

Fall Open 2019: let,s ,fix those com,mas,,

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Tossups

1. **Chi Hyung Chung, known as Dr. Chi to his supporters, ran in this election as a Christian Democrat on an anti-LGBT platform. Jhanisse (“jah-NEES”) Vaca-Daza and her NGO Standing Rivers led non-violent protests against the incumbent in this election. The TSE (“T-S-E”) appointed the tech company NEOTEC (“neo-tech”) to collaborate with SERECÍ (“sehr-eh-CEE”) in administering the TREP for this election. The CC coalition was the main opposition party in this election for which María (“mah-REE-ah”) Eugenia (“yoo-hen-ee-ah”) Choque (“cho-kay”) invited over 200 (*) international observers. FEJUVE (“feh-HOO-vay”) organized blockades in El Alto in support of the winner of this election. A supposed “hard to explain” change in the quick count trend was reported by the OAS in its report on this election in which the winner edged out Carlos Mesa by 10.5 percentage points. For 10 points, name this election won by Evo Morales, after which he resigned and fled to Mexico.**

ANSWER: 2019 **Bolivian** general election [accept descriptive answers that indicate the most recent election in **Bolivia**] (The 2009 constitutional change eliminated the requirement that the presidents of Bolivia are from the country)

<JS, Current Events>

2. **A time scale that describes how quickly this condition is restored equals the square root of the following quantity: “ R -cubed over the product of big- G and M .” This condition is assumed to nearly hold when equating the time scales of free fall and explosion. Beginning with a polytrope model and applying this condition yields a second-order differential equation for dimensionless pressure as a function of dimensionless radius named for Lane and Emden. Equations expressing energy conservation, mass conservation, energy transport, and this condition make up the fundamental equations of (*) stellar structure. No stars that maintain this condition can exist to the right of the Hayashi track. The maximum luminosity a star can have while maintaining this condition is the Eddington limit. This condition is expressed by the equation “ dP/dr (“D-P-D-R”) equals negative-rho times little- g .” For 10 points, name this condition that equates the pressure force and a force described by Newton’s law.**

ANSWER: **hydrostatic equilibrium** [accept **gravitational equilibrium**; prompt on equilibrium] (The first clue is referring to dynamical or hydrodynamical time)

<JS, Astronomy>

3. **A character created by this author realizes that the “really big word” isn’t “love,” but “trust,” and ends the play by telling her companion, “Open your arms and catch me! I’m going to jump!” The stage instructions of a play by this author describe a character who urinates on his hand in order to wash his friend’s bloodied eye. The props required for that play by this author include a necklace strung with rusted nails and a pair of plastic breasts, which a man refuses to wear after his friend teases him. This author wrote a play about (*) Miss Helen, who sculpts an Easter Island head out of concrete for her statue garden. This author’s “township” plays include one in which the two main characters, premiered by John Kani and Winston Ntshona (“un-CHO-nah”), perform *Antigone* in prison. A play by this author opens and ends with the title character’s servants practicing their ballroom dancing. For 10 points, which author of *The Road to Mecca* and *The Island* also wrote “*Master Harold*”...and the Boys?**

ANSWER: Athol **Fugard** [or Harold Athol Lanigan **Fugard**]

<INB, Drama>

4. An E-flat major piece by Louise Farrenc, written for this many instruments, is the largest ensemble for which she wrote chamber music. The standard instrumentation for an ensemble of this size originates from Louis Spohr's F major piece, titled *Grand*. Anton Webern used a tone row comprised of a trichord, its retrograde inversion, its retrograde, and its inversion, to write his Opus 24 Concerto for this many instruments. Aaron Copland's one-movement piece for this ensemble uses only string instruments. Franz Schubert's *symphony of this number* opens with a passage for two unaccompanied (*) horns, and was actually the *seventh* symphony that he completed. However, according to the standard ordering, Schubert's symphony of this number directly follows the *Unfinished* Symphony. The most common ensemble of this size comprises a wind quintet plus one of each string instrument. For 10 points, give this number of instruments in a nonet.

ANSWER: nine [accept nonet before "nonet"]

<KL, Classical Music and Opera>

5. This author was called a "rogue in porcelain" by Emily Toth, who drew on Per Seyersted's influential monograph on this author for biographical details. Though not Thomas Hardy, this author wrote a novel in which Fanny drowns while scavenging for alcohol in a riverside cabin, allowing her husband to marry a virtuous Catholic widow. A character created by this author pursues a "seductive, never ceasing" voice that invites "the soul to wander in abysses of solitude." The sawmill manager David pursues Thérèse ("teh-REZ") in this author's first novel, (*) *At Fault*. A crippled bird flutters overhead at the end of a novel by this author, mirroring the novel's start, in which a parrot squawks, "Allez vous-en! Allez vous-en!" ("al-LAY voo-ZON! al-LAY voo-ZON!") In that novel by this author, the main character finds a note reading "Good-by - because I love you" in the "pigeon house," written to her by her lover Robert Lebrun. For 10 points, Edna Pontellier drowns herself at the end of which author's novel *The Awakening*?

