

# Michigan Winter Tournament

"The Holy Roman Empire of Tournaments"

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## Packet 12

Tossups:

1. **During this conflict, Keller E. Rockey led a massive four year evacuation of foreigners in the US' Operation Beleaguer. German advisers Hans von Seeckt and Alexander von Falkenhausen helped develop a series of encirclement campaigns in this conflict. Edgar Snow accompanied forces during this conflict, which he wrote about in a book named for a Red Star over the country where it occurred. This conflict saw a debated skirmish at the crossing of (\*) Luding Bridge. This conflict was temporarily ended when one side's leader was detained by his subordinates in Xi'an. During this conflict, troops departing from Jiangxi avoided its enemy in the Long March. For 10 points, name this conflict that resulted in Mao Zedong's communists taking over mainland China.**

ANSWER: **Chinese Civil War** [or **Guo Gong** Neizhan] <Laurie, World History>

2. **Modern updates to an experiment that tested this phenomenon have involved ion storage rings which utilize high speed lithium ions analyzed with saturated spectroscopy. The magnitude of this phenomenon can be measured by rotating an atom interferometer. The amount of this phenomenon is approximately proportional to 1 plus velocity squared over twice the speed of light squared. Along with Doppler shift, this phenomenon was tested in the (\*) Ives-Stilwell experiment. According to the Lorentz transformation, the central quantity affected by this phenomenon will be shortest in its rest frame. This phenomenon's related "proper" quantity resolves the "twin paradox." For 10 points, name this effect resulting from special relativity in which a clock will move slowly at high velocities.**

ANSWER: (gravitational) **time dilation** [accept **gravitational redshift** before "Doppler" is read; prompt on **special relativity** or just **relativity**] <Bunker, Physics>

3. **One philosopher who principally inspired this thinker opposed the supposed tolerance of "false liberalism" and appealed to writers outside the "official culture" of universities. This thinker differentiated between an intelligentsia that sees itself as separate from society and its organic thinking groups. A political group started by this thinker was seen by Lenin as Bolshevik-aligned and opposed the party of Amadeo (\*) Bordiga. A historicist, this follower of Benedetto Croce ["Cro-chay"] thought that meaning was derived from human praxis and the objective social or historical processes. This thinker's most notable idea describes how the bourgeoisie impose their beliefs and values onto the population as the dominant ideology. For 10 points, what Marxist philosopher wrote about cultural hegemony in his *Prison Notebooks*?**

ANSWER: Antonio **Gramsci** <Bunker, Philosophy>

4. **The epigram for the base of a sculpture by this artist reads "the lover, who would fleeting beauty clasp / Finds bitter fruit, dry leaves are all he'll grasp." This artist based a bust of a ruler off of a van Dyck portrait which depicts that ruler *in Three Positions*. This man's assistant Ercole Ferrata likely sculpted the elephant at the base of an obelisk by this man, the shortest in Rome. This artist depicted leaves coming out of the hands of two mythological figures in a sculpture at the Villa (\*) Borghese. This artist showed a figure with a cloth draped over his head to represent the Nile and another holding an oar as a metaphor for the navigability of the Ganges. For 10 points, name this Baroque sculptor of *The Rape of Proserpina* and *The Fountain of the Four Rivers*.**

ANSWER: Gian Lorenzo **Bernini** [or Gianlorenzo **Bernini**; or Giovanni Lorenzo **Bernini**] <Rodriguez, Other Visual>

5. Osamu Dazai's novel *Sekibetsu* fictionalizes this man's time at medical school, which this man also wrote about in "Mr. Fujino." This man argued in a lecture given at a women's college that due to her inability to support herself, Nora Helmer will be forced to return home. After having his legs broken for stealing, a scholarly character created by this man crawls to a tavern and orders (\*) wine. In one story by this author, the narrator feels disgusted eating fish because it reminds him of villagers of the Wolf Cub village. In that story by this author, the narrator, who suspects his brother fed him his sister's flesh, says "save the children..." because he believes everyone is a cannibal. For 10 points, what early proponent of vernacular Chinese wrote "Kong Yiji" and "A Madman's Diary"?

ANSWER: **Lu** Xun [or **Lu** Hsun; or **Zhou** Shuren] <Tsai, World/Other Literature>

6. The Book of Revelation describes the appearance of a figure "clothed with the sun, with the moon under her feet, and on her head a crown of" this many stars. Artworks depicting the Virgin Mary frequently depict her with a halo of this many stars. When the president of the Mormon Church dies, a "quorum" of this many Church figures appoints his successor. This many (\*) thousands of people from each of the tribes of Israel are said to be sealed by God. Saint Matthias was added to a certain group of people to ensure that that group would consist of this many people. The feast of the Epiphany traditionally takes place this number of days after Christmas. For 10 points, identify this number of apostles of Jesus and tribes of Israel.

