

Pre-ICT and Nationals Open/Minnesota Open 2019 (PIANO/MO): “What about bad subject matter? Or a bad title drop, even? That could kill a tournament pretty good.”

Written and edited by Jacob Reed, Adam Silverman, Sam Bailey, Michael Borecki, Stephen Eltinge, Adam S. Fine, Jason Golfinos, Matt Jackson, Wonyoung Jang, Michael Kearney, Moses Kitakule, Shan Kothari, Chloe Levine, John Marvin, and Derek So, with Joey Goldman and Will Holub-Moorman.

Packet 12 Tossups

1. **Recent devices made for this procedure include the VolTRAX and the Flongle. PhiX [phi-x] is an internal calibration standard in this procedure, the efficiency of which is measured by the percentage of Q-scores above 30. Data collected by this technique are analyzed by software like Bowtie, CuffLinks, and TopHat. Today, the predominant method for this procedure amplifies bridge helices on a flow cell to form clusters. A method that measures the voltage when the substrate is threaded through a hemolysin [hee-moh-LYE-sin] (*) pore, as in a MinION [MIN-eye-on], is a new high-coverage variant of this technique pioneered by a spinoff from the University of Oxford. Library prep adds Illumina adapters in the most common form of the short-read, next-generation paradigm for this technique. Its “Sanger” variety uses fluorescently labelled d·d·N·T·Ps. For 10 points, name this method of determining the order of bases in a nucleic acid.**

ANSWER: next-generation DNA sequencing [or NGS; or next-gen sequencing; or word forms; or high-throughput sequencing; or HTS; or RNA-seq; or RNA sequencing; or nanopore sequencing; or Illumina sequencing] <AS>

2. **In *Religious Experience*, Wayne Proudfoot used *this* religion’s primary scripture to argue that negative theology is essentially about forbidding certain kinds of speech and knowledge. Contemporary rural practice of this religion centers around the “Thunder Ritual,” one activity of which involves flying kites with spells written on them. The Ge [guh] family wrote the texts of this religion’s Numinous Gem school. This religion’s canon includes texts called (*) “grottoes.” This tradition’s “religious” form developed in the 3rd century under the influence of alchemy. This religion emphasizes the virtues of compassion, frugality, and humility, called the “Three Treasures.” It centers on a principle of “naturalness” called *zìrán* [zuh-ran] and a concept of intentionless action called *wúwéi*. For 10 points, name this Chinese religion inspired by Lǎozǐ’s writings about its namesake “Way.”**

ANSWER: Religious Daoism [accept Taoism; or Dàojiào] <JM>

3. **A student of this philosopher built upon Theodor Lipps’ idea of reflexive sympathy to describe the reciprocal and paired nature of reiterated empathy. This teacher of Edith Stein analyzed the statement “there flies a blackbird,” in a book whose prolegomena argues that, because it’s absurd to think that 2+2 would not equal 4 in a universe without humans, a psychologistic account of logic was incomplete. In another work, this philosopher argued that the present moment is constituted by the (*) “running-off” of the just-past, in tension with anticipation; that work is titled for *Internal Time Consciousness*. This thinker developed a method of withholding judgment on the contents of experience in order to analyze the experience in itself, called “bracketing.” For 10 points, name this author of *Logical Investigations*, the founder of phenomenology.**

ANSWER: Edmund (Gustav Albrecht) Husserl <JM>

4. Christian Gutleben has argued that this character became the “first true outcast” of “nostalgic postmodernism” through declarations such as “I have set myself beyond the pale.” This character gets a job after a passionate reading of Psalm 119, but is nearly fired for sleeping in Ware Commons. In one appearance, this character is found in a Chelsea apartment working as an assistant to Dante Gabriel Rossetti. After this character intervenes on behalf of the maid Millie, she is spied on by Mrs. Fairley, who then tells Mrs. (*) Poulteney that she spends much of her free time at The Cobb, staring out into the sea. The Hackney servant Sam Farrow aspires to open a haberdashery in the novel titled for this character, whose tryst with Varguennes is recounted by Ernestina Freeman. Charles Smithson, in one of three different endings, proposes to—for 10 points—what disgraced woman who titles a John Fowles novel?

ANSWER: Sarah (Emily) Woodruff [accept either underlined portion; accept *The French Lieutenant's Woman*; prompt on Tragedy or the French Lieutenant's Whore] <WJ>

5. After failing to induce the Senate to condemn Caesar, a consul of *this* name supposedly thrust a sword into Pompey's hand and ordered that he oppose him. In a biography paired with that of Pelopidas, Plutarch credits another man of this name with bringing Greek art styles to Rome. For defeating the Gallic chieftain Virodamarus in single combat, a man of this name earned the third and final *spolia opima*; that man of this name was called the (*) “Sword of Rome,” with Fabius Maximus as the “Shield.” Agrippa reportedly left Rome after a man of this name was made the imperial heir. A man of this name unsuccessfully instructed soldiers that Archimedes not be killed during his siege of Syracuse. A theater on the Campus Martius is named after—for 10 points—what man who was Augustus' presumptive heir until his untimely death in 23 B.C.?

