

ACF Fall 2015

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Tossups

1. One of this group's leaders was assassinated in Operation Anthropoid. They came to power after an event which was initiated using the code word "hummingbird." As part of one operation, this organization controlled units called *Einsatzgruppen*. The ODESSA program was created to help members of this organization escape to places like South America. They grew out of a group that was purged during the Night of the Long Knives, the SA, and included an armed "Waffen" branch. For 10 points, name this paramilitary branch of the Nazi Party responsible for overseeing much of the Holocaust, which was headed by Heinrich Himmler.

ANSWER: Nazi SS [or Schutzstaffel]

2. Stanley Cavell analyzes this philosopher and "skepticism, morality, and tragedy" in his magnum opus, *The Claim of Reason*. This thinker argued that groups of activities do not have one defining commonality, but instead have a set of "family resemblances". This thinker described a shopkeeper who has to look up the word "red", and described builders being told to collect "blocks, pillars, slabs and beams". This creator of language games closed another book with the line, "whereof one cannot speak, thereof one must be silent". For 10 points, name this Austrian philosopher who wrote *Philosophical Investigations* and the *Tractatus Logico-Philosophicus*.

ANSWER: Ludwig Wittgenstein [or Ludwig Josef Johann Wittgenstein]

3. The HESS project is a series of telescopes which detect cosmic gamma rays via this phenomenon. Since this effect is emitted in a cone, detection of "rings" formed by it can determine the angle of emission. Super-Kamiokande ["kah-mee-oh-KAN-day"] uses this effect to detect neutrinos. The amount of this phenomenon for a given wavelength is predicted by the Frank-Tamm formula, whose developers won the Nobel in physics in 1958 along with this effect's namesake. For 10 points, name this bluish radiation that occurs when a charged particle exceeds light's velocity in its medium which creates the bluish glow seen in nuclear reactors.

ANSWER: Cherenkov radiation

4. A god of this people transforms into a cat and uses a knife to decapitate a wicked serpent. This people's calendar includes five extra days won in a gambling match with the moon. A god of this culture asserts his superiority by ejaculating into a head of lettuce eaten by his rival. When these people die, their hearts are fed to the demon Ammit if they fail to weigh lighter than a single feather. In a myth from this civilization, a deceased god's fourteen scattered body parts are used to give birth to the god that defeats Set and avenges his father Osiris. For 10 points, name these people who believed that the falcon-headed Horus was manifested in each pharaoh.

ANSWER: ancient Egyptians

5. A piece in this genre represents the cardinal directions with a set of four brass bands that enter in the second section. Unusually, a solo soprano sings the Pie ["PEE-ay"] Jesu in the central movement of Gabriel Fauré's piece of this type. Mozart called for a double fugue on the words "Kyrie eleison" ["KEY-ree-ay eh-lay-son"] and "Christe eleison" in a piece of this type whose movements include the Tuba

mirum and the Confutatis maledictis. The Dies Irae section of that piece in this genre breaks off eight bars into the Lacrimosa, from which point the remainder was completed by Franz Sussmayr. For 10 points, name this liturgical genre of music written for the dead.

ANSWER: requiem [or requiem mass; do not accept "mass"]

6. This novel's final sentence describes the features of buildings as "each in its ordered place." A character in this novel obsesses over a broken watch that his father described as the "mausoleum of all hope and desire." A character in this novel remembers seeing mud on his sister's underwear when she climbed a tree to spy on their grandmother's funeral. The characters of this novel are served by a long-suffering maid named Dilsey. This novel's first section is narrated by a castrated mentally retarded man who associates the smell of rain with his sister Caddy. Jason, Quentin and Benjy narrate chapters of, for 10 points, what William Faulkner novel about the Compson family?

