

ACF Nationals 2016

Packet by Berkeley A (Ankit Aggarwal, Aseem Keyal, Bruce Lou, Justin Nghiem)

Tossups

1. This author was accused of serving up a “perennial dish: the tragedy of the Fine Girl and the Impossible Man” in an essay by Elizabeth Hardwick. The title character of this author’s final novel is accidentally shot dead by her illegally-adopted deaf-and-dumb son Jeremy at Victoria Station shortly after Henry Dancey declares his love for her. The Montmorencys and Marda Norton visit the Naylor’s estate Danielstown, based on this author’s family’s namesake “court,” in a novel set during the Irish War of Independence. Robert Kelway kills himself after revealing his status as a Nazi spy to his lover Stella Rodney in a novel by this woman set during the Blitz. The revelation that her adoptive mother Anna has been reading her diary prompts Portia Quayne to run away in a novel by this author of *Eva Trout* and *The Last September*. For 10 points, name this Anglo-Irish author of *The Heat of the Day* and *The Death of the Heart*.

ANSWER: Elizabeth **Bowen** [or Elizabeth Dorothea Cole **Bowen**]

2. One religious tradition of this ethnic group practices the "Great Condolences" ceremony. According to the beliefs of that religion of this ethnic group, there is no afterlife, but souls join the "Master Heaven," or God, upon death. A Taoist shrine built by this non-Chinese ethnic group is called the Three Sages Palace and honors an aspect of the Jade Emperor who descended to Mt. Jiri. Rituals called *gut*, which are partly intended to purify the dead, are practiced by this group’s shamans called *mu*. During the 19th century, the spread of Christianity affecting this ethnic group was referred to as the "Western Learning," which stood in contrast to a neo-Confucianism movement called the "Eastern Learning." A cult of personality with religious elements among this ethnic group is exemplified by the Arirang Festival. For 10 points, name this Asian ethnicity which practices Cheondoism, many of whom live in a state whose ideology is Juche.

ANSWER: **Koreans**

3. One of this man’s paintings includes a depiction of Luxuria, or Vice, with her back to the viewer, arranged in a pose that was borrowed by Caravaggio for the violin-playing angel in a painting created for the Palazzo Doria Pamphilj. This artist painted *The Choice of Hercules* for the *camerino* of a building that also contains a series by this man consisting of an early example of *quadri riportati* depicting scenes from Ovid. Pietro Aldobrandini commissioned a lunette from this man in which a ferryman crosses a river next to the small figures of Joseph and Mary. The *Triumph of Bacchus and Ariadne* is the center panel of this man’s fresco cycle in the Farnese Gallery, *The Loves of the Gods*. For 10 points, name this Italian artist of *Domine, Quo Vadis?* and *Landscape with the Flight into Egypt*, who led the Bolognese school alongside his cousin Ludovico and brother Agostino.

ANSWER: Annibale **Carracci** [do not accept any other Carraccis]

4. During a couple of speeches, this man brandished various bladed weapons like bayonets to argue that switchblades should be made illegal. As chairman of a hearing, he held up a picture by Johnny Craig showing a severed head and bloody axe, and asked William Gaines whether it was in good taste. This man introduced a bill requiring pharmaceutical companies to prove that a drug was effective, together with Arkansas senator Oren Harris, during the thalidomide crisis. He started wearing a coonskin cap after Boss Ed Crump called him a pet coon. He also sponsored a bill that tightened up the Clayton Antitrust Act and ended vertical mergers, along with Emmanuel Celler. Frank Costello was among the mobsters interviewed by this man's Senate committee, which traveled the country to expose organized crime. He was the running mate of Adlai Stevenson in the 1956 presidential election. For 10 points, name this powerful Democratic senator from Tennessee.

ANSWER: Carey "Estes" **Kefauver**

5. At low temperatures, this quantity's temperature dependence equals the product of its value at absolute zero times 1 minus the ratio of the actual and critical temperatures raised to the three halves power. The anisotropy energy of a uniaxial crystal is proportional to the square of the sine of the angle between the crystal's "easy axis" and this quantity. This quantity's time derivative is expressed as the sum of a torque-dependent damping term and a term proportional to this quantity's cross product with the effective field according to the Landau-Lifshitz-Gilbert equation. This quantity's curl equals the bound current density. The B-field equals the permeability of free space times the sum of the H-field and this quantity. For 10 points, name this magnetic analogue of electric polarization density, which gives the magnetic moment of a material per unit volume.