ANSWER: Marcellus [accept Marcus Claudius Marcellus or Gaius Claudius Marcellus] <MK>

6. An early portrait by this artist shows an art dealer leaning over a coin-laden table and looking away while cradling a small statue of Venus. In another early portrait by this painter, the sitter's right hand points down and to the right, while his gloved left hand holds another glove. This painter may have used himself as the model for a painting in which a bearded young man looks sidelong at the viewer and rests his right elbow on a parapet while wearing a huge (*) blue sleeve. In an early portrait, this painter depicted Pope Alexander VI at the throne of Saint Peter presenting Jacopo Pesaro, who later commissioned a *Madonna* from this artist. This artist abandoned his earlier idealizing style for his portrait of a weary-looking Paul III. For 10 points, name this Venetian painter of a massive *Equestrian Portrait of Charles V*, who also painted *Venus of Urbino*.

ANSWER: Titian [or Tiziano Vecellio] <JR>

7. A 1999 paper by Nakamura *et al.* proposed using the charge stored on these devices to define the basis states of a macroscopic qubit. Kappa vortices that contribute phase in fractions of pi can only exist on the outer surfaces of these objects longer than the persistence length. In analogy to a damped pendulum, the potential of these devices decreases by the sum of a linear and a cosine term in their order parameter, the phase. SFQ logic relies on these components as switches rather than transistors. Thousands of these devices in (*) series are used to determine the NIST standard volt since the potential across them is in integer ratios of the frequency times the flux quantum, h over $2e$. Two of these devices are placed in parallel to detect sensitive magnetic fields in a SQUID. For 10 points, Cooper pairs tunnel through what thin junctions between superconductors?

ANSWER: Josephson junctions [accept Josephson effect; prompt on JJ] <AS>

8. This country's king came to watch his soldiers set off an explosion so big that several of them died from lack of oxygen. A 2014 article in *National Geographic* includes pictures of an "ice city" built in this country, and shows how war relics in this country are being thawed into the open by climate change. The Road of 52 Tunnels was built for army mules in this country, where 270 soldiers were killed by the White Friday avalanche. Prior to the Kargil War, the battle fought at the (*) highest altitude was in this country. A front called the White War was fought in this country, whose forces in the second half of World War I were led by Armando Diaz. This country won the Second Battle of the Piave [PYAH-vay] River, but lost the Battle of Caporetto. For 10 points, name this country whose *Alpini* fought *Kaiserschützen* [KYE-zuh-shew-tzun] from Austria-Hungary in a mountain campaign ended by the Battle of Vittorio Veneto.

ANSWER: Italy [or Kingdom of Italy] <DS>

9. An essay about this author claims that the title figure "borrow[s] his authority from death," and discusses the fairy-tale like aspects of this author's "The Voice of Nature." Along with Kafka, this is the only author of short fiction who's the subject of an essay in *Illuminations*. This author's style of conveying lived experience in a traditional, practically-oriented fashion is contrasted with the rise of "information" and "news" in Walter Benjamin's essay "The Storyteller." In one of his stories, the main character poisons her father-in-law and strangles her husband to be with (*) Sergei. In another of his stories, "Cross-Eyed Lefty" puts tiny horseshoes on the title "Steal Flea." For 10 points, name this successor of Gogol, a Russian author of folksy-comic short stories like "Lady Macbeth of the Mtsensk District."

ANSWER: Nikolai (Semyonovich) Leskov <JR>

10. This relationship was elicited using "kinks" in linear data in an influential 2010 article about student aid by Nielsen, Sorensen, and Taber. A model of this relationship that requires the "SUTVA" assumption is named for Jerzy Neyman and Donald Rubin. In a "structural model," this relationship must meet a back-door criterion to be identifiable. A time series whose lagged values better predict time series Y's than Y's own lagged values alone has a type of this relationship named for Clive (*) Granger. Regression discontinuity designs use arbitrary cutoffs to find *this* relationship, which is the subject of a 2018 popular-press book by Judea Pearl. Social scientists use instrumental variables or "as-if" random assignment to infer *this* relationship when controlled experiments are infeasible. "Confounders" produce false indications of—for 10 points—what relationship that's not implied by correlation?