ANSWER: The Sound and the Fury

7. A scene in this film repeatedly cuts between shots of two bored guards and shots of a man charging towards them to a drum roll, before the running man suddenly enters the frame and stabs a guard. A scene in this film is interrupted by some previously unseen characters yelling "GET ON WITH IT!" The main characters of this film attempt to cross the Bridge of Death, which spans the Gorge of Eternal Peril. A character in this film refuses to surrender even though his limbs are hacked off, declaring "it's just a flesh wound!" Characters in this film include the Black Knight and the Knights who say Ni ["NEE"]. For 10 points, name this spoof of Arthurian legend made by the Monty Python comedy troupe.

ANSWER: Monty Python and the Holy Grail [prompt on just "Monty Python"]

8. Shortly after he came to power, this leader's regime killed an American citizen named Charles Horman. This non-European leader's regime started to fall apart after Pope John Paul II publicly criticized his policies during an official visit to his country. His regime sponsored a death squad called the "Caravan of Death." He instituted laissez-faire policies designed by a group of American-educated economists, the Chicago Boys. This leader overthrew his predecessor in a 1973 coup possibly supported by the American government. For 10 points, name this dictator who replaced Salvador Allende as president of Chile.

ANSWER: Augusto Pinochet [or Augusto Jose Ramon Pinochet Ugarte]

9. In this period, subduction of the Kula and Farallon plates under the North American plate contributed to the Laramide orogeny. A series of large volcanic eruptions formed the Deccan Traps at the end of this period. It marked the first appearance of pachycephalosaurids, and Walter and Luis Alvarez postulated that the concentration of iridium found in a thin layer of sediment, the K-T boundary, was linked to the end of this period. Large chalk deposits laid down during this period give it its name. For 10 points, name this final period of the Mesozoic Era, during which a meteor strike is hypothesized to have killed the dinosaurs.

ANSWER: Cretaceous period

10. In this opera's third act, a clarinet solo introduces an aria in which the tenor lead recalls his lover falling into his arms on a night when the "stars were shining." A character in this opera signs a safe conduct pass after being told where an escaped prisoner is hiding. As her lover is tortured, this opera's title character asks why God has forsaken her, even though her entire life she has "lived for art." "*E lucevan le stelle*" and "*Vissi d'arte*" are arias from this opera, whose title character leaps from the Castel Sant'Angelo to her death after the execution of her lover, the painter Mario Cavaradossi. For 10 points, name this Giacomo Puccini opera about the title singer.

ANSWER: Tosca

11. Robert Graves published a 1968 translation of this text that was allegedly based on an original manuscript, but was revealed to have instead adapted a 20th-century translation by Edward Heron-Allen. A section of this text includes an extended allegorical discussion between clay pots. One of this poem's verses begins "The Moving Finger writes; and, having writ / Moves on," and another verse begins, "A Book of Verses underneath the Bough / A Jug of Wine, a Loaf of Bread--and Thou" in the fifth version of Edward Fitzgerald's translation of this poem. For 10 points, name this medieval Persian poem organized into quatrains and written by Omar Khayyam.

ANSWER: The Rubaiyat of Omar Khayyam

12. This process changes the position of a metal-metal interface in the Kirkendall effect. Spinodal decomposition occurs solely due to this process. Solutions to problems involving this process often contain the error function. This process is driven by a negative chemical potential gradient. The flux of this process is proportional to the negative gradient of the concentration according to Fick's first law. The rate at which this process occurs is proportional to one over the square root of molar mass according to Graham's law. For 10 points, name this process by which molecules travel from areas of high to low concentration.

ANSWER: diffusion [prompt on "effusion"]

13. In his youth, this man fought in the Battle of Diu, and he enslaved a Malay interpreter named Enrique while participating in the siege of Malacca. This man was forced to quell a mutiny at Port Saint Julian. At the request of Rajah Humabon, this man tried to invade Mactan, which resulted in him getting fatally speared by Lapu-Lapu. This man's fleet, including the flagship *Trinidad*, was funded by Charles V. Juan Sebastian finished the accomplishment this man is best known for after he was killed in the Philippines. For 10 points, name this Portuguese explorer who led the first expedition to successfully circumnavigate the Earth.