ANSWER: **magnetization** [accept **magnetic polarization** before "polarization" is read; prompt afterwards, do not accept or prompt on "polarization"]

6. A work by this thinker uses the phrase "vocabularies of motive" to ascribe goals like "useful" or "practical" to a person's actions, and describes society as consisting of institutions, institutional orders, and spheres. An appendix by this author lists eight positive qualities of certain people like "playfulness toward phrases, words, and ideas" and finding a bad book just as stimulating as a good book. He coined the name for a movement by writing his "Letter to the New Left" for a British journal of that name. One of his best-known books calls on scholars to reject the "methodological inhibitions" in the "abstracted empiricism" and "Grand Theory" of past thinkers. That work begins with the chapter "The Promise" and ends with "On Intellectual Craftsmanship." For 10 points, name this American sociologist who wrote *The Causes of World War Three* and *The Sociological Imagination*, as well as *The Power Elite*.

ANSWER: Charles Wright **Mills**

7. A response to this poem that reveals how the title character “grew broad and red and stout,” with “native grace” now seeming “out of place,” was written by Bret Harte. A character in this poem imagines “narrow kitchen walls” stretching into “stately halls” and a “weary wheel” turning into a spinnet in a situation where “joy was duty and love was law.” The thought of “sisters, proud and cold” and “mother, vain of her rank and gold” causes a character in this poem to dispel his dreams of being “a harvester of hay,” only for him to later regret “Ah, that I were free again!” This poem describes a “nameless longing” sparked by an encounter with the title character, who “on a summer’s day / raked the meadows sweet with hay.” A judge encounters the title country girl in, for 10 points, what poem that includes the couplet “for all sad words of tongue or pen, / the saddest are these: ‘It might have been!’” and was written by John Greenleaf Whittier?

ANSWER: **Maud Muller**

8. After this man erected a monument at Epidaurus, he made an offering to Asclepius to cure his case of the gout, which was so bad that he put his legs in tubs of hot vinegar to kill the pain. As a general, he was sent to subdue the guerilla warrior Corocotta, whose sister he may have violated. So that he could act in place of the emperor, this man was given a signet ring with a sphinx carved into it. He defeated Papias in battle at Mylae after constructing a secret base near Lake Avernus which he called the Portus Julius. This man invented a heavy ballista dart used to shoot a grappling hook called the *harpax*, which replaced the *corvus*. He won the Battle of Naulochus over the forces of Sextus Pompeius, but is best remembered for crushing a large force of *quinqueremes* in a fight centered on the Gulf of Ambracia in the Ionian Sea. For 10 points, name this commander who won the Battle of Actium, a powerful lieutenant of Augustus.

ANSWER: Marcus Vipsanius **Agrippa**

9. In bacteria, the presence of an enzyme whose substrate is this protein can be detected using TMPD or DMPD. Mutations in that enzyme whose substrate is this protein are the most common cause of Leigh syndrome. In animals, the most common region used for DNA barcoding is the gene coding for an enzyme whose substrate is this protein. It’s not a fibrinopeptide or hemoglobin, but Emanuel Margoliash’s studies on this protein provided supporting evidence for the molecular clock hypothesis. The peroxidation of cardiolipin causes the release of this protein into the cytoplasm, where it reacts with APAF-1 to activate caspases 9 and 3 during apoptosis. In the Q cycle, oxidation of coenzyme Q facilitates the reduction of this heme-containing protein. For 10 points, name this protein which shuttles electrons between complexes III and IV of the electron transport chain.

ANSWER: **cytochrome c** [do not accept or prompt on “cytochrome”]

10. A player of this instrument named Ksenia Erdely heavily edited Reinhold Gliere's E major concerto for it. Another E major concerto for this instrument, whose final movement sets Ludwig Höltz's poem "Ihr Freunde hänget," was composed by Paul Hindemith. Solo pieces for this instrument such as *Air à danser* and the etude *Au matin* were written by the 20th-century virtuoso Marcel Tournier. One of Mozart's few double concerti is a C major concerto for flute and this instrument. A 1953 sonata for this instrument dedicated to Nicanor Zabaleta was composed by Germaine Tailleferre. This instrument plays twelve straight Ds to represent a clock striking midnight at the beginning of Saint-Saens's *Danse Macabre*, and it plays a famous cadenza just before the beginning of the "Waltz of the Flowers" in Tchaikovsky's *Nutcracker*. For 10 points, name this instrument whose concert variety has seven pedals and 47 strings.