ANSWER: causality [accept any word form of the word cause] <JG>

11. This director began one scene by iris-ing in from a giant spinning wheel to show a crowd of people entering a carnival, where one of the protagonists chases an escaped piglet. In that film by this director, a man in a moonlit marsh finds a woman who suggests "Couldn't she be drowned?" in an intertitle that appears to sink down the screen. Éric Rohmer's *Six Moral Tales* was inspired by one of this man's films, in which a bundle of bulrushes saves The (*) Wife after a boat capsizes in a storm. In another film by this man, sailors on a ship break open a coffin to find it filled with rats, which give them all a deadly plague. After moving to America, this man directed a film in which The Man forsakes The Woman from the City, with the subtitle "A Song of Two Humans." A 1922 film about the vampire Count Orlok was made by—for 10 points—what German expressionist director of *Sunrise* and *Nosferatu*?

ANSWER: F(riedrich) W(ilhelm) Murnau <SK>

12. **This man proposed a controversial tax to support Christian instruction, which let citizens specify the sect they wanted to receive their payment. This man’s late-career reputation was damaged by his leadership of the northern-most constituent company of the “Combined Society” involved in the Yazoo scandal. This man argued that the Constitution “squints toward monarchy” by giving the President sole control of the army. Most current knowledge of this man comes from William (*) Wirt’s biography of him. This man led the Hanover militia in the Gunpowder Incident. He rose to prominence in a case about the Two Penny Act, when he convinced a jury to award Reverend James Maury a penny in damages in the “Parson’s Cause.” This man supposedly told critics of a speech “if this be treason, make the most of it.” For 10 points, what Virginian declared “Give me liberty or give me death”?**

ANSWER: Patrick Henry <JG>

13. **This ligand was discovered to bind to a purple tungsten tri-carbonyl-di-phosphine compound and turn it yellow in 1984, the same year that Roald Hoffmann proposed that it binds side-on rather than end-on to chromium. “Spillover” occurs when this species binds to a metal. This ligand’s ability to bind metals and not just form agostic interactions was key to Gregory Kubas’ discovery of sigma complexes. P-2, also known as (*) nickel boride, preferentially binds this ligand. This species oxidatively adds to a noble metal like rhodium, then inserts into a carbon-carbon bond, in the cycle for Wilkinson’s catalyst. The metal in a MOF [“moff”] or a zeolite is increasingly being used to store this gas, which embrittles the metal cathodes of many galvanic cells and is produced at the cathode during electrolysis of water. For 10 points, name this gas produced when metals react with acids.**

ANSWER: hydrogen gas [or H₂] <AS>

14. **This author wrote an infamous review attacking another author’s *The Beet Queen* for abandoning the cause of racial equality. A story by this author follows a character who accidentally signs her children over to some doctors because she is proud she can write her name, and ends with her singing the title “Lullaby”. In a novel by this author, a mountain lion distracts some men who catch the protagonist cutting through an electric fence to steal back Uncle Josiah’s cattle. The protagonist of that novel by this author has visions of his cousin (*) Rocky dying during the Bataan Death March. Ken and Leon try to arrange a traditional funeral for their grandfather in this author’s story “The Man to Send Rain Clouds.” This author of *Storyteller* wrote a novel about World War II veteran Tayo, who returns to the pueblo to recover from PTSD. For 10 points—what Native American author wrote *Ceremony*?**

ANSWER: Leslie Marmon Silko <DS>

15. **A genre of dance music from this country is characterized by augmented fourths and *zabumba* drums; that genre from this country was pioneered by accordionist and singer Luiz Gonzaga. A 1971 album whose title means “construction” mixed this country’s folk music with American-style pop and rock as part of a genre simply named “popular music of” this country. A psychedelic rock-influenced genre is exemplified by the 1968 debut album of a band whose name means “the (*) mutants.” A genre from this country that originated in the 19th century features a three-part rondo form and has a name meaning “lament” despite its often upbeat mood. This country’s popular music was introduced to the U.S. through a collaboration with saxophonist Stan Getz. For 10 points, name this home of the composers João Gilberto and Antônio Carlos Jobim, as well as the genres *Tropicália*, *choro*, and bossa nova.**

ANSWER: Federative Republic of Brazil [or República Federativa do Brasil; accept Música popular brasileira] <JM>

16. An infamously forged example of *these* texts describes cucumbers as a cure “good for whatever it is used for.” A figure that appears disproportionately often in these texts was known as “The Father of a Kitten.” G.H.A. Juynboll wrote an encyclopedia of these texts, which accepts the claim that most of these texts were fabricated relatively late, and then “grew backwards,” as argued by Joseph Schacht. The canonical compilations of these texts are known as the (*) “Six Books.” A speaker from these texts claims to leave behind “two weighty things” and compares his son-in-law to Aaron and himself to Moses. The most trusted collections of these texts were compiled by ibn al-Ḥajjāj and Muḥammad al-Bukhārī, and each contains an *isnād*, or “chain of transmission.” For 10 points, name these texts that illustrate the *sunnah* of Muḥammad by relaying accounts of the Prophet’s extra-Qur’ānic words and deeds.