ANSWER: Ferdinand Magellan [or Fernão de Magalhães; or Fernando de Magallanes]

14. In a play by this author, the accusation that some puppets are cross-dressing is refuted because the puppets have no genitalia. In a play by this author, Peregrine convinces a friend to hide inside a tortoise shell and the central character disguises himself as Scoto and attempts to sleep with Celia, the wife of Corvino. Mosca pretends to help three characters who are vying to inherit money from a wealthy man pretending to be moribund in a play by this author. In a play by this author of *Bartholomew Fayre*, *Subtle*, *Captain Face*, and *Doll Common* promise the Philosopher's Stone to Epicure Mammon. For 10 points, name this English playwright of *Volpone* and *The Alchemist*.

ANSWER: Ben Jonson

15. In this academic discipline, a battleship curve can be used to visualize data in the method of seriation. Lewis Binford incorporated middle range theory into this field's processual approach, which replaced the older cultural-historical approach. A scholar of this discipline, Jens Worsaae, theorized the purpose of shell middens. This discipline uses techniques like magnetometry and ground-penetrating radar to identify underground features as part of field surveys. Practitioners of this discipline like Heinrich Schliemann and Arthur Evans excavated Troy and Knossos. For 10 points, name this field that studies material artifacts of ancient humans.

ANSWER: archaeology [or word forms like archaeological research]

16. In this novel, Don Issachar takes a young baroness as a mistress after killing her family and is later forced to share her with the Grand Inquisitor. The protagonist's love interest spies Paquette engaging in "experimental physics" towards the beginning of this novel. The title character believes that "we must cultivate our garden" by the end of this work, although the title character's mentor encourages him to think that they live in the "best of all possible worlds." This work's protagonist travels through an earthquake-struck Lisbon to South America, accompanied by Cacambo and the Leibniz-inspired Dr. Pangloss. For 10 points, name this novel by Voltaire.

ANSWER: Candide

17. A festival in this religion includes the giving of "thousand year candy," and a construction site sacred to this religion has its ground broken using a sickle, hoe, and spade. A practice in this religion involves writing prayers or wishes on small wooden plaques. This religion's emphasis on purification is why its places of worship all have a basin for washing the mouth and hands. A festival in this religion is a rite of passage called "Seven-Five-Three," and this religion can be classified into types including "Folk" and "Sect." This religion's shrines feature gates called *torii*. For 10 points, name this religion which worships kami such as Amaterasu, the native religion of Japan.

ANSWER: Shintoism

18. A molecule involved in this process is "charged" by the enzyme aaRS ["A-A-R-S"]. Amber, ochre, and opal tags cause release factors to end this process. This process can be inhibited by phosphorylating ["fos-FOR-ill-ate-ing"] a serine residue in an eIF2 ["E-I-F-2"]-GDP complex. In eukaryotes, this process begins after recognition of the Kozak sequence. During this process, molecules with a cloverleaf structure interact with an organelle's A, P, and E sites. The existence of only twenty types of some molecules used in this process is explained by wobble base pairing between codons and anticodons. For 10 points, name this process that occurs at ribosomes and synthesizes proteins from mRNA.

ANSWER: translation [prompt on "protein synthesis"]

19. After it tried to avoid paying full customs on a shipment of Madeira wine, the HMS *Liberty* was towed out of this city's harbor. This city was defended by a fort on Castle Island. An event in this city was depicted in a propaganda engraving that shows a small dog beneath a cloud of smoke. A "noble train of artillery" that brought cannons to this city was planned by Henry Knox. After a crowd gathered on this city's King Street to throw snowballs at some soldiers, Thomas Preston fired upon a group that included Crispus Attucks. For 10 points, name this city, the site of a 1770 massacre that preceded the American Revolution.