ANSWER: pedal harp

11. These compounds can be synthesized from benzoquinone in the Nenitzescu synthesis. A methyl group ortho to a nitro group is deprotonated in the first steps of the Leimgreuber-Batcho and Reissert syntheses of these compounds. A ketone, an imidazole, and this functional group is found in the anti-nausea drug ondansetron. A classic reaction used to synthesize these compounds was modified to use a palladium-catalyzed cross coupling between an aryl bromide and a hydrazone by Stephen Buchwald. That synthesis of these compounds contains a [3,3]-sigmatropic rearrangement where a compound with two imines is formed from an aryl hydrazine. The Fischer synthesis is used to make this functional group, which is part of the most commonly occurring auxin and the side chain of tryptophan. For 10 points, name this heterocyclic functional group consisting of a benzene ring fused to a pyrrole.

ANSWER: indoles

12. A now-regularly-performed section of this ballet used music taken from the score of *La rose, la Violette et le Papillon*. In the beginning of the third act of this ballet, one character throws his handkerchief to a young girl, but it is then passed around until it reaches an old woman. A character in this ballet enlists Lankendem in a plan that involves a sleeping potion-drenched rose. In addition to the aforementioned *Pas d'esclave*, this ballet includes a dream sequence featuring a *grand ballabile* danced by a crowd of women called *Le jardin animé*, as well as a chaotic scene in which the traitorous Birbantio is shot while chasing Gulnare. This ballet opens with Seyd Pasha purchasing women in a slave market, and its second act is set in a grotto where Medora and the protagonist Conrad dance a famous *pas de deux*. For 10 points, name this Byron-inspired ballet by Adolphe Adam, which was revived by Marius Petipa, and is about a seafaring rogue.

ANSWER: *Le* Corsaire [or *The* Corsair; or *The* Pirate]

13. This book's twelfth chapter discusses how John Locke's "Law of Opinion" was also called the "Law of Private Censure" and how Pierre Bayle formed a "philosophical law." This book quotes Kant's *What is Enlightenment?* to argue that liberating individuals from their state of "tutelage" is inherently a social activity. This work, its author's habilitation thesis, argues that leisure in the title entity arose with "bourgeois self-interpretation," leading to a neo-mercantilism and "refeudalization" of society. It argues that capitalism caused the shift from an "English king" who presented himself "as the embodiment of a Higher law," to "rational-critical debate" in locations such as coffeehouses and salons. *The Theory of Communicative Action* updated, for 10 points, what 1962 Jürgen Habermas book about the evolution of Western discourse?

ANSWER: *The **Structural Transformation of the Public Sphere**: An Inquiry into a Category of Bourgeois Society* [or **Strukturwandel der Öffentlichkeit**. *Untersuchungen zu einer Kategorie der bürgerlichen Gesellschaft*]

14. In the preface to this novel, the author states that it is a "portrait of our generation's vices in full bloom." The main character of this novel sees a pig sliced in two with a sabre while walking home after he just lost twenty gold pieces in a bet about the nature of predestination to a lieutenant. Its protagonist stays at a home run by a blind boy and an old woman, and is nearly drowned after he deduces that a young woman and Yanko are conducting a smuggling operation in Taman. In this book, Vulich is killed by a drunk only thirty minutes after he aims a loaded gun at himself and survives when it misfires. The protagonist of this book is spotted at Princess Mary's window while escaping from an illicit visit to Vera, prompting a cliffside duel in which Grushnitsky is killed. For 10 points, name this book about the Grigory Pechorin, written by Mikhail Lermontov.

ANSWER: A **Hero of Our Time** [or **Geroy nashego vremeni**]

15. An ultimatum issued after this event demanded that Lee Atwood either resign or fire his employee Harrison Storms. A humorous image taken before this event shows three men praying around a table with the inscription "it isn't that we don't trust you, Joe, but this time we've decided to go over your head." That picture refers to Joseph Francis Shea, who suffered a nervous breakdown due to this event. Due to a dislocated shoulder, Donn Eisele was not present during this incident, which may have been caused by "34 square feet of Velcro." This event led to hearings where Walter Mondale released the "Phillips Report" and called for federal funding to be cut off. This event caused the death of Roger Chaffee, Edward Higgins White, and Gus Grissom after a routine systems test at Cape Canaveral. For 10 points, name this fiery disaster that nearly derailed a NASA effort to achieve a manned lunar landing.