ANSWER: **twelve** [or **12**] <Thompson, Religion>

7. For use in this purpose, Soranus of Ephesus suggested using ginger or pomegranate juice. According to a papyrus document from Kahun, mixing honey, saltpeter, and crocodile dung would create a substance with this purpose. The primary ingredient in Cyrenaic juice, silphium, was driven into extinction by Romans using it for this purpose. Ethel Byrne and Fania Mindell helped open the first American clinic for this purpose in Brownsville, New York. Katherine McCormick funded the research of (\*) John Rock and Gregory Pincus, who developed a substance used for this purpose. Promotion of this practice named the forerunner to an organization founded by Margaret Sanger, Planned Parenthood. For 10 points, condoms and the pill were invented for what purpose?

ANSWER: **birth control** [or **contraception** or **family planning**; accept answer indicating attempt to **prevent pregnancy** or **birth**] <Laurie, Other History>

8. The determinant of any matrix in the image of the matrix exponential function must have this property. A linear transformation preserves orientation if its determinant has this property. The identity of indiscernibles criterion requires that the value of a metric have this property for two distinct inputs. The triangle inequality requires that for non-collinear points, [read slowly] the distance from x to y, plus the distance from y to z, (\*) minus the distance from z to x, has this property. The inner product of any nonzero vector with itself has this property, a fact described by this property and the word "definite." All even powers of nonzero real numbers have this property, which is also true of all numbers in the domain of the log function. For 10 points, what property is held by numbers greater than zero?

ANSWER: **positive** [accept descriptive answers like **greater than zero**, prompt on **nonzero** until "orientation" and do NOT accept or prompt afterwards; do NOT accept or prompt on "nonnegative"] <Thompson, Mathematics>

9. This state was home to a railroad crossing signal installed in the 1930s that comprised neon lights reading "STOP - DEATH - STOP" accompanied by an air raid siren. This non-Texas state is home to the grave of Douglas the Camel, who was part of a Civil War regiment from it. A government-sponsored scientific marijuana research program is headquartered at this state's flagship university, in the city of (\*) Oxford. This state's Yazoo River demarcates part of an agricultural region known as its "delta". The southern portion of the Natchez Trace, a historic early road, passes through this state. This state's flag is the only one to still bear the Confederate battle flag on it. For 10 points, name this southern state with capital at Jackson.

ANSWER: **Mississippi** <Thompson, Geography>

10. In a speech, this character calls himself the "king of courtesy," since he is called "a Corinthian, a lad of meddle" by some of his sworn brothers, whose names are Tom, Dick and Francis. This character taunts Lord Scroop by comparing his revolt to "another fall of man" after foiling an assassination attempt at Southampton. The prologue of the play named for this character wishes for "a muse of (\*) fire, that would ascend the brightest heaven in invention." While a prince, this monarch liked to hang out at the Boar's Head Tavern with Sir John Falstaff. For 10 points, name this title king of a Shakespeare play, who rallies his troops in the St. Crispin's Day Speech to fight at the Battle of Agincourt.

ANSWER: **Henry V** [or Prince **Hal**; prompt on King **Henry**] <O'Rourke, British Literature>

11. **Mutations in RDE-1 inhibit this pathway. A drug that takes advantage of this pathway is used to treat hereditary transthyretin amyloidosis is called patisiran. Exportin-5 is used to transfer one intermediate in this pathway. Both mock and scramble controls are used when this pathway is activated artificially, which can be accomplished via lentiviral (\*) transduction of hairpin structures.** In this pathway, the RISC complex is loaded by another complex containing TRBP, Ago2, and Dicer, which then allows it to target and cleave complementary transcripts using certain small, interfering molecule. For 10 points, name this pathway discovered by Nobelists Craig Mello and Andrew Fire, which is used to post-transcriptionally knock down genes.

ANSWER: **RNA interference** [or **RNAi**; prompt on RNA silencing, post-transcriptional gene silencing, post-transcriptional silencing, gene knockdown, gene repression, quelling; do NOT accept gene "knockout"] <Mukherjee, Biology>

-- This packet contains 22 tossups. Halftime is after tossup 11. --

12. **One short piano piece by this composer begins with pianissimo left hand playing an ascending and descending [read slowly] "B flat - C - D - G" motif. An E major Andantino con moto piece by this composer is tricky to perform due to polyrhythmic pairing of triplets and eighth notes in the left and right hands, and vice versa. One piano suite by this composer opens with a tempo rubato first movement and ends with a (\*) passepied final movement.** Triads in pentatonic scale open a piece by this man that is named for an artistic motif. Early short piano pieces by this composer include "Rêverie", his two "Arabesques", and a four movement suite inspired by Paul Verlaine. For 10 points, name this French composer, whose *Suite bergamasque* contains "Clair de lune".