ANSWER: Boston [or the Boston massacre]

20. In the bottom left of this painting, a scene painted onto a cloak shows three nude figures forming a ring around yellow-clad figure who is praying. A large group of martyrs is looking from this painting's upper right towards a white-robed Jesus, and St. Peter is dangling a pair of keys in this painting's top left. This painting was made to be displayed six feet off the ground at the Church of Santo Tome. The pale faces of a row of men forms the border between the Earthly and Heavenly zones of this painting, in which the artist's son is shown pointing at the central scene. For 10 points, name this El Greco painting that depicts a Spanish nobleman being interred.

ANSWER: The Burial of Count Orgaz [or The Burial of the Count of Orgaz; or El Entierro del Conde de Orgaz; accept other answers describing the Burial of Count Orgaz]

Extra

One type of these devices can run in a constant height or constant current mode, and functions by creating a bias and measuring the tunneling current. These devices are used to locate hybridized probes in FISH ["fish"], and can identify locations stained with phalloidin derivatives or DAPI ["DAH-pee"].

One type of these devices uses dichroic mirrors to isolate specific wavelengths of fluorescence. Samples used in these devices may need to be mounted and placed under a coverslip. Anton van Leeuwenhoek's ["LAY-ven-hook"] use of these devices led to his observations of "animalcules" which were later revealed to be microbes. For 10 points, name this sort of device which uses a set of lenses to magnify an image.

ANSWER: microscope [accept more specific answers such as "scanning tunneling microscope" or "fluorescence microscope"]

Bonuses

1. The law of the “diminishing marginal” type of this concept states that as the amount consumed of a commodity increases, this concept decreases. For 10 points each:
[10] Name this concept referring to the satisfaction received from consuming a good or service.
ANSWER: utility
[10] Utility is constant along these curves, which illustrate combinations of goods that are interchangeable to consumers.
ANSWER: indifference curves
[10] Named for the developer of indifference curves, this quadrilateral construct combines indifference curves to illustrate how a Pareto-optimal distribution of goods between two consumers can be achieved.
ANSWER: Edgeworth box
2. A GQ profile of this celebrity by Drew Magary begins with the line “I have been specifically told I will be able to punch [him] in the face.” For 10 points each:
[10] Name this high-pitched Canadian teen heartthrob who dated Selena Gomez after releasing the irritatingly popular song “Baby.”
ANSWER: Justin Bieber [or Justin Drew Bieber]
[10] Justin Bieber’s obnoxious streak intensified after he visited a museum dedicated to this girl, writing in the guest book that he hoped this girl “would have been a Belieber.”
ANSWER: Anne Frank [or Annelies Marie Frank]
[10] *Saturday Night Live* parodied Bieber’s Calvin Klein ad campaign by having this female cast member portray a juvenile version of the celebrity. She also performs excellent impressions of Hillary Clinton and Ellen DeGeneres.
ANSWER: Kate McKinnon [or Kate McKinnon Berthold]
3. President Eisenhower ordered the 101st Airborne Division to enter a city in this state after its governor refused to allow a high school to integrate. For 10 points each:
[10] Name this state where, in 1957, 9 black students tried to integrate Little Rock High School.
ANSWER: Arkansas
[10] This Governor of Arkansas tried to block the integration of Little Rock High School but was unsuccessful.
ANSWER: Orville Faubus
[10] Three years after the Little Rock integration crisis, this brave little girl faced similar difficulties as the first black child to attend one of Louisiana’s all-white public elementary schools. She is depicted walking to school in Norman Rockwell’s painting *The Problem We All Live With*.
ANSWER: Ruby Bridges [or Ruby Nell Bridges Hall]

4. A painting by this artist show three Breton women look on as the title figure, whose body is of the same color as the fields behind him, gets crucified. For 10 points each:
 [10] Name this French artist whose time in Tahiti inspired his painting *The Yellow Christ*.
 ANSWER: Paul **Gauguin**
 [10] This Gauguin masterpiece has its French title inscribed into the top left corner. This painting is meant to be read from right to left to show depictions of childhood, adulthood, and old age.
 ANSWER: *Where Do We Come From? What Are We? Where Are We Going?* [or *D'où Venons Nous / Que Sommes Nous / Où Allons Nous*]
 [10] Early on in his career, Gauguin was influenced by this impressionist and student of Camille Corot. He made a series of paintings of Boulevard Montmartre and was the only artist to show at all Impressionist exhibitions.
 ANSWER: Camille **Pissarro**

