

ACF Fall 2018

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Editors 1

Tossups

1. At the end of *Raging Bull*, Robert de Niro recites one of this actor's monologues into a mirror. He's not James Dean, but this student of Stella Adler was the first notable Hollywood actor to employ Stanislavski's [stan-uh-SLAWV-skee's] "method acting." This actor played a character who overturns a basket of oranges when he is shot by Tattaglia hitmen; that character played by this man advises his son, Michael, to "keep your friends close [and] your enemies closer." In an Elia Kazan film about corrupt dockworkers, this actor laments "I coulda had class. I coulda been a contender." For 10 points, what star of *On the Waterfront* portrayed mob boss Vito Corleone in *The Godfather*?

ANSWER: Marlon **Brando**

2. Abnormal clusters of DNA in these cells called Howell-Jolly bodies may develop during hereditary spherocytosis. Deficiency of these cells is common in a disease whose name is derived from its prevalence among Mediterraneans. Another disease affecting these cells results from a glutamine-to-valine mutation at position 6 of a protein's beta chain. They take on an abnormal shape in a disease that confers resistance against malaria due to heterozygote advantage. The number of these cells in the body is lowered in thalassemias and sickle-cell anemia. For 10 points, name these cells that deliver oxygen to body tissues with the help of hemoglobin.

ANSWER: **red blood** cells [or **erythrocytes**; or **RBCs**]

3. A sexually explicit example of this literary form describes "dirty farts...spluttering" out of Nora Barnacle's backside. A work of this type by John Keats compliments Shakespeare's ability to cope with uncertainty, which Keats dubbed "negative capability." Sylvia Plath's suicide is explored in a Ted Hughes collection named for this literary form. In a novella, Wormwood learns how to corrupt the Patient through works of this type. While on an Arctic expedition, Robert Walton writes some of these works in Mary Shelley's *Frankenstein*. For 10 points, name these correspondences that are imitated by the narration of epistolary novels.

ANSWER: **letters** [or **epistles**; accept *Birthday Letters* or *The Screwtape Letters*]

4. This empire authorized Jan Janszoon ["YAWN YAWN-sohn"] and the Salé Rovers to conduct a series of slave raids in Iceland, known as this empire's namesake "abductions." Supposed evidence for pre-modern Antarctic exploration exists on a map by one of this empire's admirals, Piri Reis. This empire's admiral Dragut died at the Great Siege of Malta and served at the Battle of Preveza, where Andrea Doria retreated from a fleet led by this empire's admiral Hayreddin Barbarossa. The Age of Sail began after this country's galley fleet was routed by the combined forces of Venice and Don Juan of Austria at the Battle of Lepanto. For 10 points, name this empire ruled by Suleiman the Magnificent.

ANSWER: **Ottoman** Empire [accept **Turkey** or **Turkish** Abductions]

5. This deity declares that no giant is equal to Vafthrudnir [voff-THRUD-near] and counsels another deity against visiting him. This deity protects certain people from danger by sending them to the servant Hlín. This deity's messenger has a flying sea-treading horse whose name means "hoof-tosser," or Hófvarpnir [hoff-VARP-near]. This deity's servants include Gná [NAH] and Fulla. In the *Lokasenna*, Loki accuses this deity of sleeping with Vili and Ve. Freya is second only to this goddess, who is known as the highest among the Aesir. This goddess weeps at her hall Fensalir after the death of her son Baldr. For 10 points, name this Norse goddess and wife of Odin.

ANSWER: **Frigga** [or **Frija**; do not accept or prompt on **Freya**]

6. This sculpture inspired the pose of the central figure in Abbott Thayer's *A Virgin*. Filippo Marinetti's *Futurist Manifesto* declares that "a racing automobile ... is more beautiful than [this sculpture]." This sculpture originally overlooked the Temple of the Great Gods, where it was elevated by a marble pedestal representing a ship's prow. It was found and reassembled under the lead of archaeologist Charles Champoiseau ["shawm-pwah-SOH"]. This statue, located atop the Daru Staircase within the Louvre, features clothing ruffled by wind and is missing its arms and head. For 10 points, name this Hellenistic-era sculpture depicting the goddess Nike.