ANSWER: ahādīth [accept “hadīths”; accept the isnād/asānīd until “Six Books,” then prompt until mentioned; anti-prompt on Sahīh] <JG>

17. Tisserand’s criterion was formulated to describe gravitational interactions with this object. Secular, hierarchical oscillation of the inclination was first described by Kozai in a triple system where this body is the second-largest. The grand tack hypothesis supposes that this object once rapidly decelerated and reversed its motion. Short-period, low-inclination comets are in a family named for this object. 51 peg B was the founding member of a group of (*) exoplanets located near stars, which are named for this object. Many of this object’s satellites librate in horseshoe-shaped orbits at its L4 and L5 Lagrange points. Planet Nine theories in the Nice model suppose that this object expelled an ice giant as it “jumped” into its current 3 to 2 resonance with Saturn. For 10 points, name this planet that cleared out the asteroid belt due to its large mass.

ANSWER: Jupiter <AS>

18. *Description acceptable.* While inside the only major prop in the *nōh* repertoire, one of *these* people is burned to death by a woman who turns into a serpent after being jilted. Another play ends with one of these people making a “flying exit” called the *tobi roppō*. In *mūgen nōh* plays, the actor in the *waki* role most commonly played one of *these* people. One of these characters tries to fool a samurai guard by reading a blank scroll while improvising the title “subscription list,” or *Kanjinchō*. Several *nōh* and kabuki plays center on that *yamabushi* serving Minamoto no Yoshitsune, named (*) Benkei. Before committing the title *Love Suicides at Amijima*, Jihei and Koharu claim to become two of these people. One of these people puts up a sign about a dragon in the “Old Potter’s Tale.” An Akutagawa story follows one of these people’s prayers for a smaller nose. For 10 points, name these people who wrote and meditated on *koans*.

ANSWER: monks [accept priests or abbots; accept descriptions like holy man or religious official; accept bonze or sōhei; accept yamabushi until mentioned but prompt on answers like hermits; accept nuns, bhikku, or priestesses but do not accept or prompt on “miko” or “shrine maidens”; prompt on answers like travelers] <JG>

19. An archival track by this musician was based on the “Vilja Song” from Franz Léhar’s *The Merry Widow*. This musician frequently performed a composition with the same changes as “So What” called “Impressions,” but a studio recording of it did not surface until 2018. An early album by this artist ends with a track whose title puns on Tadd Dameron’s “Lady Bird.” The track “Untitled Original 11383” appeared on a 2018 release of this musician’s (*) “Lost Album,” called *Both Directions at Once*. This man played with Lee Morgan and Curtis Fuller on a hard bop album featuring the tracks “Locomotion” and “Moment’s Notice.” Alongside Cannonball Adderley, he played tenor sax on *Kind of Blue*. This musician paid homage to Paul Chambers in the song “Mr. P.C.,” and used his first wife’s nickname to title the track “Naima.” For 10 points, name this musician behind *Giant Steps* and *A Love Supreme*.

ANSWER: John (William) Coltrane <JM>

20. A wooden sculpture of Christ whose beard allegedly grows each year appeared unbidden in *this* city, according to a three-volume history by native son Bartolomé Arzáns de Orsúa y Vela. A landmark once called Sumaj Orco stands by this city, which blended veneration of Saint Bartholomew into its indigenous Ch’utillos festival. The Kari-Kari are a set of at least 22 artificial *lagunas* built to generate hydraulic power near it. Foes of this city’s ruling-class (*) Basques wore hats made of vicuña wool. Workers in this city still give offerings to a goat-headed underworld deity called “The Uncle” or El Tío. A supply of mercury from Huancavelica fed the toxic “patio process” in this outlaw-laden city at the base of Cerro Rico. Viceroy Francisco de Toledo sent natives here for forced labor via the *mita* system. For 10 points, name this city in Bolivia where imperial Spain mined over 40,000 metric tons of silver.

ANSWER: Potosí <MJ>

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Packet 12 Bonuses

1. In many cheminformatic [KEM-ee-“informatic”] approaches, these things are encoded as entries in an adjacency matrix, where reactions that interconvert them are represented by linear transformations. For 10 points each:

[10] Name these common structures that impart chemical reactivity to organic molecules. Examples of them include hydroxyl, carbonyl, and amine.