5. The protagonist of this novel repeats the phrase “es muss sein” and publishes a letter comparing a communist government to Oedipus. For 10 points each:
 [10] Name this novel in which the womanizing surgeon Thomas escapes from Prague to Switzerland with his wife Theresa.
 ANSWER: *The **Unbearable Lightness of Being***
 [10] This Czech author of *The Book of Laughter and Forgetting* wrote *The Unbearable Lightness of Being*.
 ANSWER: Milan **Kundera**
 [10] This other Czech dramatist created the character Hugo Pludek, who becomes the head of the Office of Liquidation by learning how to talk in meaningless cliches, in *The Garden Party*.
 ANSWER: Vaclav **Havel**

6. A formula named for this man states that entropy is equal to his namesake constant times the natural log of the number of microstates. For 10 points each:
 [10] Name this physicist who also names a constant equal to the ideal gas constant divided by Avogadro’s number.
 ANSWER: Ludwig **Boltzmann** [or Ludwig Eduard **Boltzmann**]
 [10] Boltzmann names an exponential factor found in these functions that describe the macroscopic properties of a statistical ensemble. It is usually symbolized Z.
 ANSWER: **partition functions** [or grand canonical **partition function**]
 [10] Boltzmann and this scientist are the namesakes of a distribution which describes the velocities of particles in an ideal gas. He also names a set of relations which relate the partial derivatives of thermodynamic variables.
 ANSWER: James Clerk **Maxwell**

7. Places of worship in this religion fly Nishan Sahib flags and contain kitchens called langar that give free food to adherents of all faiths. For 10 points each:
 [10] Name this monotheistic Indian religion. Adherents of this religion who are initiated into the Khalsa order must wear the “Five Ks” at all times, which include uncut hair and a special curved sword.
 ANSWER: **Sikhism**
 [10] Sikhism was founded by this first guru who said “There is neither Hindu nor Muslim”, and whose body is said to have turned into flowers upon his death.
 ANSWER: Guru **Nanak**
 [10] Any Sikh male who has been initiated into the Khalsa order is given this title, which is often used as a middle name or surname.
 ANSWER: **Singh**

8. The St. Louis Cemetery in this city is only home to aboveground vaults due to flood risk. For 10 points each:
[10] Name this city, the most populous in Louisiana. Its Ninth Ward was devastated by Hurricane Katrina.
ANSWER: New Orleans
[10] The Causeway Bridge in Louisiana is the world's longest bridge that continuously crosses over water. It crosses this lake north of New Orleans.
ANSWER: Lake Ponchartrain
[10] Instead of counties, Louisiana is divided into 64 of these administrative districts.
ANSWER: parishes
9. This politician wrote his country's first constitution, the Instrument of Government, during his time as Lord High Chancellor. For 10 points each:
[10] Name this man who orchestrated the Torstenson War while serving as regent for the future queen Christina.
ANSWER: Axel Oxenstierna [or Axel Gustavsson Oxenstierna]
[10] Axel Oxenstierna served as advisor to this father of Christina, who led Sweden for most of the Thirty Years War and was known as the "Lion of the North." He is often considered the father of modern warfare.
ANSWER: Gustavus Adolphus [or Gustav II Adolf]
[10] Sixteen years after the death of Gustavus Adolphus at Lützen, the Thirty Years War was ended by this series of treaties signed at Osnabrück and Münster.
ANSWER: Peace of Westphalia
10. *Pseudomonas aeruginosa* is often used as a model system to study the formation of these structures. For 10 points each:
[10] Name these structures which form when colonies of microorganisms excrete extracellular polymeric substances. Microbes sense whether they have reached a critical density using quorum sensing before forming these structures.
ANSWER: biofilms
[10] Another model for studying biofilms is the *aureus* species in this bacterial genus. This genus gets part of its name due to its spherical, or "coccus" shape.
ANSWER: Staphylococcus [or staph; prompt on S. aureus]
[10] Many strains of *S. aureus* have gained resistance to beta-lactam antibiotics like this one, which Alexander Fleming discovered while working with mold.
ANSWER: penicillin
11. The oracle of Themis instructs this man to repopulate humanity by throwing rocks behind his shoulder. For 10 points each:
[10] Name this man from Greek mythology. He and his wife Pyrrha survive the great flood that ends the Bronze Age.
ANSWER: Deucalion
[10] Deucalion's wife Pyrrha is the daughter of this first woman, who releases evil into the world when she opens her namesake box.
ANSWER: Pandora
[10] The Bronze Age is the third of five ages of man described in this author's poem *Works and Days*.
ANSWER: Hesiod