ANSWER: **Winged Victory of Samothrace** [or **Winged Nike of Samothrace** or **Winged Victory of Samothrace** or **Winged Nike of Samothrace**; prompt on partial answers]

7. After a city in this state voted for a 2014 referendum banning fracking within city limits, its legislature passed a law forbidding cities from making such bans. Although T. Boone Pickens' scheme to build the world's largest wind farm in this state failed, as of 2018 it produces the most wind power of any US state. This state's Railroad Commission is unusually powerful because it regulates the energy industry, rather than railroads. The oil-rich Permian Basin is in this state, which is the southern terminus of the Keystone XL pipeline. This state's oil industry is centered in the Midland-Odessa metropolitan area. For 10 points, name this state where many oil companies are headquartered in Houston.

ANSWER: **Texas**

8. This man made a speech nominating Jerry Brown for president at the 1976 Democratic National Convention. Philip Vera Cruz resigned from this man's organization after he endorsed Ferdinand Marcos. This man's brother Richard designed a black eagle logo for his organization. Protesting a preferential contract negotiated with the Teamsters, this activist was jailed for violating an antiboycott injunction during the Salad Bowl strike. This activist joined Filipino workers in the Delano grape strike and fought to end the Bracero Program alongside Dolores Huerta. For 10 points, name this Mexican-American labor activist who led the United Farm Workers.

ANSWER: Cesar **Chavez**

9. The Gram-Schmidt process produces vectors that are named for both being orthogonal and having this property. Phonons can represent "modes" described by this adjective, corresponding to the resonant frequencies of a system. This adjective denotes matter that is not antimatter. A "condition" named for this term specifies that the integral of the magnitude of psi squared is equal to 1. In specular reflection, a line named for this word is at equal angles to both the incident and reflected rays. The force of friction is proportional to the coefficient of friction times a force described by this adjective. For 10 points, name this word which denotes the force perpendicular to a surface.

ANSWER: **normal** [or **normalization**]

10. A poem written in this language contrasts the “golden hair” of Margarete [“mar-guh-RET-uh”] with the “ashen hair” of Shulamith, and begins by describing the “black milk of daybreak we drink at nightfall.” A collection written in this language includes a poem inspired by Picasso’s *Family of Saltimbanques*, and another that declares “beauty is nothing but the beginning of terror.” Paul Celan’s “Death Fugue” was written in this language, as was a poem that ends “You must change your life.” An Italian castle inspired a set of 10 mystical poems in this language that opens “Who, if I cried out, would hear me among the Angelic Orders?” For 10 points, what language was used for the *Duino Elegies* by Austrian poet Rainer Maria Rilke?

ANSWER: **German** [or **Deutsch**]

11. Talcott Parsons’ analysis of the division of labor distinguished between the “instrumental” and “expressive” based on this concept. A 1987 paper by Candace West and Don Zimmerman popularized the phrase “doing [this concept].” The “ritual of subordination” is discussed in an Erving Goffman book analyzing how advertisements affect our view of this concept. A 1990 book considers J. L. Austin’s theory of “performative utterances” to argue for this concept’s “performativity.” That book by Judith Butler is titled for its *Trouble*. Sociologists often discuss the “binary” this concept is confined to in most Western societies. For 10 points, what social construct is often contrasted with sex?

