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## TOSSUPS

1. Daniel Dennett argued that digger wasps lack this capacity in his book *Elbow Room*, and Epicurus unified this concept with atomism via the "swerve". While Desiderius Erasmus defended this concept, Martin Luther argued that its existence would deny the omnipotence of God. Compatibilists such as Dennett believe that this concept can coexist with (\*) determinism. This concept was seen to be incompatible with the Calvinist doctrine of predestination. For 10 points, name this concept that describes the human ability to make their own choices.

ANSWER: free will [or liberum arbitrium]

2. A supporter of this movement was killed in Alton, Illinois after he criticized the ironically-named judge Luke E. Lawless in his newspaper. A preacher who supported this social cause secretly shipped guns known as "Beecher's Bibles" to fellow supporters. Petitions about this cause were automatically ignored by Congress in a controversial "gag rule" of the early 19th century. Another of its supporters declared "I will not retreat a single inch- AND I WILL BE (\*) HEARD" in his newspaper *The Liberator*. William Lloyd Garrison was a supporter of, 10 points, what social cause partly realized by the Emancipation Proclamation?

ANSWER: abolitionism [or abolition of slavery; or anti-slavery; accept equivalent answers that mention opposing slavery; prompt on "Free Soil": prompt on "popular sovereignty"]

3. One number in this musical asks "Where is the leader who will save us and be the first man to be shot?" That number begins with a peddler complaining about being "hood-blinked!" and "ham-bushed!" after he is caught in a liaison with a girl with an obnoxious laugh who sings "I Cain't Say No." Hugh Jackman starred in a 1998 London Revival of this musical. Two characters in this musical sing a reprise of (\*) "People will Say We're in Love" after a basket auction scene. This musical has a "smelling salt"-induced dream ballet sequence in which Jud kills Curly to the horror of Laurey. For 10 points, name this first Rodgers and Hammerstein musical about cowboys and farmers in the title state "where the wind comes sweeping down the plain."

ANSWER: Oklahoma!

4. Two boys in this novel bleach their hair to disguise themselves while hiding in an abandoned church. The narrator of this novel goes to a drive-in where he meets Cherry, who tells him that "things are rough all over." A grieving Dallas Winston robs a liquor store with an empty gun and gets shot in this novel. (\*) Two-Bit and Sodapop participate in a rumble in this novel. Near the end of this novel, the narrator finds a note from Johnny that quotes a Robert Frost poem telling him to "stay gold." For 10 points, name this S.E. Hinton novel in which Ponyboy gets caught in the middle of a war between the Socs (SO-shez) and the Greasers.

ANSWER: *The* Outsiders

5. This commodity is produced by the Sonangol Group, which currently generates a majority of the Angolan government's annual revenue. In early 2015 a company producing this commodity became the center of a bribery scandal that damaged president Dilma Rousseff's (ROO-seffs) reputation in Brazil. A 2014 crash in the price of this commodity has caused large budget deficits for countries like (\*) Nigeria and Venezuela. North Dakota has the lowest unemployment rate in the U.S. because large amounts of natural gas and this commodity are produced there via fracking. For 10 points, name this commodity used to make gasoline.

ANSWER: oil [or crude oil or petroleum; prompt on "gasoline" or "gas" or "natural gas" or "fossil fuels" or "fuel"]

6. Thomas Mann fictionalized this author in a novel titled after one of this author's characters "in Weimar." According to urban legend, this author triggered a wave of copycat two-pistol suicides across Europe with a novel he wrote in which the title character recites verses from Ossian to his lover, who is married to Albert. In addition to writing that epistolary novel, this author also wrote a play whose title scientist and lover of (\*) Gretchen is followed home by a poodle, which turns out to be the disguised Mephistopheles (MEH-fuh-STAH-fuh-leez). For 10 points, name this *Sturm und Drang* author of *The Sorrows of Young Werther* and the two-part tragedy *Faust*.  
ANSWER: Johann Wolfgang von Goethe (GUR-tuh)

7. This region is the site of the balloon-based BOOMerang experiment, as well as one which embeds strings of photomultipliers in the ground to detect neutrinos. This region was the location of the Nimrod expedition, which sought to reach its approximate center. In 2013 a Russian team in this region accidentally introduced anti-freeze into a massive underground (\*) lake here via a two-mile-deep borehole. This site of the IceCube Observatory is the base of the McMurdo station, its largest human settlement, where you can observe this region's sizable penguin population. For 10 points, name this continent that encircles the South Pole.  
ANSWER: Antarctica [accept South Pole or Lake Vostok or East Antarctic Ice Sheet or Ross Island or Ross Ice Shelf or Ross Sea]

8. In 1984 this country's new leader controversially justified recent ethnic rioting by declaring "when a big tree falls, the earth shakes." That same year, a gas leak at a Union Carbide plant killed thousands of people in this country's city of Bhopal. This country's government sterilized over 8 million civilians during a period of dictatorial rule known as The Emergency. After this country's military partly destroyed the Golden Temple of (\*) Amritsar, its prime minister was assassinated by her Sikh bodyguards in 1984. For 10 points, name this country once led by Rajiv and Indira Gandhi.  
ANSWER: India [or Republic of India; or Bharatiya Ganarajya]

9. This poet states that "it's not easy to know what is true for you or me/at twenty-two, my age" in response to the instruction to "go home and write a page tonight" and "let that page come out of you--then, it will be true." This author wrote a poem whose speaker says that "life for me ain't been no crystal stair." This poet of (\*) "Theme for English B" and "Mother to Son" proposes festering like a sore, drying up "like a raisin in the sun," and exploding as possible answers to the query "What happens to a dream deferred?" For 10 points, name this African-American author of "Harlem," the foremost poet of the Harlem Renaissance.  
ANSWER: Langston Hughes [or James Mercer Langston Hughes]