ANSWER: **Apollo 1** fire [prompt on just **Apollo**, accept any synonym for "disaster" in place of "fire"]

16. Descriptive answer acceptable. At the conclusion of this conflict, the winning commander ordered Liu Bingzhong to build a new capital at Yanjing. In order to garner support from the local populace, the winner in this conflict styled himself as Zhongtong, or the “moderate ruler,” and promised to reduce taxes. After losing a battle at Shimultai, the losing side was betrayed by their ally Alghu, who slaughtered the tax collectors sent to his camp. Subsequent to this conflict, the winner was bogged down in a decades-long war with his nephew Kaidu. At the outset of this conflict, the two sides declared rival *kurultais* in Kaiping and Karakorum. The western khanates were prevented from interfering in it by the war between Berke and Hulagu. This 1260 to 1264 war was precipitated by the sudden death of Möngke Khan without heirs. For 10 points, name this civil war between the first Yuan Emperor and his youngest brother, a conflict often named for their father.

ANSWER: the **Toluid** Civil War [accept any mention of conflict between **Kublai Khan** and **Ariq Böke**; or the sons of **Tolui**, accept Yuan **Shizu** in place of “Kublai Khan”]

17. A beggar from this place is made rich by a clever performing monkey in the story “The Mute Companion.” A storyteller from this place decides that he has no more stories to tell, so his last story will be that of “silence.” A character from this place enrolls in a creative writing program in Michigan and gets married to Grace. That character, Mali, asks his dad, a resident of this place, to invest in a factory that makes machines for writing stories. Novels set here include one in which a man from Timbuctoo hoodwinks its “man-eater,” called the Talkative Man, as well as one in which the title “Financial Expert” dispenses advice while underneath a banyan tree.

Founded by Frederick Lawley, this place's inhabitants include Raman, a painter of signs, as well as Mani and Rajam, who often play with Swami. For 10 points, name this fictional town created by R. K. Narayan.

ANSWER: **Malgudi** [prompt on India]

18. In November 2014, FreeBSD started supporting a “lightweight” variant of this system that allows for partial checksums. STUN uses this standard to determine if a device is behind a NAT (“N-A-T”) and is often used to find values reserved for it. So-called “keep-alive” data must be sent out every couple of seconds to maintain a connection in the “hole-punching” technique named for this standard. Only four fields—source, destination, length, and a 16-bit checksum—constitute the eight-byte header for this standard, differentiating it from the twenty-byte header of a similar standard. This system avoids head of line blocking since it does not guarantee order delivery; it also does not guarantee error recovery, nor does it not establish a three-way handshake, unlike another transport layer standard. For 10 points, name this protocol that is often used for streaming multimedia and DNS queries, since it is faster but less reliable than TCP.

ANSWER: **UDP** [or **User Datagram** Protocol]

19. Some of this group's religious rituals were described by George Waddington, including a "Great Oath" sworn by its members while holding a lit candle in a "safe house," and the use of so-called "shepherds" to relay orders. Formed as an extension of the Lodge of Lefkada, this group initially claimed to be run by a mystical foreign leader dubbed the "Invisible Authority," though that was replaced with a body called the "Authority of the Twelve Apostles." A female member of this group, Laskarina Bouboulina, captured the fortress of Monemvasia after building her own flagship. This group used a phoenix as its symbol, alluding to the earlier Phoenix Lodge. Founded by three Freemasons in Odessa, this group invited John Capodistrias, the foreign secretary of Alexander I, to be its leader, though he declined. This group's leader established a military unit called the Sacred Band. For 10 points, name this secret organization led by Alexander Ypsilantis to advocate for Greek independence.

ANSWER: Friendly Society [or Society of Friends; or Filiki Eteria; or Philiki Etaireia; do not accept Quakers]

20. During the Roman festival dedicated to this goddess, the female household heads walked barefoot in a procession to her temple. This goddess was worshipped under the name Prutanitis at the *thamos* in a Greek town's *prytaneium*. She was considered both the eldest and the youngest of her siblings because she was the first of her siblings to be swallowed by Cronus and the last to be regurgitated. In Ovid's *Fasti*, this goddess is woken up by the braying of a donkey, saving her from being raped by Priapus. Roman priestesses dedicated to this goddess prevented a sacred fire from going out. After rebuffing the advances of Apollo and Poseidon, this goddess asked Zeus to make her a virgin eternally, which resulted in her overseeing the production of bread and domestic life. For 10 points, name the Greco-Roman goddess of the hearth who was served in Rome by namesake virgins.