ANSWER: **gender** [do not accept or prompt on “sex”]

12. Conspiracies theories arose after this nation signed the Tashkent Declaration with a prime minister who died the next day. A leader of this country vowed to “eat grass” until his country acquired nuclear weapons. In 2004, this country’s top nuclear physicist was revealed to have smuggled uranium to Libya and North Korea. This country began enriching uranium in response to a neighboring country’s Smiling Buddha test. Separated from its eastern neighbor by the Line of Control, this country’s nuclear program was started by A. Q. Khan on the orders of prime minister Zulfikar Ali Bhutto. For 10 points, identify this country that contests the rule of Kashmir with the nation it was partitioned from, India.

ANSWER: **Pakistan**

13. At the beginning of this novel, Mary Debenham mysteriously tells a colonel “Not now. When it’s all over.” In this book, Cyrus B. Hardman is frustrated that he can’t find a “small, dark man with a womanish voice.” A man in this novel learns that many women’s dressing gowns are “corn coloured” and “blue satin,” but fails to find a “scarlet kimono.” The protagonist of this novel discovers that Samuel Ratchett is actually Cassetti, who fled America after kidnapping Daisy Armstrong; later, the protagonist deduces that Cassetti was stabbed to death by his fellow passengers. For 10 points, Hercule Poirot investigates a crime aboard a train in what Agatha Christie novel?

ANSWER: **Murder on the Orient Express**

14. Heinz Hopf conjectured that this figure is homeomorphic to any simply connected manifold with pinched sectional curvature. Grigori Perelman proved a statement concerning the 4-dimensional variant of this figure; that statement is named for Henri Poincaré. The Kepler conjecture gives 0.74 as the maximum density with which this figure can pack a volume. Coordinates symbolized rho, theta, and phi are used in a system named for this solid figure. For 10 points, the solid that gives the largest surface area for a given volume is what shape, whose surface area is “4 pi r squared”?

ANSWER: **sphere**

15. This philosopher's atomism was defended by a later thinker's idea of the "swerve," which holds that atoms can divert from their innate downwards path. In a letter to Herodotus, this philosopher argued that death is not to be feared. A trilemma attributed to this man is arguably the first version of the problem of evil. This philosopher believed that the highest form of happiness is the combination of tranquility and the absence of pain, or *aponia* and *ataraxia*. Lucretius' *De Rerum Natura* defended the beliefs of this man who taught at The Garden. For 10 points, name this Greek philosopher whose namesake school of philosophy is considered to be a form of hedonism.

ANSWER: **Epicurus** [or **Epikouros**]

16. This religion inspired a poem in which a character in "blue work overalls" chants "DROWN THEIR BUTTS/ CRUSH THEIR BUTTS." That poem titled for Smokey the Bear is by Gary Snyder. In one novel, spiritual experiences like climbing the Matterhorn occur after Japhy Ryder introduces Ray Smith to this religion. A poem inspired by this religion set on "the tincan banana dock" claims that the title object was "never no locomotive!" This religion is central to Beat movement literature like "Sunflower Sutra" and *The Dharma Bums*. For 10 points, name this religion practiced by Allen Ginsberg and Jack Kerouac in its Mahayana and Zen forms.

ANSWER: **Buddhism** [or **Zen** Buddhism; or **Mahayana** Buddhism]

17. At high pressures, this element could undergo the Wigner-Huntington phase transition to its "metallic" form. Most common solvents in NMR replace nuclei of this element with its rarer isotopes. The kinetic isotope effect is most pronounced in this element, as its isotopes have the largest relative change in mass than do any other element's. The majority of cosmic rays are nuclei of this element. The predominant isotope of this element is replaced by an uncommon isotope in heavy water. Isotopes of this element, which contain one and two neutrons, respectively, are deuterium and tritium. For 10 points, name this diatomic gas, the lightest element on the periodic table.