12. The speaker of this poem tells a woman who “purpled” her fingernail with the “blood of innocence” that to kill the title creature would be “three sins in killing three.” For 10 points each:

[10] Name this poem whose speaker tries to persuade a woman to yield to him after their “two bloods mingled” in an insect that bit both of them.

ANSWER: “The Flea”

[10] This English metaphysical poet wrote “The Flea.” He also wrote a series of “Holy Sonnets”.

ANSWER: John Donne

[10] The speaker of this Donne poem compares himself and his lover to the two arms of a compass, and says to his lover that “Thy firmness makes my circle just / And makes me end where I begun.”

ANSWER: “A Valediction: Forbidding Mourning”

13. This philosopher described *akrasia*, or “incontinence”, in those whose emotions cause them to act irrationally, in contrast with *enkrateia*, or “continence”. For 10 points each:

[10] Name this ancient Greek philosopher who was a student of Plato.

ANSWER: Aristotle [or Aristoteles]

[10] In this text, Aristotle defines goodness as that which functions well, in the sense that a good flute player is good because she plays well. Aristotle dedicated this treatise to his son.

ANSWER: Nicomachean Ethics [or Ethika Nikomacheia]

[10] In *Nicomachean Ethics*, Aristotle defined this quality as the highest goal of humanity. This state of living well is often simply translated as “happiness” in English.

ANSWER: eudaimonia

14. Answer the following about literary depictions of Chicago, for 10 points each.

[10] It is described as the “City of Big Shoulders” and “Hog Butcher of the World” in this poet’s most famous poem, “Chicago.”

ANSWER: Carl Sandburg [or Carl August Sandburg]

[10] This character states “I am an American, Chicago born” at the beginning of a Saul Bellow novel about his *Adventures*.

ANSWER: Augie March [or *The Adventures of Augie March*; prompt on just “March”]

[10] Binx Bolling, the title character of this Walker Percy novel, takes his suicidal cousin Kate on a trip from New Orleans to Chicago to visit a Korean War buddy.

ANSWER: *The Moviegoer*

15. Krakow was made a free city and Switzerland was given a constitution during this diplomatic meeting. For 10 points each:

[10] Talleyrand and Castlereagh attended this conference, which was held in the capital of modern-day Austria to restore balance of power in Europe in the aftermath of the Napoleonic Wars.

ANSWER: Congress of Vienna

[10] The Congress of Vienna was chaired by this Austrian statesman, who served as Foreign Minister and later as Chancellor.

ANSWER: Klemens von Metternich [or Klemens Wenzel Nepomuk Lothar, Fürst von Metternich-Winneburg-Beilstein]

[10] Metternich was forced to flee Austria during the Revolutions of 1848, when this Hungarian revolutionary gave a speech to incite a mob in Vienna.

ANSWER: Lajos Kossuth

16. Identify the following about methods of data storage, for 10 points each.

[10] When items frequently need to be added or removed, this data structure is often used, in which nodes store a pointer to the next node. In addition, it is easy to implement queues and stacks using this data structure.