ANSWER: **functional groups** [or **functionalities**; or **moieties**; or word forms]

[10] Besides its functional groups, a molecule must be encoded in cheminformatic databases with this key piece of information, which also helps determine its base name in IUPAC [EYE-you-pack] nomenclature. This property of an organic molecule can be determined by dividing the relative height of the “ $M + 1$ ” peak in the mass spectrum by 1.1.

ANSWER: **number of carbons** in the molecule [or **number of carbons** in the longest carbon chain in the molecule; prompt on length of molecule]

[10] S·T·N and Scifinder [SIGH-“finder”], popular cheminformatic databases, are put out by this division of the American Chemical Society, which issues a namesake registry number to uniquely identify any chemical that has ever been published on.

ANSWER: **CAS** [kass] [or **Chemical Abstracts Service**] <AS>

2. This sutra’s title figure falls silent when it is his turn to explain the principle of non-duality. For 10 points each:

[10] Name this often humorous Mahayana sutra, whose title layman spends much of the text pretending to be ill. It was particularly popular in East Asia.

ANSWER: ***Vimalakīrti*** (*Nirdeśa*) *Sutra*

[10] One of the main doctrines of the *Vimalakīrti Sutra* is *this* concept, which refers to the lack of *svabhava* or “own-being.” Theravada Buddhists often take this concept to refer to the non-self.

ANSWER: ***śunyata*** [accept ***sunyata*** or ***suññata***; accept **emptiness** or **voidness**]

[10] Vimalakīrti’s main interlocutor is one of *these* figures named Manjushri. Avalokiteshvara was one of these figures, who are on the path to buddhahood.

ANSWER: ***bodhisattva*** <JR>

3. For 10 points each—answer the following about barcarolles:

[10] The barcarolle “Belle nuit, ô nuit d’amour” appears in *this* opera, which also features a coloratura showcase for Olympia.

ANSWER: *The **Tales of Hoffmann*** [or *Les **contes d’Hoffmann***] (by Jacques Offenbach)

[10] Frédéric Chopin’s barcarolle for piano is in *this* key, whose key signature has six sharps. Olivier Messiaen liked to often use this relative major of D-sharp minor, such as in the “Love Theme” of his *Turangalīla-Symphonie*.

ANSWER: **F-sharp** major

[10] This composer’s works for piano include thirteen barcarolles. This composer’s suavely dissonant style had a broad influence on later music thanks to the teaching of his student Nadia Boulanger.

ANSWER: Gabriel (Urbain) **Fauré** <WJ>

4. Answer the following about the early history of white Americans in Arizona, for 10 points each:

[10] Many visitors to Arizona had *this* bacterial disease, which they hoped to treat with the desert climate at open-air sanatoriums. Dentist-turned-gunslinger Doc Holliday went west to treat this disease, which was then called “consumption.”

ANSWER: **tuberculosis** [or **TB**]

[10] Many whites came to Arizona to fight in *these* military conflicts, which broke out after Nicholas Bascom demanded the return of an allegedly abducted 12-year-old. They largely ended after a surrender at Skeleton Canyon.

ANSWER: **Apache** Wars [prompt on **Indian** Wars]

[10] This Democrat was Arizona’s first congressman and went on to serve a record-setting seven terms in the Senate. This so-called “silent senator” helped push major infrastructure projects such as the Grand Coulee Dam.

ANSWER: Carl Trumbull **Hayden** <MJ>

5. This man’s death inspired many works by Mori Ōgai, such as the samurai story “The Last Testament of Okitsu Yagoemon.” For 10 points each:

[10] Name this Japanese general who committed *seppuku* in 1912. In another work, his suicide disturbs the narrator’s ailing father and prompts Sensei to send a long confessional letter to the protagonist.

ANSWER: **Nogi** Maresuke [accept names in either order; accept Count **Nogi**]

[10] Nogi’s suicide is used to represent the end of the Meiji ethos in *this* 1914 novel by Natsume Soseki, whose second half consists entirely of Sensei’s letter.

ANSWER: **Kokoro**

[10] Nogi played a large role in reviving *seppuku* in the 20th century, indirectly inspiring this author’s story “Patriotism,” as well as his novel *Runaway Horses* and his ill-fated attempt to overthrow the Japanese government in 1970.

ANSWER: Yukio **Mishima** [accept names in either order; accept Kimitake **Hiraoka**] <DS>

6. The journal *Lab on a Chip* mainly details advances in this field. For 10 points each:

[10] Name this field of applied biochemical engineering that uses capillary action to drive laminar flow in channels that are approximately the width of a cell.