ANSWER: **hydrogen** [or **H**; prompt on deuterium or tritium]

18. Dorieus, brother of Leonidas, claimed this island's city of Heraclea Minoa based on his Herculean ancestry. An invasion of this island intended to restore the tyrant Terrilus ended in Hamilcar I's defeat at the Battle of Himera. This island's city of Segesta was betrayed by Agathocles, whose son-in-law Pyrrhus of Epirus unsuccessfully besieged Lilybaeum to drive out Carthage. A request by Mamertine mercenaries on this island for an alliance with Rome against Hiero II sparked the First Punic War. Archimedes, who resided on this island, legendarily built a heat ray for its city of Syracuse. For 10 points, name this Mediterranean island, located to the south of mainland Italy

ANSWER: **Sicily** [or **Sicilia**]

19. An aria by this composer opens with the notes D and C-sharp, then triplets on C, then B-natural, B-flat, and A. He used a theme based on the carol "March of the Kings" for his incidental music to the play *L'Arlesienne* [LAHR-less-ee-en]. In an opera by this composer, two characters recall their time together in Kandy in the friendship duet "Au fond du temple saint" [oh fond due TOMP-luh SAHNT"] Another opera by this composer begins outside a cigarette factory, where the title character sings that "love is a rebellious bird" and throws a flower at her love interest. That opera by this composer includes the Toreador Song and the Habanera. For 10 points, name this composer of *The Pearl Fishers* and *Carmen*.

ANSWER: Georges **Bizet**

20. This country's Christian church was represented by Dioscorus at the Council of Chalcedon, where this country's church joined other miaphysite ["MY-uh-fizz-ite"] churches in breaking from the rest of Christianity. A saint from this country is considered the father of Christian monasticism and was tempted by demons while in the wilderness. During a journey back to this country, a Biblical character had his feet touched by his son's foreskin after it was cut off by his wife, Zipporah. The Israelites are led out of this country to Mount Sinai. For 10 points, name this country where Moses freed the slaves from the Pharaoh.

ANSWER: **Egypt** [or Arab Republic of **Egypt**]

Tiebreaker. It's not an ethnicity, but the white stripe of the Five Races Under One Union flag signified members of this minority group. The members of the Kansu Braves were part of this minority, as were the leaders of the Ma Clique. A man born into this minority group presented a giraffe to the Yongle Emperor after one of his treasure ship expeditions to the Indian Ocean. The eunuch Zheng He ["ZHUNG HUH"] belonged to this religious minority, and it is the majority religion of Xinjiang ["shin-JYANG"] province. For 10 points, most Uyghurs are members of what religion that was introduced to China by companions of Muhammad?

ANSWER: Chinese **Muslims** [or Chinese followers of **Islam**; prompt on more specific forms of Islam like **Shia** or **Sunni**; prompt on **Uyghurs** until mentioned; prompt on **Chinese people**]

Bonuses

1. Thousands of Jews emigrated from this country after it blamed a series of March 1968 student protests on Zionists. For 10 points each:

[10] Name this country where, two years later, protests over increased food prices brought Edward Gierek to power.

ANSWER: **Poland**

[10] Gierek was toppled in 1980, shortly after signing the Gdańsk Agreement, which permitted the creation of this trade union. Under Lech Wałęsa [“LEKH vaw-WES-uh”], this organization led the anti-Communist movement in Poland.

ANSWER: **Solidarity** [or **Solidarność**]

[10] This Polish Cardinal was elected Pope during Gierek’s rule. John Lewis Gaddis identifies this pontiff’s 1979 visit to Poland as the catalyst for the formation of the Solidarity movement.

ANSWER: Pope **John Paul II** [or Karol **Wojtyła** [“KEH-rul voy-TAY-wah”]]

2. David Hudson and Mark Atkins are both renowned players of this instrument, for which Atkins composed a concerto. For 10 points each:

[10] Name this wind instrument whose players utilize extensive circular breathing. They are often over a meter long, and are traditionally made from wood that has been hollowed out by termites.

ANSWER: **didgeridoo**

[10] Didgeridoos are often referred to as a “pipe” that produces this sort of sound. Bagpipes also produce this sort of sound sustained for a long period of time.