ANSWER: Claude-Achille **Debussy** <Tsai, Classical Music>

13. **JJ Goux ["go"] applied the Saussurean linguistic idea of how concepts can be related to things of the same nature to objects of this kind. Guyer and Munn argued against the notion that these objects enforce a colonizing quantification. The introduction of these objects liberated humans from status distinctions due to their anonymity according to Georg (\*) Simmel.** On the Micronesian island of Yap, large Rai stones were used as this kind of object. Chartalists argue that these objects emerged after the sovereign power to tax was established. Herodotus said that the Lydians were the first people to use a metallic version of these objects. For 10 points, name this type of object which can be used to buy goods and services.

ANSWER: **money** [accept **currency** or **coins** or **monies**] <Bunker, Anthropology>

14. **In his confirmation hearings, this future Supreme Court Justice argued that his role would be like that of an umpire simply calling balls and strikes. Lawrence Tribe and Joshua Matz argued that this Justice's Court inconsistently applied its principles in *Uncertain Justice*. This Justice said the "The way to stop discrimination on the basis of race is to stop discriminating on the basis of race" in ruling against racial integration policies in *Parents Involved*. In one opinion, this Justice argued that an (\*) "individual mandate" should be seen as a tax, and is therefore constitutional. This Justice said the Constitution "had nothing to do with it" after his Court legalized gay marriage in *Obergefell v. Hodges*.** For 10 points, name this current Chief Justice of the Supreme Court.

ANSWER: John **Roberts** <Laurie, American History>

15. **In a painting by this artist, a young woman in blue lies prone next to an old man who crosses his arms across his chest while a saint in an orange robe walks by, seemingly ignoring the sick figures to his left. A skeleton lies just below a Latin phrase which translates as "I once was what you are and what I am you also will be" in another painting by this artist. He's not Michelangelo, but Cosimo III de' Medici ordered that fig leaves cover the genitalia of two figures being led away by a (\*) sword-wielding angel in a fresco by this man.** A more famous work by this man shows Jesus in a blue robe while St. Peter is shown taking a coin from a fish's mouth. For 10 points, name this artist of *The Holy Trinity*, *Expulsion from the Garden*, and *The Tribute Money*.

ANSWER: **Masaccio** ["muh-SAH-chee-oh"] [or Tommaso di Ser **Giovanni di Simone**] (The painting in the first sentence is *St. Peter Healing the Sick with His Shadow*) <Rodriguez, Painting>

16. **The square root of alpha appears in the expression for the departure function of the per-mole version of this quantity in the Peng-Robinson equation of state. The total differential of this quantity equals temperature times the differential of entropy plus volumes times the differential of pressure. Ideal and regular solutions are distinguished by having nonzero and zero changes in this quantity upon mixing. In an ideal gas, the derivative with respect to temperature of this quantity is equal to the (\*) isobaric heat capacity.** The change in this quantity resulting from the creation of a mole of a compound from its component elements is known as this quantity of formation. For 10 points, what quantity for a chemical reaction is independent of path according to Hess' Law and is symbolized *H*?

ANSWER: **enthalpy** [accept **enthalpy** of formation or **lattice enthalpy**; or hydration **enthalpy**; prompt on *H* or  $\Delta H$  before mention] <Bunker, Chemistry>

17. In one story by this author, a woman angrily tells her lover "You're not a corpse!" after she reveals a family secret. In another story by this author, Sally realizes she hates the North upon imagining seeing the Southern belle Margery Lee. In a novel by this author, a man gives a woman a puppy during a party with the McKees, but then breaks her nose because she would not stop chanting his wife's name. In another story by this author, the (\*) Washington family lies to their slaves so people do not find the secret under their massive Montana mansion. This author's stories "The Ice Palace" and "Bernice Bobs Her Hair" are in his collection *Flappers and Philosophers*. For 10 points, what Jazz Age author wrote "The Diamond as Big as the Ritz" and *The Great Gatsby*?