ANSWER: Kate Chopin [or Katherine O'Flaherty]

<INB, Long Fiction>

6. The claim that 5' ("five-prime") leader RNA regulates the expression of the AAC ("A-A-C") and AAD ("A-A-D") genes that confer this trait was disputed by Roth and Breaker. Overexpression of members of the RND superfamily has been linked to this trait. The enzyme NDM-1 that causes this trait requires a zinc cofactor like all Ambler class B enzymes. The acronym ESKAPE ("escape") refers to a common group of nosocomial organisms with this trait. Mutation of dihydropteroate ("di-hydro-ptero-ate") synthase is responsible for this trait when it increases specificity for pABA ("P-A-B-A") relative to (*) sulfonamide ("sulfone-amide"). *MecRI* ("mec-R-one") and *mecI* ("mec-I") regulate a gene in the SCC*mec* cassette that is a biomarker for this trait. In organisms with one instance of this trait, PBPs are still able to catalyze transpeptidation reactions in the presence of beta-lactamases. For 10 points, phage therapy is becoming more common because of what trait possessed by MRSA ("mersa") that allows it to survive being treated with methicillin?

ANSWER: antibiotic resistance [or ABR; accept antimicrobial resistance or AMR; accept multidrug resistance or MDR; accept extensively drug resistant or XDR; accept totally drug-resistant or TDR; accept resistant for resistance in any answer; anti-prompt on resistance to specific drugs/drug classes: penicillin, methicillin, sulfonamides, carbapenems, fluoroquinolones, aminoglycosides, tetracyclines, macrolides, lincosamides, chloramphenicol, aminoglycosides, cephalosporins, ampicillin, vancomycin]

<JS, Biology>

7. The Metropolitan Museum of Art owns a complete deck of fifteenth-century Flemish playing cards whose illustrations were inspired by this activity. Limers and raches ("ratches") were employed in this activity. In the original version of the *Book of Saint Albans*, a manual on heraldry is included with essays on two varieties of this activity by Juliana Berners. Before allegedly saving Henry V's ("the-fifth's") life at Agincourt, Edward of Norwich translated a popular treatise on this activity originally written by Gaston Fébus, Count of Foix ("fwah"). In the Byzantine Empire, the (*) *protokynegos* ("proto-KYE-nuh-go'z") was tasked with leading this activity, which was the main job of the *luparii* under Charlemagne. The unmaking and the curée ("k'yoo-RAY")

were among the final steps in a form of this activity done “par force.” An error made by Walter Tirel during this activity killed William II. Royal forests in England were reserved for this activity, one form of which inspired Henry the Fowler’s nickname. For 10 points, falcons and dogs often assisted in what activity of killing game animals?

ANSWER: hunting [accept specific types, such as wolf hunting; accept falconry or hawking]

<KS, European History (Continental)>

8. **This person wears a tophat and goes for a stroll in a Martin Tejcek (“TEH-shek”) lithograph. The only artist permitted to complete a sitting portrait of this person was Joseph Karl Stieler, whose resultant painting depicts this person dressed in a black overcoat and red scarf, clutching a pencil in his right hand. A “Well-Armed Strong Man” flanked by personifications of Ambition and Compassion appears in the “Yearning for Happiness” section of an artwork titled for this person. This person was depicted in the likeness of Zeus in a 1902 polychrome sculpture by (*) Max Klinger. A 112-foot-long work titled for this person depicts the three Gorgon sisters standing next to a monstrous, gap-toothed Typhoeus (“tye-FEE-us”). That work was decorated with its artist’s characteristic gold leaf and was painted directly onto the walls of the Vienna Secession building. For 10 points, Gustav Klimt incorporated imagery from “Ode to Joy” into his “Frieze” (“freeze”) depicting which composer?**

ANSWER: Ludwig van Beethoven

<INB, Painting and Sculpture>

9. **According to Pseudo-Apollodorus, a king of this city exiled Amphitryon (“am-FIT-tree-on”) for the murder of his uncle Electryon (“ELECT-tree-on”). Book Two of Homer’s *Odyssey* describes a “fair-crowned” nymph born to Inachus who inspired this city’s name. This city’s throne changed hands after its king entrusted his conniving wife with a golden lamb. Pausanias recounts that this city was either established on the site where a hero’s cap fell from his scabbard, or where that hero bent down to pluck a (*) mushroom from the ground. This city’s throne was contested by a pair of brothers who had been exiled from Olympia for tossing their half-brother Chrysippus (“CRY-sip-us”) down a well. The charioteer Myrtilus issued the curse that afflicted this city’s ruling house. In this city, Aerope’s (“ay-RO-pee’s”) husband murdered and cooked his adulterous brother’s children and served them to him at a banquet. For 10 points, Thyestes (“thee-ESS-teez”) and Atreus ruled what city, where Atreus’s son Agamemnon’s “mask” was unearthed by Heinrich Schliemann (“sh’lee-man”)?**

ANSWER: Mycenae

<INB, Mythology>

10. **John F. Kennedy began his denuclearization speech at American University by referencing how this man would be graduating that day through the years of night school classes he had taken. This man gave speeches opposing a declaration of war in which he said “I weep for my country” and “we stand passively mute.” This politician introduced an amendment to the Congressional Budget Act of 1974 that allows the blocking of reconciliation bills containing “extraneous” provisions. In a 2005 interview, this politician described how the loss of his grandson in a car accident caused him to regret participating in the filibuster of the (*) 1964 Civil Rights Act. This senator said the “greatest mistake he ever made” was his membership in the Ku Klux Klan. For 10 points, name this former West Virginia Senator, the longest-serving member of Congress in US history.**

ANSWER: Robert Byrd [or Robert Carlyle Byrd; or Cornelius Calvin Sale Jr.]