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

[10] A long-necked string instrument from this country known as the tanpura is also used to produce a drone. Other instruments invented in this country include the tabla and the sitar.

ANSWER: Republic of **India**

3. In Suzan-Lori Parks’ play *Topdog/Underdog*, a character named for this historical figure tries to get a job impersonating him. For 10 points each:

[10] Name this man who, in a poem, is said to have “fallen cold and dead” after “the fearful trip is done.” In another poem, he is compared to a “powerful western fallen star” that is “lustrous with silver face in the night.”

ANSWER: Abraham **Lincoln**

[10] This poet mourned Lincoln’s assassination in the poems “O Captain, my Captain!” and “When Lilacs Last in the Dooryard Bloom’d.”

ANSWER: Walt **Whitman** [or Walter **Whitman**]

[10] Abraham Lincoln’s son, Willie, lingers in purgatory in this author’s 2017 novel *Lincoln in the Bardo*. He wrote the short story collections *Tenth of December* and *CivilWarLand in Bad Decline*.

ANSWER: George **Saunders**

4. This religion's banner includes its main symbol, the Left Eye of God, along with a charity bowl, a feather duster, and a red book. For 10 points each:

[10] Name this syncretic religion whose name translates to "highest power." Popes, cardinals, and bishops are ranks in its executive body, and its beliefs are generally a combination of Buddhism, Taoism, and Confucianism.

ANSWER: **Caodaism** [or Đức **Cao Đài**]

[10] Cao Dai is a religion from this country. This country's largest basilica was built in Saigon during its time as a French colony.

ANSWER: Socialist Republic of **Vietnam**

[10] As in Buddhism, Hinduism, and other Indian religions, a major goal of adherents of Caodaism is freedom from the cyclical pattern of life, death, and suffering referred to by this Sanskrit term. Nirvana is the release from this cycle.

ANSWER: **samsāra** [or **sansara**]

5. Answer the following about the velocity of fluids. For 10 points each:

[10] According to this principle named for a Swiss physicist, an increase in a fluid's velocity is accompanied by a decrease in its pressure or potential energy.

ANSWER: **Bernoulli's** principle

[10] In this low-velocity flow regime, fluids typically do *not* exhibit chaotic behavior, so parallel fluid layers slide past one another.

ANSWER: **laminar** flow regime

[10] This "tube" named for a Frenchman is often used to measure the velocity of fluids. It is also used as a speedometer on aircraft.

ANSWER: **Pitot** [pee-TOH] tube [or **Pitot** probe]

6. In *The Waste Land*, Eliot quotes this poet's "Prothalamion," asking the "Sweet Thames" to "run softly, till I end my song." For 10 points each:

[10] Name this poet of *Amoretti*. His most famous work is an allegorical epic poem that represents Queen Elizabeth I as Gloriana.

ANSWER: Edmund **Spenser** (the allegorical epic poem *The Faerie Queene*)

[10] The opening of Eliot's *The Waste Land* parallels the "General Prologue" of this Geoffrey Chaucer book, which describes April's "shoures soote" ["showers soot"]. This book's characters include the Miller, the Franklin, and the Wife of Bath.

ANSWER: *The **Canterbury Tales***

[10] At the end of *The Waste Land*, Eliot describes this play's character Hieronymo becoming "mad againe." In this Thomas Kyd play, Hieronymo murders Lorenzo and Balthazar to avenge the death of his son.

ANSWER: *The **Spanish Tragedy**, or Hieronimo is Mad Again*

7. A scene in this opera takes place in a tavern and calls for an out-of-tune upright piano to be played on stage. For 10 points each:

[10] Name this opera based on a Georg Büchner play that opens with the title character shaving his captain. This opera's protagonist gets revenge on his wife, who is cheating on him with the Drum Major, by stabbing her under a blood moon.

ANSWER: ***Wozzeck***

[10] *Wozzeck* and the unfinished *Lulu* are operas by this Austrian composer, a member of the Second Viennese School of composers. This composer's violin concerto was dedicated "to the memory of an Angel."