ANSWER: Francis Scott **Fitzgerald** <Tsai, American Literature>

18. This man composed music for the revue *Jump for Joy*, which contained the widely covered song "I Got it Bad (and that Ain't Good)." Many suites by this composer released posthumously included one written for Queen Elizabeth II. Adelaide Hall recorded wordless vocals with this man on "Creole Love Call." Mahalia Jackson sang on "Come Sunday," the first movement of this man's longest work (\*) *Black, Brown, and Beige*. Oscar Peterson greatly popularized a song by this man, whose main theme only consists of G and C. This long time collaborator with Billy Strayhorn has a signature tune that tells the listener to "go to Sugar Hill way up in Harlem." For 10 points, name this jazz pianist and bandleader that wrote "C Jam Blues" and "Take the 'A' Train."

ANSWER: Duke **Ellington** [or Edward Kennedy **Ellington**] <Tsai, Other Auditory>

19. In the *Skaldskaparmal*, gold is named for a part of one of these objects called Glasisir. Henry Adams Bellows associates Ydalir with archery because his name refers to a type of these objects. The first two humans, Ask and Embla, are named for these objects, and the two humans that survive Ragnarok (\*) hide in one of them. *Grimnismal* is the only extant piece of Norse poetry to mention the four stags that gnaw at one of these objects. In order to gain knowledge of runes, Odin hangs himself from one of these objects for nine days and nine nights. For 10 points, Ratatoskr carries messages between Nidhogg and an eagle on top of one of these plants, exemplified in Norse mythology by Yggdrasil.

ANSWER: **trees** [accept **forests**, **holt**, **wood**, ash **tree**, yew **tree**, and reasonable equivalents; accept **Yggdrasil**, Hoddmimir's **wood**, **yew-dales**] <Stevenson, Mythology>

20. This politician gave a speech in a historically themed amusement park in which he remarked that "honesty obliges me to say that I am not a socialist". It was revealed that this politician's security officer and deputy chief of staff impersonated a police officer, beat up a protester during a May Day protest, and had ties to two Russian oligarchs during the so-called Benalla affair. Fulfilling a campaign promise, this politician's administration abolished a (\*) wealth tax and replaced it with a tax targeting real estate. This politician was the former Minister of the Economy and Industry for François Hollande before founding his political party, En Marche ["on marsh"]. This world leader's decision to raise gas taxes led to the yellow vest protests in his nation. For 10 points, what man became president of France in 2017?

ANSWER: Emmanuel **Macron** <Bunker, Other Academic>

21. In a Colm Toibin novella, this character's mother hopes for a shipwreck as part of her "hunger for catastrophe." This character claims he cannot remember his parents in a novel in which he befriends Matthew Levi. In another novel, this character causes his cousin to go into prostitution because he refuses to marry her. Before dying in that depiction, this character imagines himself as an (\*) old man surrounded by a loving family. This character, along with the man who orders his death, are part of an unfinished novel by "the Master," the first title character of a Mikhail Bulgakov novel. For 10 points, name this New Testament figure, who is the title character of a Nikos Kazantzakis book about his "Last Temptation" before he was crucified.

ANSWER: **Jesus** Christ [or *The Last Temptation of Christ*; or **Yeshua** Ha-Nozri; or **Isa** ibn Maryam; or **Jesus** of Galilee; or **Jesus** of Nazareth; or **Jesus** the Nazarene; or **Jesus**, son of Joseph] <Bunker, European Literature>

22. This Kingdom's history was recorded by Theodoric the Monk, who recorded a military campaign during which it attacked the Balearic Islands; that namesake crusade saw the first in-battle crusading action by a European monarch. The death of Duke Skule in battle ended a civil war in this country which saw fighting by rival parties the Birkebeiner and the Bagler. Edwin of Mercia and Morcar of Northumbria were defeated by forces from this Kingdom at the Battle of Fulford. This Kingdom was unified by the (\*) Fairhair Dynasty. After allying with Tostig Godwinson, a King of this Kingdom failed to take England after being defeated at the Battle of Stamford Bridge; that ruler was Harald Hardrada. For 10 points, name this Kingdom allied with Denmark and Sweden in the Kalmar Union.

ANSWER: Kingdom of **Norway** <Laurie, European History>

## Bonuses:

1. In some cases, the supposedly objective non-informative version of this object can lead to a non-integrable posterior density. For 10 points each:

[10] Name this class of distribution often written  $\pi$  of  $\theta$  which is conjugate to the posterior distribution if both come from the same family of distributions.

ANSWER: **prior** distribution [accept **conjugate prior**]

[10] Prior and posterior distributions are central to a paradigm of probability named for this scientist. This scientist's theorem relates the probability of event A given B true and probability of B given A true.

ANSWER: Thomas **Bayes** [accept word forms like **Bayesian** interpretation of probability or **Bayesian** inference]

[10] Bayes's Theorem can be used to calculate this rate, which is the probability of a Type 1 error given that the observed B is true. This rate is plotted on the horizontal axis for the ROC curve.