<AK, US History>

11. **The contemporary Islamic philosopher Nāder el-Bizrī argues that this thinker and Avicenna had the same philosophical “quest.” Albert Borgmann’s “device paradigm” is based mainly on this philosopher’s work. This thinker underpins a “guerilla metaphysics” in a Graham Harman work subtitled for him “and the Metaphysics of Objects” This thinker says that the title subject makes the world a “standing reserve” in a work arguing that the essence of the title subject is the act of “enframing,” or (*) *Gestell* (“guh-sh’TELL”), of ways of life. This thinker examines a painting of a pair of shoes in an essay he opens by describing the hermeneutic**

circle. An essay by this thinker argues that the Aristotelian causes do not suffice to answer *The Question Concerning Technology*, and another posits a role for *aletheia* (“al-uh-THEE-uh”) in the title process of *The Origin of the Work of Art*. For 10 points, name this German philosopher, who also introduced the concept of *dasein* (“DAH-zyne”) in *Being and Time*.

ANSWER: Martin **Heidegger**

<JG, Philosophy>

12. A poem partly titled for this adjective describes a period that begins in “loutishness” and ends “among angels of flame and ice.” In another poem, this adjective describes a “carcass” “lost in the foliage of caves” that is thrown “into the birdless air.” John Ashbery’s translation of a prose poem titled for this sort of “Morning” ends with a warning to “Behold the time of the *Assassins*.” A poem partly titled for this adjective imagines a “martyr weary of poles and zones” that extends between “Europe with its ancient parapets” and (*) “unbelievable Floridas.” This modifier appears in the title of a poem comprised of twenty-five Alexandrine quatrains, whose “indifferent” speaker describes seeing “yelping redskins” nailing “haulers” to “colored stakes” from aboard the title vessel. For 10 points, an object “going down impassive Rivers” titles an Arthur Rimbaud (“ram-BO”) poem about what sort of “boat”?

ANSWER: **drunken** [accept *The Drunken Boat* or “**Drunken** Morning;” accept “Morning of **Drun**kness;” accept “Le bateau **ivre**” or “Matinee d’**ivresse**;” accept “water-**drunk**”]

<INB, Non-epic Poetry>

13. In one technique, the result of this process passes through skimmer and hyper-skimmer cones, with this process occurring *after* the use of Babington or V-Groove elements. A chamber that contains an exit grid and needle electrode is part of an instrument that performs one form of this process called direct analysis in real time. Glycerol or 3-NBA (“three-N-B-A”) mixtures and an argon or xenon gun are used in a technique for this process called (*) fast atom bombardment. DHB and alpha CHC are used for the matrix in a technique that relies on laser desorption to perform this process. Another technique that performs this process produces a Taylor cone through electrospray of the analyte. This process can be followed by further fragmentation and is accomplished by “hard” and “soft” methods, with the latter including MALDI (“MAL-dee”) and ESI (“E-S-I”). For 10 points, name this process performed on the uncharged analyte in mass spectrometry in order to measure its mass-to-charge ratio.

ANSWER: **ionization** [accept matrix-assisted laser desorption/**ionization**; accept electrospray **ionization**; prompt on **MALDI**, **ESI**, **DART**, **FAB**; prompt on fast atom bombardment before mention]

<AK, Chemistry>

14. A 1969 monograph on texts discovered in this modern-day country cites nearly 300 “travel-rations” inscriptions as evidence for a complex credit economy. A 200-pound bronze knucklebone now housed in the Louvre was unearthed in this country by Jacques de Morgan’s 1901 excavation. Enormous rock-cut crosses frame each of the four tombs carved into the face of a cliff at a necropolis in this country. It took Richard Hallock over 30 years to translate 2,000 of the Fortification Tablets uncovered at a site in this country. In the 1830s, British officer (*) Henry Rawlinson stumbled across a trilingual inscription carved into the face of this country’s Mount Behistun. During his busy career in this country, archaeologist Ernst Herzfeld excavated the most famous *apadana*, and also correctly identified the dedicatee of a limestone tomb in this country’s site of Pasargadae. For 10 points, identify this country home to the Achaemenid (“uh-KEE-muh-nid”) sites of Susa and Persepolis.