ANSWER: Alban **Berg** [or Alban Maria Johannes **Berg**]

[10] This other Austrian composer mentored Berg and founded the Second Viennese School. The unfinished opera *Moses und Aron* was written by this composer of *Transfigured Night* and *Pierrot Lunaire*.

ANSWER: Arnold **Schoenberg** [or Arnold Franz Walter **Schoenberg**]

8. This political party's leadership was dominated by a clique of generals who had attended Whampoa Military Academy. For 10 points each:

[10] Name this political party that was led by the former commandant of Whampoa Academy, Chiang Kai-Shek.

ANSWER: **Kuomintang** [or **KMT**; or **Nationalist Party of China**; or **Guómíndǎng**; or **Chinese Nationalists**; prompt on "Nationalists" or other partial answers]

[10] This wife of Chiang Kai-Shek helped negotiate his release after he was captured in the Xi'an ["SHEE-ahn"] Incident. Mao famously quipped that this woman loved power, while her two sisters loved money and China.

ANSWER: **Soong** Mei-Ling

[10] After the Kuomintang's defeat in the Chinese Civil War, Chiang and Soong fled to this island, where they established the Republic of China.

ANSWER: **Taiwan** [or **Formosa**]

9. You're a hotshot trying to make it big on Wall Street. For 10 points each, identify some concepts you'll need to be familiar with if you're going to make the big bucks:

[10] If you're predicting a stock's failure, you can take this position, in which you sell an asset you don't own and "cover" it later. Michael Lewis described the 2000s housing bubble in a book titled for a *Big* sale of this sort.

ANSWER: **short** sale

[10] One of the most important rules of finance is to always diversify this group of investments or assets you own.

ANSWER: your **portfolio**

[10] You might use CAPM, or the Capital Asset Pricing Model, in which this variable is symbolized beta. Harry Markowitz' modern portfolio theory seeks to find an "efficient frontier" given a certain value for this variable.

ANSWER: **risk** [or **volatility**]

10. To demonstrate one of his ideas, this scientist imagined giraffes stretching their necks to reach high leaves, then eventually gaining longer necks to reach leaves more easily. For 10 points each:

[10] Name this French biologist who proposed the theory of inheritance of acquired characteristics.

ANSWER: Jean-Baptiste **Lamarck**

[10] Lamarck's theory conflicted with this British scientist's theory of evolution by natural selection.

ANSWER: Charles Robert **Darwin**

[10] Lamarck's views are somewhat consistent with the "transgenerational" form of this phenomenon, in which the traits of one's offspring are altered without altering any DNA sequences.

ANSWER: **epigenetics** [or transgenerational **epigenetics**]

11. Julie Chen resigned from *The Talk* as a show of support for this man, her husband. For 10 points each:

[10] Name this former CEO of CBS who resigned in the wake of a July *New Yorker* article publicizing the sexual harassment allegations against him.

ANSWER: Les **Moonves**

[10] An October 2017 *New Yorker* exposé revealed the sexual assault allegations against this independent film producer, whose fall from grace initiated the #MeToo movement.

ANSWER: Harvey **Weinstein**

[10] The Moonves and Weinstein exposés were written by this journalist, who also wrote about the abuse allegations against New York Attorney General Eric Schneiderman. He has a strained relationship with his father Woody Allen.

ANSWER: Ronan **Farrow** [or Satchel Ronan **Farrow**]

12. The narrator of a memoir waffles between reading this book and *Invitation to a Beheading*. For 10 points each:

[10] Name this novel discussed by Azar Nafisi in a book titled *Reading [it] in Tehran*. Nafisi argues that the subject of this book is not the rape of Dolores Haze by “a dirty old man,” but “the confiscation of one individual’s life by another.”