ANSWER: **microfluidics**

[10] Though passive microfluidic flow relies on differences in surface tension to drive flow, active microfluidics instead uses scaled-down versions of these devices, which create a pressure head for fluid motion using rotary motion. They also provide the pressure to drive flow in pipes.

ANSWER: centrifugal or rotary **pumps**

[10] Micromixers are necessary for combining two streams in a microchannel because, in the laminar regime, this dimensionless number, which characterizes the rate of axial advection versus lateral diffusion, is very large.

ANSWER: **Péclet** [PEH-klay] number <AS>

7. In her presidential speech to the American Economic Association, this woman argued that economists should see themselves as neither scientists nor engineers, but rather as plumbers. For 10 points each:

[10] Name this MIT economist who has conducted several randomized control trials in developing countries with Abhijit Banerjee, with whom she also wrote *Poor Economics*.

ANSWER: Esther **Duflo**

[10] Duflo and Banerjee have studied the effects of one of *these* antipoverty programs in India. Muhammad Yunus won the Nobel Peace Prize for providing this kind of service, which is directed towards people who may be rationed out of traditional bank services.

ANSWER: **microfinance** [or **microcredit** or **microlending** or **microloans**; prompt on just finance, loans, etc.]

[10] Credit constraints can lead to *this* kind of inefficiency by causing dispersion in marginal products of capital. This kind of inefficiency occurs when inputs are distributed in a way that does not maximize social welfare.

ANSWER: **misallocation** [or **allocative** inefficiency; prompt on productive inefficiency; do not accept “technical inefficiency”] <SB>

8. Cool air seeps out of the ground in algalic talus slopes, a rare and delicate type of ecosystem found mostly in *this* region, which harbors endemic species like the Iowa Pleistocene snail. For 10 points each:

[10] Name this region within the Paleozoic Plateau near the border of Iowa, Wisconsin, and Minnesota. It’s named for its lack of sediment deposits from recent glaciation.

ANSWER: **Driftless Area** [or **Driftless Zone**]

[10] The Driftless Area is bisected by this major river, whose namesake flyway is an important migration path for birds. This river forms the southern part of the Minnesota–Wisconsin border and has its source at Lake Itasca.

ANSWER: Upper **Mississippi** River

[10] The karst topography of the Driftless Area is caused by widespread erosion of limestone and *this* other carbonate mineral, which is also the namesake of a branch of the Alps that extends into northeastern Italy.

ANSWER: **dolomite** [accept the **Dolomites** or **Dolomite** Alps] <SK>

9. This essay concludes with the line, “Have I not reason to hate and to despise myself? Indeed I do; and chiefly for not having hated and despised the world enough.” For 10 points each:

[10] Name this 1823 essay that begins by describing the author’s “spirit of malevolence” toward a spider on his floor. It’s the most-anthologized essay by William Hazlitt.

ANSWER: “**On the Pleasure of Hating**”

[10] Lord Moran, a doctor who claimed to be descended from Hazlitt, was accused of violating *this* man’s patient-physician confidentiality with the book *The Struggle for Survival*. This author won 1953’s Nobel Prize in Literature for his historical writings and for speeches including lines like “This was their finest hour.”

ANSWER: Sir Winston (Leonard Spencer) **Churchill**

[10] Lord Moran’s book popularized this metaphor, which Churchill used to describe his mental health. Samuel Johnson’s letters suggest that he was the first person to describe depression with this two-word metaphor.

ANSWER: “**black dog**” <DS>

10. Muir Churton, the youngest member of the Bushveldt Carbineers, remarked that this man was “guilty as sin” in a 1973 interview. For 10 points each:

[10] Name this Anglo-Australian lieutenant, who was court-martialed and shot alongside Peter Handcock for inciting the summary executions of Floris Visser and others in 1902.

ANSWER: Breaker **Morant** [or Harry Harbord **Morant**]

[10] In Australia, Morant is regarded by some as a scapegoat for the British war crimes committed during *this* conflict. Emily Hobhouse condemned the use of concentration camps to detain Afrikaners during this war.

ANSWER: Second **Boer** War [or Second Anglo-**Boer** War; or **South African** War]

[10] Morant and Handcock were acquitted of the murder of Daniel Heese, a German immigrant in *this* profession. Explorer David Livingstone was a member of a “London Society” for people in this profession.

ANSWER: **missionary** [prompt on clergy, preacher, or other answers suggesting religious leadership] <SE>

11. This text has up to seven different introductions, depending on one’s way of counting. For 10 points each:

[10] Name this three-part text presented as a letter to Joseph ben Yehuda. Many of its chapters are explications of Hebrew terms as a sort of Biblical lexicon, with other chapters being directly philosophical discussions.