ANSWER: Hestia [or Vesta]

Tiebreaker: Two answers required. A 12-day prison takeover in one of these countries began when inmates from the other country revolted, and was resolved by the negotiation of Weldon Kennedy. A mass exodus of citizens from one of these countries to the other began when a bus was intentionally crashed through a Peruvian embassy. One of these nations formed the secret army Operation 40 using exiles from the other nation. After one of these nations shot down two planes belonging to the group Brothers to the Rescue, the other retaliated with the Helms-Burton Act. In a Pulitzer Prize-winning photo, an agent from one of these countries points a submachine gun at a screaming child hiding in a closet. An ambassador to the UN from one of these nations demanded an answer from Valerian Zorin regarding existence of nuclear missiles in the other nation. One of these nations declared an embargo against the other after dictator Fulgencio Batista was overthrown. For 10 points, name these two countries, whose leaders Barack Obama and Raul Castro have recently worked to improve relations.

ANSWER: United States and Cuba [accept United States of America and Cuba]

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Bonuses

1. A myth about the founding of this civilization involves the four Ayar brothers, one of whom marries Mama Ocllo and fathers Sinchi Roca after getting rid of the other three. For 10 points each:

[10] Identify this culture, which had several different variations on the story of how Manco Capac founded the city of Cuzco.

ANSWER: Incan Empire [or Incas; or Tawantinsuyu]

[10] This god, known as the “Creator of the Earth,” was so influential among the Incas that the Inca had to syncretize him with Viracocha in order to fully incorporate them into the empire.

ANSWER: Pacha Kamaq [or Pacharuraq]

[10] This Incan god caused rain by sending a thunderbolt into a jug that his sister filled with the Milky Way. Drought-stricken Incans tied up black dogs to propitiate this god.

ANSWER: Ilyap'a [or Illapu; or Apu Illapa]

2. This disease’s namesake bodies are actually follicles with their growth arrested at the antral stage. For 10 points each:

[10] Name this disease which can cause acne, hirsutism, and weight gain in women due to increased production of androgens.

ANSWER: polycystic ovary syndrome or PCOS [accept Stein-Leventhal syndrome or hyperandrogenic anovulation or HA]

[10] The White classification delineates various subtypes of this disease, whose risk factors include macrosomia and PCOS. It can lead to pre-eclampsia if medication such as metformin is not taken.

ANSWER: gestational diabetes mellitus [or GDM, prompt on “diabetes mellitus”; do NOT accept or prompt on answers containing “insipidus” or “type 1” or “type 2”]

[10] Gestational diabetes, like Type 1 and Type 2 diabetes, results in high blood glucose levels due to either a lack of production of, or improper response to, this peptide hormone. It is produced by the beta cells of the pancreas.

ANSWER: insulin

3. Practices referred to as “survivals” were discussed by Edward Tylor in a text describing “culture” with this term. For 10 points each:

[10] Identify this adjective used by Franz Boas to describe men who are the precursor to the modern form of every race, in a work titled for the “mind” of these men.

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

[10] This anthropologist suggested the substitution of the term “not-literate” for “primitive,” to avoid the connotations of the latter. He founded the African Studies Association and wrote about African-descended cultural practices in *The Myth of the Negro Past*.

ANSWER: Melville Jean **Herskovits**

[10] This New Zealand-born ethnologist described a virginity cult in his “Sociological Study of Kinship in Primitive Polynesia,” entitled *We the Tikopia*. This founder of “economic anthropology” and member of the London School of Economics wrote the 1938 book *Human Types*.

ANSWER: Sir Raymond **Firth** [Raymond William **Firth**]

4. Name some people on whom the title of *Amir al-Mu'minin*, or “Commander of the Faithful,” was bestowed. For 10 points each:

[10] This man is considered by Sunnis to be the first person to gain that title. This second Rashidun caliph, the successor of Abu Bakr, made the boneheaded decision to dismiss undefeated military commander Khalid ibn al-Walid.

ANSWER: **Umar** [or **Omar**]

[10] This position, filled by members of the Alawite dynasty since 1666, is constitutionally granted the title of *Amir al-Mu'minin*. The first man to hold this position was Mulai al-Rashid, followed by the “warrior” Ismail ibn Sharif.

ANSWER: **King** of **Morocco** [or **Sultan** of **Morocco**; or **Emperor** of **Morocco**; or reasonable equivalents, prompt on **leader of Morocco** or other similar vague answers]

[10] Rulers of the Sokoto Caliphate held the title of *Amir al-Mu'minin*, because this founder of the Sokoto took that title before declaring a jihad against the Hausa kingdoms.