ANSWER: **Lolita** [or *Reading Lolita in Tehran*]

[10] This other Iranian author described falsely accusing an innocent man of harassment to distract attention from her lipstick in the graphic memoir *Persepolis*.

ANSWER: Marji **Satrapi**

[10] Iran’s first female author of the modern era, Simin Daneshvar, wrote about Zari’s fascination with this religion’s martyr Hosein in *Savushun*. In *Persepolis*, Satrapi opposes a theocracy guided by this religion’s clerics.

ANSWER: Shiite **Islam**

13. This painting inspired a photograph that depicts the camera in between the artist and a disillusioned woman, Jeff Wall’s *Picture for Women*. For 10 points each:

[10] Name this painting whose primary subject stands next to a bowl of oranges. Despite looking directly at the viewer, that subject’s reflection in the mirror behind her is seen to the right as she faces a top-hatted man.

ANSWER: *A **Bar at the Folies-Bergere***

[10] Critics believe the model for the painting, Suzon, also held this profession. T. J. Clark discussed the “Choice” of a scandalous painting in which a person with this profession stares at the viewer as she’s presented a bouquet by a black servant.

ANSWER: **prostitute** [or **sex worker**; reluctantly accept synonyms like **hooker**]

[10] This early French Impressionist subverted the male gaze in paintings like *A Bar at the Folies-Bergere*, the aforementioned *Olympia*, and *Luncheon on the Grass*.

ANSWER: Édouard **Manet**

14. The term “synthon” was coined by the person who invented this technique, which also uses a namesake double arrow in its diagrams. For 10 points each:

[10] Name this technique used in organic chemistry, which starts with a target molecule and breaks it down into precursor materials until simpler molecules are reached.

ANSWER: **retrosynthetic analysis** [or **retrosynthesis**]

[10] Performing retrosynthesis on this functional group on an aromatic ring can result in carboxylic acids. These functional groups have a C-N triple bond.

ANSWER: **nitriles** [or **cyanides**]

[10] One can perform retrosynthesis on amides to yield nitriles, as adding this compound to nitriles results in amides. This compound is removed in a dehydration reaction.

ANSWER: **water** [or **H₂O**]

15. In the Gentlemen's Agreement of 1907, this country agreed to limit emigration to the United States so long as the US agreed to protect this country's citizens on American soil. For 10 points each:

[10] Name this country that experienced mostly peaceful relations with the United States until 1941, when its navy attacked Pearl Harbor.

ANSWER: **Japan**

[10] This American commodore opened Japan to the West by sailing his "Black Ships" to Edo Bay and threatening to fire on the capital.

ANSWER: **Matthew Perry** [prompt on just **Perry**; do not accept or prompt on Oliver Hazard Perry]

[10] In 1866, the American steamer *General Sherman* attempted to emulate Perry's expedition by visiting this non-Japanese East Asian city; however, the ship was destroyed by this city's residents. The USS *Pueblo* was captured off the coast of this capital city, and is still held in this city today.

ANSWER: **Pyongyang**

16. This philosopher asserted that Alexius Meinong's theory of objects violates the law of non-contradiction. For 10 points each:

[10] Name this philosopher who attacked Meinong's conception of a "round square" being both round and not round in a paper that attempted to solve the problem of negative existentials.

ANSWER: Bertrand **Russell** [or Bertrand Arthur William **Russell**, 3rd Earl Russell]

[10] This Austrian philosopher of language went to Cambridge to study with Russell and, like Russell, discussed the meanings of false propositions in his text *Tractatus Logico-Philosophicus*.

ANSWER: Ludwig **Wittgenstein** [or Ludwig Josef Johann **Wittgenstein**]

[10] Russell and Wittgenstein are both associated with this philosophical tradition, which is usually contrasted with the "continental" tradition of mainland European philosophy.