ANSWER: **false positive** rate <Bunker, Mathematics>

2. Herb Simon developed a three-stage process of these things which starts from the intelligence activity, then to the design activity and finally the choice activity. For 10 points each:

[10] The von Neumann-Morgenstern axioms are used to define rationality about what things? A theory about these things studies how agents choose different options under different initial conditions.

ANSWER: **decisions** [accept word forms like **decision theory**]

[10] This strategy or heuristic in decision-making was introduced by Simon within his bounded rationality framework. In this strategy, agents aim for a merely adequate or "good enough" payoff instead of an optimum.

ANSWER: **satisficing**

[10] Simon also developed the EPAM theory of this practice with Edward Feigenbaum. Another theory of this process, developed by B.F. Skinner and others, supposes new behaviors are obtained by observing others.

ANSWER: **learning** [accept social **learning** theory] <Bunker, Other Social Science>

3. The protagonist of this novel goes to stay with her uncle Babamukuru to attend his mission school. For 10 points each:

[10] Name this novel by Tsitsi Dangarembga, which opens with its protagonist, Tambu, stating "I was not sorry when my brother died."

ANSWER: **Nervous Conditions**

[10] This author taught at Oba's Merchant of Light school, which was built on what the local residents called "bad bush." This author fictionalized that into the "evil forest," where Christian missionaries build a church, in his novel *Things Fall Apart*.

ANSWER: Chinua **Achebe** [or Albert Chinualumogu **Achebe**]

[10] Obinze, a character in this Chinamanda Adichie novel, is the son of a former professor at the university in Nsukka. In this novel, Obinze's love interest Ifemelu writes a blog called *Raceteenth* and wins a fellowship to Princeton.

ANSWER: **Americanah** <West, World/Other Literature>

4. The Kikuyu Wambui Otieno married S.M. Otieno, a man of this ethnicity, whose death caused a court case over customary law when Wambui fought with members of this tribe over his burial place. For 10 points each:

[10] Name this tribe, whose members include Odinga Odinga, who long feuded with the Kikuyu leader Jomo Kenyatta.

ANSWER: **Luo** people [or **Joluo**]

[10] Wambui Otieno later published an autobiography titled "Daughter of" this rebel movement against the UK, primarily led by Kikuyu people. Its leaders included Dedan Kimathi.

ANSWER: **Mau Mau** Rebellion [or other answers mentioning Mau Mau; prompt on the **Emergency**]

[10] Odinga and Kenyatta generally disagreed about Kenya's position within this larger period of tension between the US and Soviet Union.

ANSWER: **Cold War** <Thompson, World History>

5. Answer the following about the biophysics of proteins, for 10 points each:

[10] This range affects the stability of the folding protein and its associated dynamics where the relaxation of the native state is accelerated by increasing this range. In a solid, this range is the region where no electron states can exist.

ANSWER: **energy gap** [or **band gap**]

[10] One type of these instruments allows scientists to study ephemeral molten globule states of proteins and the associated forces. Arthur Ashkin developed another type of these instruments which relies on high E field gradient at a Gaussian beam waist.

ANSWER: **tweezers** [accept magnetic **tweezers** or optical **tweezers**]

[10] The structure of proteins can be studied by utilizing diffraction from this part of the electromagnetic spectrum. Rosalind Franklin used this part of the spectrum to determine the structure of DNA.

ANSWER: **X-rays** [accept word forms like **X-ray** crystallography or **X-ray** diffraction] <Bunker, Physics>

6. This artist painted Henry Ford Hospital while recovering from a miscarriage. For 10 points each:

[10] Name this Mexican artist known for her many self portraits. Her rough marriage with Diego Rivera often influenced her art.

ANSWER: Frida **Kahlo** de Rivera [or Magdalena Carmen Frida **Kahlo** y Calderón]

[10] Rivera is notably not present in this Kahlo painting which operates as a memoir of her life. A skyscraper is erupting from a volcano in this painting which also depicts a married couple who are believed to be Kahlo's parents.

ANSWER: ***What the Water Gave Me*** [or ***What I Saw in the Water***; or ***Lo que el agua me dio***]

[10] Echoing Kahlo's wish to possess him despite his many affairs, paintings such as *Self-portrait as a Tehuana* and *Diego and I* placed portraits of Diego Rivera's face at this unusual location.

ANSWER: Kahlo's **forehead** [prompt on her **body** or her **face**] <Tsai, Painting>

7. A catastrophic earthquake occurred in the Pacific Northwest on January 26, 1700. For 10 points each:

[10] The cultural memory of that earthquake is reflected in hundreds of myths, such as one in which one of these creatures fights a whale, causing the earthquake and subsequent tsunami. These supernatural avians are common in Native myths and are often symbolized with a stylised X shape.