ANSWER: Usman **dan Fodio** [or Shaihu Uthman **dan Fodio**; or Shaikh Usman **dan Fodio**, or Usman **bii Foduye**]

5. In the introduction to this poem, “The Design,” the poet labels this poem “as a general Map” of the title entity, having considered it first “in the abstract, his nature and his state.” For 10 points each:

[10] Name this poem whose speaker mocks its title subject with the lines “go, teach Eternal Wisdom how to rule— / Then drop into thyself, and be a fool!”

ANSWER: “An **Essay on Man**”

[10] “An Essay on Man” was written by this English poet, who coined the maxim “to err is human, to forgive divine” in his poem “An Essay on Criticism.”

ANSWER: Alexander **Pope**

[10] In “An Essay on Criticism,” Pope warns that “a little learning is a dangerous thing,” enjoining the reader to “drink deep, or taste not” this mythical source of knowledge.

ANSWER: the **Pierian Spring** [prompt on **spring**]

6. After the San Francisco earthquake, Frank Bartleman published an article connecting the disaster with the End Times, causing many people to flock to the namesake location of this event. For 10 points each:

[10] Name this 1906 event in which services were held thrice daily by William Seymour, an African-American minister. It began at Bonnie Brae before moving to its namesake location.

ANSWER: **Azusa Street Revival**

[10] The Azusa Street Revival galvanized this movement of charismatic Christians, some of whom were so inspired that they traveled abroad immediately to use their “spiritual gifts.” It’s named for the Greek word for Shavuot.

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

[10] This 19th century movement, a revival of John Wesley’s Methodism, emphasizes “entire sanctification”—the idea that a born-again Christian could make his or her heart free from Original Sin. Phoebe Palmer is considered a founder of this movement.

ANSWER: **Holiness** Movement [Do not accept or prompt on word forms of "holiness"]

7. The specific heat at constant pressure multiplied by the negative of this quantity gives its “isothermal” form, which changes sign at the inversion temperature. For 10 points each:

[10] Name this quantity, symbolized μ , that is defined as the derivative of temperature with respect to pressure with constant enthalpy.

ANSWER: **Joule-Thomson coefficient** [or isothermal **Joule-Thomson coefficient**]

[10] Most gases at room temperature cool when undergoing this process, due to the Joule-Thomson effect. The first two steps of the Carnot cycle are isothermal and isentropic examples of this process, in which the volume of a gas increases.

ANSWER: **expansion** [or word forms, such as **expanding**]

[10] For PV diagrams showing the liquefaction of gases, the peak of this shape defines the critical point. All isotherms that go through this region on the diagram are flatly horizontal.

ANSWER: **vapor dome** [or **liquid-vapor dome**; or **saturation dome**]

8. It was published by the printer Aldus Manutius with 172 woodcuts made by an unknown artist. For 10 points each:

[10] Name this book by Francesco Colonna, which contains many sexually mesmerizing passages of buildings. Its title character travels to the Palace of the Queen of Freedom, where he has a conversation about the nature of love.

ANSWER: **Hypnerotomachia Poliphili** [or *Poliphilo's Strife of Love in a Dream*; or *The Dream of Poliphilus*]

[10] Francesco Colonna wrote the novel in a form of Italian that was mixed with this other language, which was also used to write a novel in which Niels Klim travels to the center of the Earth and meets talking violins. It was also used by the Goliardic poets and Thomas of Celano.

ANSWER: Medieval **Latin**

[10] Thomas of Celano is the author of this Medieval Latin poem, whose English translation begins: “The Day of Wrath, that day / will dissolve the world in ashes.” It is often used in requiems.

ANSWER: **"Dies Irae"** [prompt on **"Day of Wrath"**]

9. Marcel Breuer was a proponent of the “soft” variant of this movement, examples of which litter the University of Minnesota campus thanks to former architecture dean Ralph Rapson. For 10 points each:

[10] Name this unpleasant mid-20th century architectural style whose name derives from a French term for the “raw concrete” used in its buildings.

ANSWER: **brutalism** [or **brutalist** architecture]

[10] This Hungarian-born brutalist designed London’s Balfour and Trellick Towers, both of which feature a service tower containing elevators and laundry rooms connected to the main building by skyways every third floor.

ANSWER: Erno **Goldfinger** [accept names in either order]

[10] This architect’s firm designed Boston’s brutalist Christian Science Center, which remains popular, unlike most other brutalist buildings. He designed the glass pyramid at the Louvre and the Rock and Roll Hall of Fame.

ANSWER: I. M. **Pei** [or Ieoh Ming **Pei**]

10. Answer the following about codebreaking during World War II, for 10 points each.

[10] The Ultra project was an effort to break this notoriously difficult-to-crack code. Working at Bletchley Park, Alan Turing invented a machine called the Bombe that was able to decipher messages in this code.