ANSWER: **analytic** philosophy [prompt on **Anglo-American** philosophy or **British** philosophy]

17. When this process occurs along coastlines, it creates productive fishing grounds due to the fertilization of surface waters by nutrients. For 10 points each:

[10] Name this process in which cooler water rises to the ocean surface to replace warm water that has been pushed away by wind.

ANSWER: **upwelling** [or coastal **upwelling**]

[10] The nutrients in upwelling waters attract large numbers of the "phyto" variety of these ocean-dwelling organisms whose name is Greek for "wanderer." Most of them are microscopic in size.

ANSWER: **plankton** [or phyto**plankton**]

[10] One key driving force of upwelling is this type of fluid transport, in which water moves at right angles to the wind direction due to the Coriolis effect.

ANSWER: **Ekman** transport

18. This figure used his four faces to oversee his kingdom in all directions. For 10 points each:

[10] Name this son of Shao dian and Fubao who defeated the Yan Emperor at the Battle of Banquan.

ANSWER: **Yellow Emperor** [or **Huangdi**]

[10] The Yellow Emperor is a mythical figure from this country. People from this country are said to be the Yellow Emperor's descendants.

ANSWER: **China** [or **Zhongguo**]

[10] The Yellow Emperor's court historian, Cang Jie ["tsung JYE"], is known for this invention. Cang Jie, who had four eyes, is said to have invented this thing after observing the footprints of animals on the earth.

ANSWER: Chinese **writing** system [or **Written** Chinese; or Chinese **alphabet**; accept word forms]

19. Vladimir Bomgard, a member of this profession, reminisces about rural life in a Mikhail Bulgakov collection. For 10 points each:

[10] Name this profession of Trefon Ivanitch, who lies about his relationship with Alexandra Andreyevna in an Ivan Turgenev story. This is also the profession of a title character who falls in love with Lara after serving in the Russian Civil War.

ANSWER: **doctors** [or *A Young Doctor's Notebook* or *A Country Doctor's Notebook* or “The District Doctor” or *Dr. Zhivago*; prompt on poet]

[10] This Russian playwright of *Uncle Vanya* and *The Cherry Orchard* was also a practicing physician.

ANSWER: Anton **Chekhov**

[10] In this Chekhov story, Anna Sergeyevna visits Moscow on the pretense of seeing a doctor to carry on her affair with Dmitri Gurov, whom she met vacationing in Yalta.

ANSWER: “The **Lady with the Dog**” [or “The **Lady with the Lapdog**” or “The **Lady with the Little Dog**”]

20. A helmet with dragon illustrations was discovered near one of these objects that was used to bury King Raedwald at Sutton Hoo. For 10 points each:

[10] Name these objects in which Viking leaders were often buried. In some instances, these objects were set on fire with corpses inside them in order to help the dead man’s soul reach Valhalla.

ANSWER: **ships** [or **boats** or **longships**]

[10] The most famous archaeological site in Britain is this monument on the Salisbury Plain. This stone circle’s trilithons align with the sunrise and sunset on the solstices.

ANSWER: **Stonehenge**

[10] The most famous archaeological site in Ireland, Tara, is located on and named for one of these geographical features. Maiden Castle is a well-preserved example of a type of “fort” named for these geographical features built in Britain during the Iron Age.

ANSWER: **hills** [or **Hill** of Tara or **hillforts**]

Tiebreaker. This scientist is the director of SNOLAB, which includes a tank of heavy water surrounded by photomultiplier tubes. For 10 points each:

[10] Name this Canadian astrophysicist. He shared the 2015 Nobel Prize in Physics for his discovery of neutrino oscillations.

ANSWER: Arthur B. **McDonald**

[10] Neutrinos oscillate between this many generations. Both quarks and leptons come in this many generations in the Standard Model.

ANSWER: **three**

[10] Neutrino oscillations helped to solve a discrepancy in the amount of neutrinos measured coming from this body. Those electron neutrinos are emitted by nuclear fusion that takes place in this star.

ANSWER: the **Sun** [or **Sol**]