ANSWER: *The **Guide of the Perplexed*** [or *The **Guide for the Perplexed***; or ***Moreh Nevukhim***; or ***dalālat al-hā’irīn***]

[10] The *Guide of the Perplexed* was written in Judeo-Arabic by *this* mediaeval Sephardic philosopher and physician, who also wrote an extensive legal commentary called the *Mishneh Torah*.

ANSWER: Moses **Maimonides** [or **Rambam**; or **Moses ben Maimon**]

[10] Maimonides directs many criticisms against *this* movement, represented by Saadia Gaon. Maimonides was especially critical of this school’s principle that anything imaginable or conceivable is admissible in argument.

ANSWER: *mutakallimūn* [or **Jewish Kalām**; prompt on partial answer] <JM>

12. A classic experiment by Skoog and Miller showed that a high ratio of this class of plant hormones to cytokinins induces root rather than shoot development. For 10 points each:

[10] Name this first class of plant hormones to be discovered. The Cholodny-Went model proposes that tropisms are governed by the distribution of these hormones, such as indole-3-acetic acid.

ANSWER: **auxins**

[10] In a Skoog and Miller-type setup, intermediate ratios of auxins to cytokinins only ever produce this sort of unorganized mass of parenchyma cells. This kind of tissue also covers wounds in living plants.

ANSWER: **callus** [or **calli**]

[10] Like thousands of undergraduates in plant biology classes every year, Skoog and Miller did their tissue culture experiment on this model plant in the family Solanaceae. A callus induced from the B·Y-2 cultivar of this species gave rise to a widely used cell line.

ANSWER: **tobacco** [or *Nicotiana **tabacum***] <SK>

13. Biette de Cassinel or Agnès Sorel is generally considered the first officially recognized one of these people, and a much later one named Rosalie Duthé is sometimes considered the original “dumb blonde.” For 10 points each:

[10] Name these people who included Madame de Pompadour. Queen Catherine de’ Medici was said to have spied on Henry II’s activities with one of them named Diane de Poitiers to figure out how to reclaim Henry’s attention.

ANSWER: Chief **Mistresses** of the King of France [or the *maîtresse-en-titre*; accept obvious equivalents]

[10] It was so unusual for a French king *not* to have mistresses that Louis XIII’s lack thereof led to suspicions that he was having a homosexual relationship with *this* man. This man led a conspiracy with Louis de Bourbon, the Duc de Bouillon, and Gaston d’Orléans against Cardinal Richelieu, but was defeated at the Battle of La Marfée.

ANSWER: Henri Coiffier de **Ruzé**, Marquis de **Cinq-Mars** [accept either underlined portion]

[10] In *this* scandal, Madame de Montespan and other women fighting for the title of Louis XIV’s main mistress were implicated in black masses and in the sale by “La Voisin” of illicit “inheritance powders.”

ANSWER: Affaire des **Poisons** <JG>

14. Traditional buildings from this country often have a “hidden roof” that enables better drainage by having a steeper pitch on the outside. For 10 points each:

[10] Name this country, where buildings once traditionally had porch-like verandas called “*en*” [“N”] for short.

Typically, front entrances in this country open into a small, slightly lower area.

ANSWER: **Japan** [or **Nihon** or **Nippon**]

[10] Traditional Japanese Buddhist temples are often built in the form of *these* towers, which have multiple sets of eaves projecting from each storey.

ANSWER: **pagodas** [or **buttō** or **tōba**]

[10] Japanese pagodas are typically topped by a *sōrin*, which is one of *these* upward-jutting elements that decorate the pinnacle of a building. The top of a flagpole is often one of these things shaped like a ball.

ANSWER: **finials** [or **hip-knobs**] <JR>

15. Modern scholars typically divide this genre of poetry into “choral” and “monodic” varieties. For 10 points each:

[10] Name this genre of ancient poetry exemplified by Bacchylides, Simonides, and seven other canonical poets.

ANSWER: **lyric** poetry [or **lurikos**; accept **melic**; accept **Nine Lyric Poets**]

[10] The basic units of Greek lyric meter were the trochee and *this* other poetic foot. This foot, which comprises one long syllable followed by two short syllables, lends its name to the “hexameter” used in Homer’s *Iliad* and *Odyssey*.

ANSWER: **dactyl** [accept **dactylic** hexameter]

[10] This earliest lyric poet in the Alexandrian canon often employed dactylic *tetrameter*. This Spartan is best known for his *partheneia*, or maiden-songs.

ANSWER: **Alcman** <MK>

16. If the Lyapunov exponent has this property, then a dynamical system approaches an attractor rather than demonstrating chaos. For 10 points each:

[10] Name this mathematical property possessed by all the eigenvalues of the Hessian at a stable fixed point. The function “ $e^{-\lambda t}$ ” goes to zero at long times only if λ has this property.

