it has been featured in countless exhibitions and a documentary film titled Finding [this woman].

ANSWER: Vivian Maier <AWD, Other Art>

14. In this play, after a man complains about having to wear a “cook’s cap,” a character responds by saying that it’s not his fault that France doesn’t send him any good comedies. For 10 points each:

[10] Name this play in which a performance of *Mixing it Up* is interrupted by the title characters. It ends with the Manager exclaiming “I’ve lost a whole day over these people” after a wounded boy is carried offstage.

ANSWER: Six Characters in Search of an Author [or Sei personaggi in cerca d'autore]

[10] *Six Characters in Search of an Author* was written by this Italian playwright who wrote about an aristocrat who falls off his horse and believes himself to be the title Holy Roman Emperor in *Henry IV*.

ANSWER: Luigi Pirandello

[10] Pirandello also wrote this play about Doctor Hinkfuss’ attempts to get actors to perform the title action as part of a staging of the novella *Leonora, Addio!*. At its end, Hinkfuss apologizes to the audience.

ANSWER: Tonight We Improvise [or Questa sera si recita a soggetto] <GG, European Lit>

15. These proteins are divided into five families in the GRAFS classification. For 10 points each,

[10] Name this class of 7-pass transmembrane proteins, also known as “serpentine receptors”, whose Rhodopsin family includes 19 sub-groups responsible for mediating olfaction specificity.

ANSWER: G protein-coupled receptors [accept GPCR, prompt on 7TM receptor, or heptahelical receptor]

[10] Another family of 33 GPCRs is specifically responsible for helping mediate this process. Other proteins with roles in this process include beta-catenin and cadherin, the latter of which can be found desmosomes.

ANSWER: cell-cell adhesion [accept descriptions clearly stating that one cell is joining/connecting itself to another cell]

[10] Cadherins are found in desmosomes, a type of cell-cell junction commonly found joining cells of this type. These cells exist in simple, columnar, and cuboidal types, and they can be found lining the surface of most organs, blood vessels, and cavities in the body.

ANSWER: epithelial cells [or epithelium, prompt on skin cells] <RH, Biology>

16. One definition of this term is the gain that consumers get by buying goods at a price lower than the price they were willing to pay. For 10 points each:

[10] Name this term also contrasted with deficit to mean a situation when a government brings in more revenue than its expenses.

ANSWER: surplus [accept economic surplus, or consumer surplus or Marshallian surplus]

[10] A government can have this type of surplus in which its revenues exceed its expenses excluding debt servicing costs. A government in this kind of situation is in a position to pay down its debt.

ANSWER: primary surplus

[10] Alfred Marshall, who established the concept of economic surplus, compared it to this concept in a namesake 1893 work. This concept, which is different from profit, is compensation for a factor of production, such as land, in excess of costs.

ANSWER: rent <GG, Social Science>



17. In popular tradition, this desert's name refers to the fact that if you go in then you might not make it out. For 10 points each:

[10] Name this Central Asian desert which occupies the Tarim Basin and is located directly west of Lop Nur.

ANSWER: **Taklamakan** Desert

[10] This other desert in Asia, which was formed by the rain shadow of the Himalayas, is divided between China and neighboring Mongolia.

ANSWER: **Gobi** Desert

[10] The Taklamakan and Gobi are the only habitat of the critically-endangered wild variant of this animal, which is distinguished from a closely related animal by the fact that this animal has two humps on its back.

ANSWER: **Bactrian camel** [or Wild **Bactrian Camel**; prompt on "camel"] <VC, Geography>

18. It's *time* for you to answer some questions about paintings with clocks in them, for 10 points each:

[10] In perhaps the best-known depiction of clocks in art, this Spanish Surrealist showed several clocks melting across a desolate Catalanian landscape in his *The Persistence of Memory*.

ANSWER: Salvador **Dali**

[10] In this work by Dante Gabriel Rossetti, a woman faces upwards with her eyes closed and her hands clasped. The sundial behind the title woman casts a shadow on nine.

ANSWER: **Beata Beatrix**

[10] The clock tower on the Schiedam Gate in this painting says that it is about 7:15 AM. That clock may have been used by the various ferries on the river in this work's foreground.

ANSWER: **View of Delft** <AWD, Painting>

19. A "Biographical Notice" written by an author who used this surname described how she had the "vague impression that authoresses are liable to be looked on with prejudice." For 10 points each:

[10] Name this pseudonymous surname used by three sisters, one of whom recounted the deaths of the other two and her desire to "wipe the dust off their gravestones" in the aforementioned "Biographical Notice."

ANSWER: **Bell**

[10] The "Biographical Notice of Ellis and Acton Bell" was written by this author who described the title character's time at Lowood and eventual relationship with Edward Rochester in *Jane Eyre*.

ANSWER: **Charlotte Brontë** [prompt on "Brontë"]

[10] The "Biographical Notice" was published in a combined edition of *Wuthering Heights* and this Anne Brontë novel in which the title character works for the Bloomfields before eventually marrying the curate Edward Weston.

ANSWER: **Agnes Grey** <GG, British Lit>

20. On the periodic table, this quantity increases from left to right along a period, and it decreases from top to bottom within a group. For 10 points each,

[10] Name this quantity equal to the amount of energy given off when an electron is gained.

ANSWER: **electron affinity**

[10] Another interesting periodic trend is the noticeable decrease in this quantity among hydrogen halides when incorporating larger halogens. The decrease in this quantity occurs as a result of the lower electronegativity differences and lower degrees of charge separation.

ANSWER: **dipole moment** [prompt on charge separation]

[10] Perhaps a more obvious periodic trend is the general increase in the number of these electrons in the outermost shell as you move from left to right. Admittedly, this trend breaks down somewhat for heavier elements.

ANSWER: **valence electrons** <RH, Chemistry>