ANSWER: **Iran** [or Islamic Republic of **Iran**; or **Persia**]

<INB, Other History>

15. A series of eight photographs of a person with this surname were described as “anatomies of aging” by *New Yorker* columnist Janet Malcolm, and appeared in a 1974 Marvin Israel-curated exhibition at the MoMA (“MO-muh”). An artist with this surname photographed a husband and wife with dour expressions shortly

after telling them that his taxi had just run over a pug. That artist with this surname documented his father's final years through a series of photos taken in Sarasota, Florida from 1969 to 1973. In one photograph, that artist with this surname depicted a (*) woman dressed entirely in black, save for a white sash, standing between a pair of circus elephants, while in another photograph, he captured a surprisingly somber woman in a black sequin dress glancing downward. That photographer with this surname included an image of a girl in overalls on the cover of his photobook *In the American West*. For 10 points, give this surname of fashion photographer Richard.

ANSWER: Avedon [accept Richard Avedon or Jacob Israel Avedon]

<INB, Photography>

16. While it offers better planarity, the buried strap approach to manufacturing one form of this technology causes a unique proximity effect that intensifies DIBL. Corner rounding and bottom uniformity are concerns during the fabrication of sidewall-doped trenches for one form of this technology. A folded architecture along with a bitline twisting scheme is preferred when implementing one form of this technology because it offers superior common-mode noise rejection compared to an open architecture. Sense amplifiers in this technology amplify voltage differentials to (*) logical values. One form of this technology is typically manufactured at high densities in cells with one transistor and one capacitor. The static type of this technology does not need to be periodically refreshed like its dynamic type. For 10 points, name this memory technology that can be read and written non-sequentially.

ANSWER: RAM [or random access memory; accept just random access after “memory”; accept RAM cells; accept any answer that mentions RAM or random access memory like: DRAM, dynamic random access memory, SRAM, static random access memory, SDRAM, or synchronous DRAM; prompt on memory; prompt on memory cells]

<JS, Physics>

17. Peter Schmidt led several excavations at this country's KM2 and KM3 sites to understand ancient iron-producing methods continued today by its Haya people. In the 1930s, Ludwig Kohl-Larsen traveled to this country to gather evidence supporting a racist theory. The Iraqw (“ee-RAH-kwuh”) people are the attributed founders of this country's site of Engaruka, which was mysteriously abandoned despite its advanced irrigation system. The “Nutcracker Man” specimen is a holotype of (*) *Paranthropus boisei*, a species discovered in this country. Key evidence that early humans learned to walk on two legs before developing larger brains was provided by the Laetoli footprints discovered in this country. The oldest category of stone tools is named “Oldowan” after an archaeological site in this country. For 10 points, name this country where Mary and Louis Leakey studied hominid fossils in Olduvai Gorge.

ANSWER: Tanzania [or United Republic of Tanzania]

<KS, Anthropology>

18. In a novel set during this decade, members of the Bradford family are the only ones who ignore the “Sunday Oath” and tread beyond the Boundary Stone. At the climax of that novel set during this decade, a crazed woman clutches the maggot-covered corpse of her daughter as she stabs the reverend's wife in the neck before killing herself. Anna Frith survives an event that took place during this decade in a 2001 novel by Geraldine Brooks. In another novel set during this decade, the narrator learns about a drunken piper, who was assumed (*) dead and mistakenly carted off to a graveyard, from his neighbor John Hayward. A philandering writer chronicled a disaster from this decade in tachygraphic shorthand. A fictionalized eyewitness account of an event from this decade appears in a novel framed as a journal by Daniel Defoe. For 10 points, a year which from decade earned the nickname “Annus Mirabilis” from John Dryden, despite the Great Fire of London?

ANSWER: 1660s [prompt on the 60s]

<INB, Miscellaneous Lit>

19. It's not Trinidad and Tobago, but heterodox religious groups in this country are often generically tarred as "Shouters." "Back to Jerusalem" is one of the largest religious groups in this country *not* to have signed a 1950 "Christian Manifesto." Since 1990, a farmer from this country called "Sister Ruth" has been writing a set of popular *Canaan Hymns*. Members of a church in this country killed a woman in a McDonald's for rejecting them, but likely were not actually members of its controversial "Eastern (*) Lightning" church. The founder of a group from this country, whose Protestants form the "Three-Self" movement, said that aliens created planes and TV to corrupt humans and claims to have put a "wheel" inside his followers. That group, whose name means "Dharma-Wheel Practice," does daily movement exercises like "Heavenly Circulation" and claims that this country's government targets it for organ harvesting. For 10 points, name this home country of Falun Gong.
ANSWER: China [or People's Republic of China or PRC; or Zhongguo; do NOT accept "Republic of China"]
<JG, Religion>

20. A *Time* magazine cover depicts this leader in front of a crowned lion walking across a tightrope. This leader's "unspectacular" memoir was given the equally-boring title *As It Happened*. This leader's navy carried out Operation Blackcurrent, in which diesel-powered submarine engines generated electricity for coastal cities during a particularly harsh winter. During this leader's tenure, tank-tractor hybrids called "shervicks" were ineffectively used in an attempt to (*) cultivate groundnuts in Tanganyika ("tan-gan-YEE-kuh"). The "Water Tower" speech criticized a program established under this leader by Aneurin Bevan. This leader's reforms were partly inspired by the call for a "cradle to grave" welfare state in the Beveridge Report. For 10 points, name this Prime Minister who established the National Health Service three years after defeating Winston Churchill in 1945.
ANSWER: Clement Attlee [or Clement Richard Attlee, 1st Earl Attlee]
<INB, European History (Commonwealth, Ancient, Historiography)>

Bonuses

1. Me6TREN (“meh-six-tren”) and TPMA are ligands frequently used for this polymerization (“polymer-ization”) reaction. For 10 points each:

[10] Name this polymerization reaction that has an equilibrium constant equal to the ratio of the activation rate constant and the deactivation rate constant. This reaction uses complexes of copper and nitrogen ligands as catalysts.