ANSWER: **linked list** [prompt on "list"]

[10] This other data structure relies on probabilistic approaches to check if an item is in a set. They have a perfect recall rate because while they may generate false positives, they never generate false negatives.

ANSWER: **Bloom filter**

[10] Implementations of Bloom filters usually rely on these types of functions that return radically different results for close input values. These functions map data into different buckets of their namesake "tables."

ANSWER: **hash** function

17. This composer's *Transfigured Night* is a one-movement string sextet about a woman who confesses to her lover that she is pregnant with another man's child. For 10 points each:

[10] Name this composer of *Pierrot* ["pye-ROH"] *Lunaire* who led the Second Viennese School of music.

ANSWER: Arnold **Schoenberg**

[10] Schoenberg pioneered this compositional technique which eschews traditional tonality by using each note of the chromatic scale with equal frequency.

ANSWER: **twelve-tone** technique [or **serialism**; or word forms like **serialist**; or **dodecaphony**]

[10] This serialist composer quoted J.S. Bach's chorale "Es ist genug" near the end of his violin concerto, whose two movements are further divided into two sections each.

ANSWER: Alban **Berg**

18. He gifted his patron, the Yongle ["yong-luh"] Emperor, with a giraffe he found while visiting modern-day Somalia. For 10 points each:

[10] Name this muslim eunuch who led Chinese exploration across the Indian Ocean during the 15th century.

ANSWER: **Zheng He** ["jung huh"]

[10] Zheng He's voyages were taken on behalf of this Chinese dynasty, which succeeded the Yuan. It was known for its ornate vases.

ANSWER: **Ming** dynasty

[10] This pseudohistorian alleged that Zheng He's fleet discovered the Americas in his book *1421*. He also dubiously claimed that the Chinese visited Italy before the Renaissance and that Atlantis had been a real empire.

ANSWER: Gavin **Menzies** [or Rowan Gavin Paton **Menzies**]

19. Kikuji meets Mrs. Ota at a tea ceremony in a novel by this author. For 10 points each:

[10] Name this author of *Thousand Cranes*. He was the first Japanese author to win the Nobel Prize in Literature.

ANSWER: Yasunari **Kawabata** [or **Kawabata** Yasunari]

[10] In this Kawabata novel, Shimamura and the geisha Komako have an affair while Shimamura is visiting the hot springs away from Tokyo.

ANSWER: **Snow Country** [or **Yukiguni**]

[10] This other Kawabata novel chronicles a match between the Honinbo ["HON-in-bo"] Shusai and the challenger Minoru Kitani in the title game.

ANSWER: *The **Master of Go*** [or **Meijin**]

20. One form of this technique uses polyhistidine affinity tags to isolate proteins. For 10 points each:

[10] Name this general class of separation techniques which move a mobile phase through a stationary phase. A common demonstration uses this technique to separate the dyes of pen ink.

ANSWER: chromatography [accept specific types of chromatography]

[10] The typical stationary phase used in column chromatography consists of beads of this substance, which also coats the plates used in TLC. This substance is also commonly used as a desiccant.

ANSWER: silica gel [or silicon dioxide or SiO₂]

[10] A form of chromatography which isolates molecules by this quality uses a gel or a porous resin. That method is often named for its exclusion of this quantity.

ANSWER: size [or size-exclusion chromatography; or volume; prompt on "SEC"]

Extra

The title character of this poem lives in an island castle and must continually weave on her loom without looking at the world outside. For 10 points each:

[10] Name this poem about a woman afflicted with a curse after seeing Sir Lancelot, who then writes her name on a boat and dies while floating down the river to Camelot.

ANSWER: "The Lady of Shalott"

[10] "The Lady of Shalott" was written by this 19th-century British Poet, who wrote about characters who rode "Half a league, half a league / Half a league onward" in "The Charge of the Light Brigade."

ANSWER: Alfred, Lord Tennyson

[10] The speaker of this Tennyson poem, which the author requested to be the final entry in his collections, hopes to see his "Pilot face-to-face" after performing the title action.

ANSWER: "Crossing the Bar"