ANSWER: **thunderbirds**

[10] An instance of this kind of event around the Black Sea may have inspired the myths of Utnapishtim in the *Epic of Gilgamesh* and Noah in the Book of Genesis.

ANSWER: **floods**

[10] Some researchers have hypothesized that this Australian Aboriginal legendary creature represents a cultural memory of the long-extinct marsupial *Diprotodon*. Aborigines have identified *Diprotodon* fossils with these creatures, who were said to lurk in waterholes.

ANSWER: **bunyips** <Thompson, Mythology>

8. Answer the following about the real Classical music: music from ancient Greece. For 10 points each:

[10] According to legend, this Ionian Greek philosopher discovered that simple ratios of the sizes of anvils hit by blacksmiths caused sonorous sounds. He also described the "Harmony of the Spheres" and lends his name to a tuning system which utilizes pure perfect fifths.

ANSWER: **Pythagoras** of Samos

[10] This ancient Greek stringed instrument, legendarily invented by Hermes, was typically strummed with a plectrum. This instrument is similar to the cithara and resembles a small harp.

ANSWER: **lyre**

[10] This work is the oldest surviving complete musical composition. The text and melody of this work were engraved with a dedication to Euterpe on a tombstone by the song's namesake grieving husband.

ANSWER: the Song of **Seikilos** [or **Seikilos** epitaph; accept clear knowledge equivalents] <McMaken, Classical Music>

9. An author from this country attacked the neoliberal policies which he blamed for the breakdown of his father's health in *Who Killed My Father*. For 10 points each:

[10] Name this home of the author of *The History of Violence* and *The End of Eddy. Exercises in Style*, in which the same story is told 99 different ways, is by an Oulipo member from this country.

ANSWER: Republic of **France**

[10] Edouard Louis, the author of *Who Killed My Father*, said he was striving to create a "literary space" for violence in the same way that this author of *Moderato Cantabile* did. She also wrote the screenplay for Alain Resnais' *Hiroshima mon amour*.

ANSWER: Marguerite **Duras**

[10] In an interview, Louis said that literature rejected the working class, so no one from his childhood read anyone except two authors they knew were on their side: Emile Zola and this author of *Les Misérables* and *The Hunchback of Notre Dame*.

ANSWER: Victor **Hugo** <Laurie, European Literature>

10. A'isha complained about being unable to perform Tawaf around the Kaaba for this reason, so Muhammad advised her to do every part of the Hajj except Tawaf. For 10 points each:

[10] Identify this state, called *ḥaid* in Arabic, during which women are exempt from fasting and praying, and following which they are required to undergo ritual purification. This state is contrasted with *istihadha*, which describes irregular bleeding.

ANSWER: **menstruation** [accept any equivalents like being on one's **period**]

[10] Menstruation, and the requirement for women to purify following it, is discussed in this longest surah of the Quran. It contains the Throne Verse, as well as the verse traditionally held to be the last revealed. The Arabic or English titles are both acceptable.

ANSWER: al-**Baqarah** [or The **Cow**, or The **Heifer**]

[10] The Cow Surah also describes three signs of people with this quality, including faith, prayer, and charity. The imperative form *ittaquallah* commands people to exhibit this quality. A description is acceptable.

ANSWER: **taqwa** [or **fear of God** or equivalents, or **consciousness of God** or equivalents, or **piety**; accept Allah in place of God] <Ranganathan, Religion>

11. This philosopher wrote a lost monograph about a philosophical group whose ranks included Philolaus of Croton. For 10 points each:

[10] Identify this ancient Greek philosopher who wrote that book on the Pythagoreans whose other lost works include *A Treatise on the Art of Poetry* and the second book of his *Poetics*.

ANSWER: **Aristotle**

[10] This ten volume moral work of Aristotle, named for his son, defined "flourishing" or *eudaimonia* in its first book. This book is typically believed to have been published after his *Eudemean Ethics*.

ANSWER: **Nicomachean Ethics**

[10] The *Nicomachean Ethics* heavily inspired this Scottish virtue ethicist who defended Thomism in his *Three Rival Versions of Moral Inquiry*. This former Marxist and author of *After Virtue* apparently changed his mind after reading thinkers such as Imre Lakatos ["lack-a-tosh"] and Thomas Kuhn.

ANSWER: Alasdair **MacIntyre** <Bunker, Philosophy>

12. To promote the newly passed *Bodenreform*, the German government used the slogan "[these people's] land into farmer land!" For 10 points each:

[10] Name these people, the landed aristocracy of Prussia. These people had their interests advanced by the Agrarian League.