ANSWER: **ATRP** [or **atom transfer radical polymerization**; accept **ATRAP** or **atom transfer radical addition polymerization**; prompt on **ATRA** or **atom transfer radical addition**]

[10] ATRP is a living polymerization, in which this quantity increases linearly with monomer conversion. Gel permeation chromatography is used to evaluate the dispersity index, which represents the range of this quantity for a polymer.

ANSWER: **molecular weight** [accept **molar mass**; accept **molecular mass**; accept **molecular weight** distribution; prompt on **M**; prompt on **mass**; prompt on **weight**]

[10] The ATRP equilibrium constant increases as this property of the solvent increases. Water has this property that arises from an unequal distribution of partial charge.

ANSWER: **polarity** [or **polar**]

<JS, Chemistry>

2. This city was built on a site which the conqueror Anittas had previously cursed and sown with weeds. For 10 points each:

[10] Identify this city built near present-day Boğazkale (“BAOSS-kah-leh”). Its rulers included the militant Suppiluliuma (“soo-pee-loo-l’YOO-mah”) I, who defeated the nearby Mitanni state.

ANSWER: **Hattusas**

[10] Hattusa served as the capital of this kingdom, which engaged in a massive chariot battle against the forces of Ramesses II at Kadesh (“KAH-desh”).

ANSWER: **Hittite** Kingdom

[10] Scholars have accurately dated the reign of the second Hittite king of this name due to a mention of a solar eclipse in his *Ten Year Annals*. The first Hittite king of this name was assassinated in a plot conceived by his traitorous cupbearer Hantili.

ANSWER: **Muršili** (“mer-SHILLY”) [accept **Muršili I** or **Muršili II**]

<INB, European History (Commonwealth, Ancient, Historiography)>

3. Van Gogh referred to the streets at the top of this district’s hill as “petit boulevards” painted by himself and Toulouse-Lautrec (“too-looz-low-TREC”), in opposition to the “grand boulevards” of established Impressionists like Degas (“day-GAH”) and Monet (“moh-NAY”). For 10 points each:

[10] Name this Parisian district depicted in Renoir’s (“ray-n’WAR’s”) *Bal du moulin de la Galette* and several cityscapes by Camille Pissarro. This district’s cabarets were advertised through posters like Theophile Steinlen’s *The Black Cat*.

ANSWER: **Montmartre** (“mon-MAR-truh”)

[10] Toulouse-Lautrec’s paintings of Montmartre include his posters for this cabaret, whose culture he critiqued in a painting whose right side includes a starkly greenish-white face. This cabaret was known for its iconic red windmill.

ANSWER: **Moulin Rouge** (“moo-lan ROOZH”)

[10] Montmartre cabarets featured performances of the can-can, which was often called this derogatory French word. An 1890 divisionist painting of this title features four dancers above a bassist facing away from the viewer.

ANSWER: *le **chahut*** (“luh sha-OO”) (the painting is by George Seurat)

<AK, Painting and Sculpture>

4. Identify the following novels that are exhaustively laden with footnotes and endnotes, for 10 points each:

[10] Footnotes, some of which contain further footnotes, and some of which appear struck through and/or in red text, litter this Mark Z. Danielewski novel.

ANSWER: **House of Leaves**

[10] This doorstopper's 388 endnotes appear under the header "Notes and Errata," and range from details about the Enfield Tennis Academy to the complete filmography of James O. Incandenza.

ANSWER: **Infinite Jest**

[10] This novel opens with a description of a cashier girl offering the narrator a straw for his carton of milk, prompting a page-long, digressive footnote chronicling society's transition from paper straws to plastic straws.

ANSWER: **The Mezzanine** (by Nicholson Baker)

<INB, Long Fiction>

5. Initially a follower of James and Jane Wardley, this religious leader was inspired by a vision of a tree with leaves that emitted a torch-like light to found the Niskeyuna community in Watervliet, New York. For 10 points each:

[10] Give this namesake of visions during the so-called "Era of Manifestations" known as this leader's "work." This preacher used the 1780 "Dark Day" to claim to be Christ's second coming and to attack "lusts of generation."

ANSWER: **Mother Ann Lee** [accept either underlined portion]

[10] Lee brought this celibate offshoot of the Quakers to the United States. Due to the celibacy thing, Maine's Sabbathday Lake is home to both remaining members of this religious group, which wrote the hymn "Simple Gifts."

ANSWER: **Shakers** [or the **United Society of Believers** in Christ's Second Appearing]

[10] This preacher, who claimed to have been reborn without a gender in 1776, also used the "Dark Day" to found a sect in New York's "burned-over districts." This abolitionist argued women should "obey God rather than men."