ANSWER: **negative** [or λ is **less than zero**]

[10] Attractors may be either fixed points, with attractor dimension 0, or these one-dimensional things, which form stable closed orbits in phase-space around fixed points but never converge. The van der Pol oscillator forms one.

ANSWER: stable **limit cycles** [prompt on periodic **orbit**]

[10] At higher dimensions—for instance, the case of coupled harmonic oscillators—a limit cycle can be generalized as tracing out one of these figures in phase space, provided that the frequencies are all incommensurate.

ANSWER: an **N-torus** (That’s from the Kolmogorov–Arnold–Moser theorem.) <AS>

17. A corruption of an Arabic term for “fusilier” lent its name to soldiers from this battle’s winning side called *arma*, who established their own regional power as a hereditary elite in the decades after it. For 10 points each:

[10] Name this battle, which exiled the renowned scholar Aḥmad Bābā. Askiya Nūḥ founded the Dendi Kingdom after reorganizing this battle’s losers, whose strategy of stampeding cattle at the Sa‘adī dynasty’s forces failed.

ANSWER: Battle of **Tondibi**

[10] The Battle of Tondibi led to the collapse of *this* empire, which itself overtook Mali as the Sāḥel’s main power. The founder of its early Za Dynasty was literally named “from Yemen,” which may suggest that he was Jewish.

ANSWER: **Songhai** Empire [accept the Empire of **Gao**]

[10] The Koulibaly and Ngolosi dynasties formed *this* empire partly in response to *arma* raids. This empire, whose name served as a generic term for “pagan,” arranged its division of labor by age cohorts called *ton*, and ruled much of Mali and Songhai’s former territory until its capital of Ségou fell to Umar Tall.

ANSWER: **Bambara** Empire [accept the **Bamana** Empire] <JG>

18. After spending an entire day watching these animals being killed, Sebastian Venable tells his mother that he’s seen God and then becomes delirious for weeks. For 10 points,

[10] Identify these animals whose slaughter by a flock of “flesh-eating birds” foreshadows Sebastian’s own murder by cannibals.

ANSWER: sea **turtles**

[10] Violet Venable tells Dr. Cukrowicz about her son watching sea turtles in *Suddenly, Last Summer*, a work by *this* American playwright who also wrote *The Glass Menagerie*.

ANSWER: Tennessee **Williams** [or Thomas **Williams** III]

[10] Sebastian sees the sea turtles during a trip to *this* location inspired by reading Herman Melville’s novella “The Encantadas,” which features a “sketch” in which the narrator climbs *this* location’s “Rock Rodondo.”

ANSWER: **Galápagos** Islands [or Islas **Galápagos**; accept Archipiélago de **Colón**] <DS>

19. In the introduction to his book *Culture and Truth*, an anthropologist with *this* surname compared the grief that incites violence in headhunters to the grief he felt after the accidental death of his wife. For 10 points each:

[10] Give this surname of an anthropologist who, in *Knowledge and Passion*, described how gaining the right to wear red hornbill earrings via headhunting was nearly a prerequisite for marriage among the Ilongot people.

ANSWER: **Rosaldo** (Renato and Michelle Rosaldo)

[10] The Ilongots live in *this* Asian country, many of whose indigenous Lumad people are ruled by nobles called Datus. A longstanding controversy concerns this country's Tasaday people, whom some anthropologists claim were paid to take on the appearance of a peaceful foraging tribe.

ANSWER: Republic of the **Philippines** [or Republika ng **Pilipinas**]

[10] Studies of Chicano people led Renato Rosaldo to formulate a "cultural" form of *this* concept, whose "flexible" type was analyzed by Aihwa Ong. The 14th Amendment guarantees this status to anyone born in the U.S.

ANSWER: **citizenship** <SK>

20. This civilization's conventions included the use of hierarchical proportion, as well as using red for the skin of men and yellow for women. For 10 points each:

[10] Name this Ancient civilization whose art typically used multiple perspective, showing faces and feet in profile, with torsos facing the viewer. Many of their surviving artworks were painted on papyrus.

ANSWER: Ancient **Egypt**

[10] Much more "realistic" paintings were made using *this* method of painting in Late Ancient Egypt. Jasper Johns often uses this technique, in which pigments are suspended in hot wax.

ANSWER: **encaustic**

[10] In *Art and Illusion*, E.H. Gombrich used one of *these* 20th-century artworks as the basis for a discussion of mixed perspective in Egyptian art. Many of these artworks were produced by Lee Lorenz and Bob Mankoff.

ANSWER: **New Yorker cartoons** [prompt on partial answer] <JR>