ANSWER: **Enigma** [accept **Enigma** machines]

[10] The less-sophisticated Japanese counterpart to Enigma, Purple, was easily decrypted by this American-led effort. This project had immediate benefits, such as intercepting and shooting down Admiral Isoroku Yamamoto’s plane.

ANSWER: **Magic**

[10] Try as they might, the Japanese never cracked the Navajo language of the code-talkers. The idea of using the Navajo as code-talkers was proposed by this man, who learned Navajo as the son of a missionary.

ANSWER: Philip **Johnston**

11. This system takes many of its fundamental strictures from *The Canon of Medicine* by Avicenna. For 10 points each:

[10] Name this ancient Greece-descended Perso-Arabic traditional medicine that, like medieval European medicine, believes in the presence of four humors within the body. It is widespread in India and Pakistan.

ANSWER: **unani tibb** [or **yunani**]

[10] This Indian traditional medicine believes that the five elements of space, air, fire, water, and earth holistically combine into three *doshas*, or vital energies.

ANSWER: **Ayurveda** medicine

[10] Mircea Eliade wrote a study titled for this widespread form of medicine in Africa and Asia. It relies on spiritually-endowed individuals by this name, who enter altered states of consciousness and appeal to spirits for intervention.

ANSWER: **shamanism**

12. A character in this play dances mock-seductively and entreats another character “Let’s do the nasty. Rub bellies,” but becomes angry when he won’t join her. For 10 points each:

[10] Name this play set entirely on a subway car which ends shortly after one main character, a white woman, stabs the other, a black man, in the heart.

ANSWER: **Dutchman**

[10] This author of *Dutchman* lost his position as Poet Laureate of New Jersey after publishing the controversial poem “Somebody Blew Up America?” in the wake of the 9/11 attacks. He changed his name from LeRoi Jones in 1967.

ANSWER: Amiri **Baraka** [or Imamu Amear **Baraka**; prompt on "(Everett) LeRoi Jones"]

[10] This Baraka poem contains an onomatopoeic representation of an airplane flying and firing a gun. It begins “Poems are bullshit unless they are teeth or trees or lemons piled on a step” and asserts “we want ‘poems that kill.’”

ANSWER: “**Black Art**”

13. At the left side of this painting, a solemn king draped in heavy white robes is shown on his throne to the right of a blue column as a female in the foreground tilts her head down and extends her arm towards the central object. For 10 points each:

[10] Name this Gustave Moreau painting that includes a floating severed head surrounded by a radiant gold disk above a pool of blood.

ANSWER: *The* **Apparition** [or *L'Apparition* or *Dance of Salomé*]

[10] Moreau and Odilon Redon were the leading lights of of this artistic movement, a reaction against realism that sought to depict the mysterious and mystical aspects of life. Its manifesto was written by Jean Moreas.

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

[10] This Symbolist depicted the sorrow of the of the title widower as he stands facing away from his children on a boat in *The Poor Fisherman*. He also painted several pale nude Muses conversing near a lake in *The Sacred Grove*.

ANSWER: Pierre **Puvis** de Chavannes

14. This weapon burst when it was fired for the future James II of England’s birthday, leading to suspicions of sabotage. For 10 points each:

[10] Name this massive cannon built by Philip the Good, the Duke of Burgundy, for the Scottish king in 1449. It bombarded Threave Castle and served as a ship gun aboard the carrack *Great Michael*.

ANSWER: **Mons Meg**

[10] The *Great Michael* was commissioned by James IV of Scotland, who declared war on England during the War of the League of Cambrai. In so doing, James was honoring this agreement dating back to 1295, which was a pact of mutual defense between Scotland and France.

ANSWER: the **Auld Alliance** [or the **Old Alliance**, or the **Vieille Alliance**]

[10] The original Auld Alliance in 1295 was an agreement between John Balliol and Philip the Fair to oppose this English monarch, known as Longshanks.

ANSWER: **Edward I** of England [prompt on Edward or Hammer of the Scots]

15. For a homonuclear diatomic molecule, setting the two Coulomb integrals of these equations equal to each other allows one to find the upper and lower energy levels. For 10 points each:

[10] Name this set of two equations that each consist of an expression containing the Coulomb, resonance, and overlap integrals along with two coefficients and the total energy set to zero.

ANSWER: **secular** equations

[10] The secular equations are derived using this principle, which varies the coefficients of a trial wavefunction to minimize the ground-state energy.