ANSWER: **Public Universal Friend** [or Jemima **Wilkinson**, if one must dead-name the P.U.F.; accept **P.U.F.**; accept simply "The **Friend**"]

<JG, Religion>

6. After a worker from one of these *two* countries stole a vacuum bag-full of jewelry from a palace in the other, the jewels returned by police from the first of them turned out to be mostly counterfeit. For 10 points each:

[10] Name these *two* countries, whose relations were tainted by the insane 1989 Blue Diamond Affair, which escalated when multiple diplomats from one, like Muhammad al-Ruwayli, were coincidentally murdered in the other the next year.

ANSWER: the Kingdom of **Saudi Arabia** AND the Kingdom of **Thailand** (to be clear, a guy from Thailand stole the jewels from a Saudi prince)

[10] Thailand's king at the time of the Blue Diamond Affair was Bhumibol Adulyadej ("POO-mee-pon AH-doon-YAH-det"), who took this regnal name like every other member of the Chakri Dynasty. Bhumibol's ("POO-mee-pon's") son became the tenth king of this name in 2016.

ANSWER: **Rama**

[10] A politician and ex-cellphone magnate of this surname was ousted as Prime Minister of Thailand in 2006 for similar levels of corruption. The current Thai military regime dates from a coup against that politician's sister.

ANSWER: **Shinawatra** (respectively, Thaksin and Yingluck)

<JG, Other History>

7. While working for the military and several private employers, Roxie Collie Laybourne used pioneering forensic methods to help prevent these occurrences. For 10 points each:

[10] Identify this type of occurrence that contributed to the death of NASA astronaut Theodore Freeman. The AEDC Ballistic Range S-3 is an air gun with unusual ammunition that the military uses to simulate this kind of occurrence.

ANSWER: **bird strikes** [accept any reasonable answer that indicates a vehicle **collision** with a **bird**; accept specific types of birds, such as **geese**, in place of "bird"; prompt on **collisions** or **impacts** by asking "With what?"]

[10] In 2009, US Airways Flight 1549 collided with a flock of Canada geese, forcing pilot Chesley Sullenberger to make an emergency landing in this New York river.

ANSWER: **Hudson** River

[10] In one of the earliest bird-plane interactions, Eugene Gilbert encountered an angry eagle while flying in an open-cockpit craft named after this man, who was the first person to cross the English Channel by plane.

ANSWER: Louis **Blériot** (“blay-ree-OH”) [accept **Blériot XI**]

<KS, General Knowledge>

8. This musician began his career playing trumpet on the albums *Blue Train* and *Art Blakey and the Jazz Messengers*, and ended his career thirteen years later by being shot by his wife. For 10 points each:

[10] Name this prolific jazz trumpeter of the soul jazz album *The Sidewinder*.

ANSWER: Lee **Morgan** [or Edward Lee **Morgan**]

[10] Twenty-six of Morgan’s thirty-one studio albums were released under this omnipresent record label, whose name denotes a common feature of jazz melodies.

ANSWER: **Blue Note** Records

[10] This jazz keyboardist took off on his maiden voyage with the Blue Note-released albums *Takin’ Off* and *Maiden Voyage*, but switched to Columbia Records for later albums such as *Head Hunters*.

ANSWER: Herbie **Hancock** [or Herbert Jeffrey **Hancock**]

<KL, Jazz>

9. Answer some questions about representation theory, for 10 points each.

[10] This result in representation theory states that a homomorphism between irreducible representations is either an isomorphism or trivial. As a consequence, the decomposition of a representation into irreducible representations is unique.

ANSWER: **Schur’s** lemma

[10] One object commonly studied in representation theory is the general linear group, which consists of matrices with this property. Matrices with this property have non-zero determinant and full rank.

ANSWER: **invertible**

[10] The two-dimensional general linear group over the field “ $Z \text{ mod } two-Z$ ” is this group, which is also the only non-abelian group of order 6. This is the group of permutations of the string “abc.”

ANSWER: **S3** [accept the **symmetric group** on **three** elements]

<SK, Math>

10. When a woman in this play claims to “hardly ever have sexual intercourse,” her husband sharply responds, “You were born with your legs apart. They’ll send you to the grave in a Y-shaped coffin.” For 10 points each:

[10] Identify this play that ends as its entire cast climbs a rope ladder through a skylight. Throughout much of this play’s second act, Geraldine Barclay and the hotel page Nick Beckett wear each other’s clothes.

ANSWER: ***What the Butler Saw***

[10] During one of his better moments, this ill-tempered character from a different play calls his wife Alison a “beautiful, great-eyed squirrel.” In the play’s first act, this character’s horseplay with Cliff results in Alison burning herself on a clothing iron.

ANSWER: **Jimmy** Porter [prompt on **Porter**]

[10] Alison and Jimmy Porter appear in a John Osborne play partly titled for this emotion. Both Osborne and Joe Orton, the author of *What the Butler Saw*, were members of a group of “Young Men” named for this emotion.