ANSWER: **Junkers**

[10] The Agrarian League formed in opposition to this leader. He pursued the "New Course" under Kaiser Wilhelm II.

ANSWER: Leo von **Caprivi**

[10] Under Caprivi, Germany forged closer relations with this neighboring dual-monarchy that collapsed in the aftermath of World War I.

ANSWER: **Austria-Hungary** [or the **Austro-Hungarian Empire**] <Laurie, European History>

13. Though located in the midbrain, this long nucleus is functionally considered a part of the basal ganglia as well, because of its connection to other brainstem function. For 10 points:

[10] Name this small nucleus that is key to the function of reward-motivated behavior and is split into the *pars compacta* and the *pars reticulata*.

ANSWER: **substantia nigra**

[10] The substantia nigra is the primary producer of this neurotransmitter that has been frequently linked to addiction.

ANSWER: **dopamine** [also accept **3,4-dihydroxyphenethylamine**]

[10] Though not Parkinson's disease, this condition is often characterized by visual hallucinations and hypokinesia. It can be caused by alpha-synuclein buildup in places like the cerebral cortex and substantia nigra.

ANSWER: **Lewy-body dementia** [or **LBD**; prompt on **dementia** alone] <Rodriguez, Biology>

14. The pretext for hosting one of these events is to gather material for an author to write his latest novel, *The Unseen*. For 10 points each:

[10] Name these events. The host of these events, Madame Arcati, avoids eating red meat before them because it "sometimes has an odd effect."

ANSWER: **seances** in *Blithe Spirit*

[10] This British playwright, who wrote about Elyot and Amanda using the code word "Solomon Isaacs" to stop their arguments in *Private Lives*, wrote about the seances in *Blithe Spirit*.

ANSWER: Noel **Coward** [or Sir Noel Pierce **Coward**]

[10] Coward titled *Blithe Spirit* after a phrase in "To a Skylark," which was written by this Romantic poet, who also wrote the play *Prometheus Unbound*.

ANSWER: Percy Bysshe **Shelley** <O'Rourke, British Literature>

15. People from this country intermarried with indigenous peoples which formed the Métis ethnicity. For 10 points each:  
[10] Name this European country, whose King Francis I commissioned an explorer from it, Jacques Cartier, to explore Canada.

ANSWER: **France**

[10] Many Métis settled around this river in Canada to farm. A namesake rebellion of this river was led by the Métis Louis Riel, who led some men in overtaking Upper Fort Garry during the Premiership of John MacDonal.

ANSWER: **Red River**

[10] The 1870 Manitoba Act addressed much of the Métis' concerns about the provisional government when it absorbed the North-West Territory and this other territory into Canada. The British had sold Canada the land of this territory in 1868.

ANSWER: **Rupert's Land** <Bunker, Other History>

16. French intellectual Bernard-Henri Levy wrote a book about traveling to America in the steps of this thinker. For 10 points each:

[10] Name this Frenchman who wrote about America after being sent there to study its prisons with Gustave de Beaumont. In that book, this thinker suggested that the country's government could lead to a soft despotism of tyranny of the majority.

ANSWER: Alexis de **Tocqueville**

[10] Tocqueville's namesake effect suggests that the probability of one of these events rises as living standards increase.

Tocqueville's observation of the French one of these events in 1789 likely informed this view.

ANSWER: **revolutions** [prompt on answers such as "political upheaval"]

[10] This political scientist's theory of revolutions differentiated between coups, civil wars, uprisings and "great revolutions" such as the French Revolution. In his book *From Mobilization to Revolution*, he applies political process models to understanding collective action.

ANSWER: Charles **Tilly** <Bunker, Political Science>

17. An important shot of this film takes place in a pampas field, where two characters wait because they want to see a train go by. For 10 points each:

[10] Name this film about the childhood of Apu, which ends with his family leaving their ancestral village after the drowning of Durga. This 1955 film is the first by its director, who started making films thanks to Jean Renoir.

ANSWER: **Pather Panchali** [or **Song of the Little Road**]

[10] *Pather Panchali*, and the two later films from Satyajit Ray about Apu, were shot in this language. Ray was a pivotal member of the "parallel cinema" movement of this language, which arose in opposition to the popularity of Bollywood.

ANSWER: **Bengali** [or **Bangla**]

[10] Because the film was scored by Ravi Shankar, the soundtrack for *Pather Panchali* heavily featured this instrument from Hindustani classical traditions. Ravi Shankar also famously taught George Harrison how to play this instrument.