ANSWER: **variational** principle [or **variation** principle]

[10] The upper and lower energy levels given by a solution of the secular equations correspond to the energies of the bonding and antibonding types of these things, which can be computed through a linear combination of their atomic counterparts.

ANSWER: **molecular orbitals** [or **MOs**]

16. This philosopher's attitude toward *akatalêpsia*, the idea that nothing can be known, has led some scholars to suggest that he did not preserve his writings since all knowledge is impossible. For 10 points each:

[10] Name this founder of Academic skepticism and teacher of Carneades. One of this author's surviving fragments attacks Zeno of Citium's causal theory of perception.

ANSWER: **Arcesilaus**

[10] Arcesilaus was the sixth scholarch of this institution and inaugurated its "Middle" phase. This institution was founded by Plato.

ANSWER: **Academy** [or **Academeia**]

[10] Arcesilaus pointed to a passage in this Platonic dialogue to illustrate his belief that philosophers could only help people with knowledge, akin to a midwife helping a delivery. In this dialogue, Socrates compares the mind to an aviary.

ANSWER: **Thaetetus**

17. In an essay pairing this concept with "heroic romance," Lloyd Alexander coined this term to refer to a certain type of fiction that is often set in a "secondary world." For 10 points each:

[10] Give this two-word term often used to describe a subgenre of fiction which depicts "enchantments," as opposed to horrific or humorous qualities.

ANSWER: **high fantasy** [prompt on partial answer]

[10] This author's essay "On Fairy-Stories" states that the language of a hero in a high fantasy "is often elevated" and that he is the moral center of a text in opposition to evil. His own high fantasy is set in places like Mirkwood and Mordor.

ANSWER: J.R.R. **Tolkien** [or John Ronald Reuel **Tolkien**]

[10] In "On Fairy-Stories" Tolkien introduced this term to describe the sudden reversal of fortune for the protagonist to ensure that a happy ending is guaranteed after all hope seems lost. It is similar to a *deus ex machina*.

ANSWER: **eucatastrophe**

18. Outside of the corotation radius of these structures, all closed orbits are perpendicular to them. For 10 points each:

[10] Name these galactic bulges, which may function as stellar nurseries since galaxies with them seem to have a higher star count. They give their name to a type of spiral galaxy.

ANSWER: bars of spiral galaxies [or barred spiral galaxies]

[10] Visual evidence that the Milky Way has a spiral bar was provided by the Diffuse Infrared Background Experiment survey on this probe. Its other experiments mapped the anisotropies of the CMBR.

ANSWER: COBE [or Cosmic Background Explorer; or Explorer 66]

[10] A proposed mechanism for the formation of spiral galaxy bars is this plasma instability, in which a galaxy bends and buckles as it is made less elongated. It is often paired with the mirror instability.

ANSWER: firehose instability [or hose-pipe instability]

19. This piece's first, second, fourth, and fifth movements are in G minor, bracketing the third movement in E-flat major and common time. For 10 points each:

[10] Name this piece whose sixth movement is a G major *Pastorale ad libitum* in 12/8 time. It is the eighth in a set of twelve pieces making up its composer's opus 6.

ANSWER: Christmas Concerto [accept Concerto grosso in G minor, Op. 6, No. 8 and prompt on partial answers]

[10] The *Christmas Concerto* was written by this Baroque Italian composer, whose trio sonatas inspired François Couperin to subtitle his own grand trio sonata *Parnassus* after this man's "Apotheosis."

ANSWER: Arcangelo Corelli

[10] The final movement of Corelli's Opus 6 *Concerto Grosso No. 4* is one of these dances, usually in 3/8 time, as is the second movement of his ninth Violin Sonata in his Opus 5.

Pachelbel's Canon was originally paired with one.

ANSWER: gigues [or giga]

20. This man's most notable act may have been motivated by a feud with fellow Kansas senator Samuel Pomeroy. For 10 points each:

[10] Name this senator who broke Republican party ranks to cast the crucial "no" vote in the impeachment trial of Andrew Johnson, leading to Johnson's acquittal by a single vote.

ANSWER: Edmund Gibson Ross

[10] After Ross's vote, this Radical Republican from Pennsylvania angrily shouted "The country is going to the devil!" while being carried out from the Senate chamber.

ANSWER: Thaddeus Stevens

[10] Others believe that Ross's vote was a favor to his buddy Thomas Ewing Jr., who is remembered for issuing General Order Number 11 four days after this event occurred, forcing residents of four counties to evacuate.

ANSWER: Lawrence Massacre [or William Quantrill's raid on Lawrence – accept either mention of Lawrence or Quantrill]