ANSWER: **anger** [accept *Look Back in Anger* or “**Angry** Young Men”]

<INB, Drama>

11. Non-cognitivist meta-ethics tends to find these concepts incoherent since it holds statements seemingly about them to be simply “inapt,” while “error theory” holds any statement pointing to them to be wrong. For 10 points each:

[10] Name these concepts attacked by J. L. Mackie's "argument from queerness" on the basis that if they existed, they would have to be utterly unrecognizably different from any analogous concept. A description is acceptable.

ANSWER: **moral facts** [or "**objective ethical values**"; accept any answer that gives something that both can be called **true**, **real**, **objective**, or just **existing** externally and in a realm related to **ethics**, **morals**, or **values**; accept word forms and any other answer that clearly gets the right point across; prompt on partial answers]

[10] This position denies moral facts because morality is inherently linked to group norms and historical context. This position's much-ballyhooed "cultural" form holds ethics to be bound to equally valid cultural contexts.

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

[10] In works like *Explaining Value*, this relativist argues that "inference to the best explanation" for the existence of differing values suggests that moral facts do not exist and vitiates any need for them. He adorably co-teaches ethics classes at Princeton with his daughter, Elizabeth.

ANSWER: Gilbert **Harman** [do not accept or prompt on "Graham Harman," who is unrelated]

<JG, Philosophy>

12. You've ordered some *E. coli* from Amazon and want to know if it's the real deal. For 10 points each:

[10] First, you use this staining technique, which reveals that the bacteria's thin peptidoglycan ("PEP-tid-oh-GLY-can") walls don't retain the crystal violet dye very well after washing.

ANSWER: **Gram** stain

[10] Next, you discover that the bacteria contains this enzyme, which acts on a substrate produced by the enzyme SOD. This incredibly fast enzyme is also present in *Staphylococcus*, but absent in *Streptococcus*.

ANSWER: **catalase**

[10] You finally determine that your bacteria is indeed *E. coli*, and a potent O157:H7 ("O-157-H-7") serotype at that, by growing it on a sorbitol variant of this agar ("AY-gar"), which turns pink for bacteria that can ferment lactose.

ANSWER: **MacConkey** agar

<INB, Biology>

13. Donald Rayfield translated several of this writer's poems, including one that instructs the title celestial object to "sing a lullaby to the glacier / Strung down from the heavens." For 10 points each:

[10] Identify this author of "To the Moon," one of several poems he wrote under the pseudonym Soselo.

ANSWER: Joseph **Stalin** [or Ioseb Besarionis dze **Jughashvili**]

[10] As a youth, Stalin admired and memorized parts of Shota Rostaveli's *The Knight in the Panther's Skin*, the national epic of this country where Stalin was born.

ANSWER: **Georgia** [or **Sakartvelo**]

[10] In fear of Stalin, this author would write poems line by line, allow a small group of friends to commit them to memory, and then burn the slips of paper. This writer began working on a lengthy poem after a woman whose lips were "blue with cold" asked, "Could one ever describe this?"

ANSWER: Anna **Akhmatova**

<INB, Non-epic Poetry>

14. In his preface to a book, this writer included a prayer that was introduced to him by Andrés Xiloj Peruch ("shee-LOSH peh-ROOTCH"), and which opens by asking the "Heart of Sky, Heart of Earth" to "make my guilt vanish."

For 10 points each:

[10] Identify this scholar who attributed his need to re-translate a text to the "brightening nature" of K'iche' ("kee-CHEH") studies, which allowed him to render the names Xbaquiyalo ("sh'BAH-kee-yah-LO") and Xtah ("sh'TAH") as "Egret Woman" and "Lust Woman," respectively.

ANSWER: Dennis (Ernst) **Tedlock**

[10] Tedlock won the 1986 PEN Translation Prize for his edition of this foundational Mayan text which recounts the narrative of the Hero Twins.

ANSWER: **Popol Vuh** (“wookh”)

[10] In the introduction to his translation of the *Popol Vuh*, Tedlock highlighted a passage about this creature’s “great tree” as an example of the book’s powerful imagery. This demon fathered Zipacna (“see-pac-NAH”) and Cabulkan.

ANSWER: **Seven Macaw** [or **Vucub Caquix** (“woo-KOOB kah-KEESH”)]

<INB, Mythology>

15. Answer some questions about the somewhat lackluster presidency of Warren G. Harding, for 10 points each:

[10] Harding’s administration is probably remembered mainly for this scandal, in which oil tycoons like Edward Doheny and Harry Sinclair bribed the Secretary of the Interior to let them drill in the namesake Wyoming oil field.

ANSWER: **Teapot Dome** scandal

[10] Harding official Charles Forbes embezzled millions of dollars meant for these people, in part with “joy rides” of hospital construction. A force led by Douglas MacArthur cleared Anacostia Flats of a protest by these people.

ANSWER: U.S. military **veterans** [accept more specific answers; prompt on **Bonus Army** with “who, along with their family members, were protesting in the Bonus Army?”]

[10] One Harding bright spot was this act, which funded a system of prenatal and child health clinics in one of the first American welfare programs. It was spearheaded by the first woman to head a federal bureau, Julia Lathrop.