ANSWER: **sitar** <Tsai, Other Visual>

18. A bus encouraging a vote in favor of this action was heavily criticized for its inaccuracy. For 10 points each:

[10] Identify this action, which was voted for in a 2016 referendum called by then-Prime-Minister David Cameron. Nigel Farage is currently the head of a political party named for this action.

ANSWER: **Brexit** [accept any descriptive answers like **Britain leaving the EU**]

[10] Brexit wasn't the first time a territory voted to leave the EU; in 1982 this polity's Siumut party led a successful referendum campaign to leave the EU--in large part to protect its fisheries.

ANSWER: **Greenland** [or **Grønland** or **Kalaallit Nunaat**]

[10] Brexit could make it harder for future potential immigrants from this country, which saw a wave of migration to the UK after it joined the EU in 2004. People from this country make up the UK's largest foreign-born community, and its language is the second most commonly spoken in England.

ANSWER: **Poland** [or **Polska**] <Thompson, Other Academic>

19. This city was the site of a proposed building named the "Leaning Tower of Pizza," which was to be built by Taliesin Associated Architects. For 10 points each:

[10] Name this Midwestern city, which is also the site of a large blue zigzagging Verizon cell phone tower designed by Tom Monaghan's architects as a condition of its placement on his property, the headquarters of Domino's Pizza.

ANSWER: **Ann Arbor**, Michigan

[10] Monaghan wanted to build the world's largest one of these objects in Ann Arbor, but his plans were squashed. America's largest one of these structures is located in Effingham, Illinois, and is known as "The [one of these objects] at the Crossroads".

ANSWER: a **crucifix** [or a **cross**]

[10] Monaghan also constructed the campus of Ave Maria University around a large chapel in this state's planned city of Ave Maria, which lies just north of the Everglades.

ANSWER: **Florida** <Thompson, Geography>

20. Jökulsárlón ["yoe-kools-our-lohn"], a lake in southeast Iceland, sits at the base of one of these slow-moving masses of ice. For 10 points each:

[10] Name these landforms that form when the accumulation of snow exceeds the ablation of snow. The largest reservoir of Earth's freshwater is found in these landforms.

ANSWER: **glaciers**

[10] Jökulsárlón was produced by the Breiðamerkurjökull ["bray-thah-mehr-kur-yoe-kootl"] glacier undergoing this process as temperatures increased following the Little Ice Age. Despite this process's name, it does not actually involve backwards motion of the glacier.

ANSWER: glacial **retreat**

[10] Jökulsárlón is located just east of the Skeiðarársandur ["skay-thar-our-sander"], a large sandy plain which is regularly affected by these events, which occur when volcanic eruptions or other geothermal activity under ice caps cause an increase in pressure and melt rate.

ANSWER: **jökulhlaups** [or **glacial outburst floods**; prompt on **floods**, be generous with pronunciation] <Phadnis, Earth Science>

21. The Manhattan Project was not only located in Manhattan. For 10 points each:

[10] The Manhattan Project led to Enrico Fermi building the first controlled, self-sustaining nuclear reactor under Stagg Field, a university football stadium in this large Midwestern city.

ANSWER: **Chicago**

[10] The second artificial nuclear reactor was built at the Clinton Engineer Works in this Tennessee town, where the "Calutron Girls" separated uranium isotopes for the Hiroshima bomb. A National Laboratory here is home to the Titan and Summit supercomputers.

ANSWER: **Oak Ridge** [accept **Oak Ridge National Laboratory**]

[10] In 1943, the Manhattan Project extended to Hanford, a condemned town in this state, where the first plutonium-producing reactor was built and went on to produce most of the warheads for the US nuclear arsenal.

ANSWER: **Washington** <Bakal, American History>

22. A botched self-abortion kills April in a novel by this author in which the dullness of suburban life leads both Frank and April to cheat on each other before and after an aborted move to Paris. For 10 points each:

[10] Name this author. The first line of this author's *The Easter Parade* declares that, because of their parents divorce, neither of the Grimes sisters would have happy lives.

ANSWER: Richard **Yates**

[10] Much of John Cheever's writings detail the drudgery of the suburbs, including a story in which Neddy Merrill travels through his neighborhood in this manner. Gene is the only person to witness Finny's record-breaking performance of this activity in John Knowles' *A Separate Peace*.

ANSWER: **swimming** [accept "The **Swimmer**"]

[10] Conrad's attempted suicide interrupts the suburban life of the Jarretts in Judith Guest's *Ordinary People*, which is set in this state. Carl Sandburg described this state's biggest city as the "hog butcher of the world."

ANSWER: **Illinois** <Laurie, American Literature>