ANSWER: **Sheppard-Towner Act** [or **Promotion of the Welfare and Hygiene of Maternity and Infancy Act**]

<JG, US History>

16. Answer the following about the year 1960 in classical music, for 10 points each:

[10] In 1960, this composer wrote a series of *Compositions* with terse musical content, such as holding the notes B and F-sharp “for a long Time.”

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

[10] In 1960, Dimitri Mitropoulos, a conductor from this country, died after nine years as director of the New York Philharmonic. This country also begat the composers Iannis Xenakis and Vangelis.

ANSWER: **Greece** [or **Hellas**; or **Ellás**; or **Hellenic Republic**; or **Ellinikí Dimokratía**]

[10] In 1960, irreconcilable differences between Luigi Nono and this German composer of *Gesang der Jünglinge* (“guh-ZANG der YOONG-ling-uh”) and *Kontakte* helped to end the avant-garde Darmstadt School of composers.

ANSWER: Karlheinz **Stockhausen**

<KL, Classical Music and Opera>

17. Unlike rotation, the operator corresponding to this property produces discrete transformations. For 10 points each:

[10] Name this property. The operator corresponding to this property transforms an arbitrary wavefunction “psi-of- x ” to “psi-of-negative- x .”

ANSWER: **parity** [or **parity operator**]

[10] When this system is set up from “negative- L -over-two” to “ L -over-two,” it is invariant under transformation by the parity operator. In this system, there is a small area with zero potential surrounded by impassable walls.

ANSWER: **particle in a box** [accept **infinite potential well**; accept **infinite square well**]

[10] The selection rules for an electric dipole are derived from the properties of the parity operator, which restricts delta- l (“delta-ell”) to odd numbers, and this theorem, which forces both delta- l (“delta-ell”) and delta- m to be at most one. This theorem also implies that scalar operators cannot change the angular momentum quantum number.

ANSWER: **Wigner-Eckart** theorem

<JS, Physics>

18. The 1973 oil crisis forced this project to create the pioneering electric Zébulon prototype within a year, and it was part of the “champion national” projects along with the Ariane 1 rocket and the Concorde jet. For 10 points each:

[10] Name this flagship project of Valéry Giscard d'Estaing's ("vah-lay-REE zhee-SCAR day-STAN") administration. Inspired by the *Shinkansen*, this public transportation project created the TVM signaling mechanism and also exports the Acela trains to the US.

ANSWER: **TGV** ("tay-zhay-vay") [or **Trains à Grande Vitesse**; accept **LGV** ("ell-zhay-vay") or **Lignes à Grande Vitesse**; accept just **High-Speed** train/rail system since that's literally what the name means; prompt on just **trains** or **rail** and equivalents]

[10] Valéry Giscard d'Estaing ("vah-lay-REE zhee-SCAR day-STAN") lost power to this socialist president of France in the 1981 election. This president presided over the abolition of the death penalty in France and the bombing of the *Rainbow Warrior*.

ANSWER: François **Mitterrand** [or François Maurice Adrien Marie **Mitterrand**]

[10] Giscard d'Estaing is considered to have presided over the end of this period of post-war economic growth. Jean Fourastié ("foo-RASS-tee-AY") coined this *dirigisme* ("dee-ree-ZHEE-smuh") and Marshall Plan-driven period's name in reference to the July Revolution.

ANSWER: Les **Trentes Glorieuses** ("lay TRAHNT glory-YOOSS") [accept any translation that gives both the number "**thirty**" and a word form of "**glory**"]

<JG, European History (Continental)>

19. The University of Pittsburgh created a quality index for this activity which is often measured with an actigraphy. For 10 points each:

[10] Name this activity initiated by Process S that is controlled in the brain by the ascending reticular activating system and produces K-complexes often followed by its namesake "spindles." It was the focus of the research of Nathaniel Kleitman.

ANSWER: **sleep**

[10] Sleep-wake cycles are regulated through these internal processes that are controlled by the suprachiasmatic ("supra-chiasm-atic") nucleus, which triggers the release of melatonin from the pineal ("PIN-ial") gland in humans.

ANSWER: **circadian rhythms**

[10] This type of sleep refers to sleep that is not entrained to the 24-hour or any other artificial cycle. This type of sleep can be produced in a lab setting by using constant dark protocols, causing sleep trouble for blind sleepers.

ANSWER: **free-running** sleep

<JM, Psychology>

20. This writer rejected Hegel's ("HAY-gull's") dialectic in favor of a cyclical, ocean-inspired "tidalectic," and asserted that "unity is submarine." For 10 points each:

[10] Identify this writer whose lectures were explored as "Sound Space" by Anna Reckin. He coined the term "nation language" as a way to avoid characterizing non-standard English as "dialect."

ANSWER: Kamau **Brathwaite** ("BRATH-wait")

[10] Kamau Brathwaite hails from this country. Mr. Slime takes control of Mr. Creighton's village in the novel *In the Castle of My Skin*, which was written by an author from this country named George Lamming.

ANSWER: **Barbados**

[10] In 1972, Brathwaite co-founded the Caribbean Arts Movement in this city. The Caribbean novelist Sam Selvon made use of "nation language" in his novel about "lonely" immigrants living in this British city.

ANSWER: **London**

<INB, Miscellaneous Lit>