10. In the 1920s, the deer population on a plateau above this river increased from 4,000 to 100,000 due to government mismanagement, making it a classic case study on carrying capacity. The Kaibab (KAY-bub) squirrel lives on one side of this river, while the genetically distinct Albert squirrel lives on the other. Oftentimes, this major river no longer flows into the ocean because most of its water is diverted into the (\*) Imperial Valley for irrigation. The Glen Canyon Dam altered this river's ecology by creating Lake Powell, while Lake Mead was created downstream by the Hoover Dam. For 10 points, name this river that flows through the Grand Canyon.  
ANSWER: Colorado River

## HALFTIME

11. The fundamental theorem of algebra is equivalent to stating that these numbers are algebraically closed. Raising these numbers to the n-th power multiplies their argument by n in de Moivre's (de MWAV's) formula. These numbers can be plotted as points on an Argand diagram. Hamilton extended these numbers to three dimensions in the form of quaternions. Euler's ("OIL"-er's) formula expresses the namesake exponential function of these numbers as a sine and cosine component. The namesake (\*) conjugate of these numbers is their reflection over the real axis. For 10 points, name these numbers that have both a real part and an imaginary part.  
ANSWER: complex numbers [prompt on "C"; do not accept "imaginary numbers"]

12. This speech describes wise men who build a house on rock so that it does not fall when the rain and wind come. This speech repeatedly gives conflicting instructions that begin "You have heard it said" in a section that follows a description of its audience as the "salt of the earth" and the "light of the world." This text notes (\*) "Blessed are the meek, for they will inherit the earth" in a section called the Beatitudes. This teaching from the Gospel of Matthew is contrasted with a similar oration "on the Plain" in the Gospel of Luke. For 10 points, identify this discourse given by Jesus at the title high place.

ANSWER: Sermon on the Mount [accept Beatitudes; prompt on "Gospel of Matthew" before "Matthew"; prompt on "Bible"; do not accept "Sermon on the Plain"]

13. This emperor crowned Tigranes VI ("the 6th") as a client king after his general Corbulo pushed the Parthians out of Armenia. This man sent his general Vespasian (veh-SPAY-zhun) to quell the first Jewish revolt and destroy the Second Temple in Jerusalem. After his governors Vindex and Galba revolted in Gaul and Hispania respectively, he committed (\*) suicide, leading to the Year of the Four Emperors. This last emperor of the Julio-Claudian Dynasty succeeded his grand-uncle Claudius. For 10 points, name this emperor who supposedly fiddled during the Great Fire of Rome.

ANSWER: Nero [or Nero Claudius Caesar Augustus Germanicus; or Lucius Domitius Ahenobarbus]

14. An artist from this country developed the "superflat" technique and is currently partnered with Vans to make some cool shoe designs. James Whistler drew on aspects of this country's culture for his piece in *Rose and Silver*. Fifty-three stations from this country were depicted in a series of (\*) woodblock prints. A mountain is seen in the background of a painting from this country that more prominently depicts a huge wave about to engulf two boats. For 10 points, name this country where Hokusai painted *The Great Wave off Kanagawa* in his *Thirty-six Views of Mount Fuji* series.

ANSWER: Japan [or Nihon-koku; or Nippon-koku]

15. This goddess had two sons named Philomelus and Plutus with her lover Iasion, whom Zeus killed with his thunderbolt because her back was covered with mud. While disguised as an old woman named Doso, she visited a king named Celeus and attempted to make his son Demophon immortal. This goddess made Triptolemus a priest of the (\*) Eleusinian Mysteries. She accidentally ate the shoulder of Pelops at the feast of Tantalus. This goddess allowed a global famine while she searched for her daughter, who had been abducted by Hades (HAY-deez). For 10 points, name this mother of Persephone (per-SEH-fo-nee), the Greek goddess of agriculture.

ANSWER: Demeter [or Damater]

16. This political party lost popularity on Black Wednesday in 1992, when its country was forced to abandon a fixed exchange rate due to currency speculation by the investor George Soros. This party came to power *after* the Winter of Discontent, and stayed in power for nearly two decades until its prime minister John Major lost in 1997. In the 1980s, this party promoted the (\*) privatization of the coal industry, and gained popularity due to Britain's victory during the Falklands War. Margaret Thatcher was a prime minister from, for 10 points, what British political party that traditionally opposes Labour?

ANSWER: Conservative Party [or Conservative and Unionist Party; or Tories]

17. These systems are used to model the cantilevers of atomic force microscopes as they measure a sample. These systems can be solved exactly by using elliptic integrals on the second order differential equation that describes them. Hermite polynomials can be used to describe a quantum analogue of these systems, which can be simplified by replacing a sine term using the small-angle approximation. Driving one of these systems at its (\*) resonant frequency can increase their amplitude, and they experience a restoring force proportional to their displacement according to Hooke's law. For 10 points, name these systems, exemplified by pendulums and springs.

ANSWER: simple harmonic oscillators [prompt on springs or pendulums before mentioned]

18. A Renaissance composer from this country wrote a motet for forty voices titled *Spem in alium*. Monarchs of this country commissioned pieces such as the coronation anthem "Zadok the Priest" and the wind band suite *Music for the Royal Fireworks* from its naturalized citizen George Frideric (\*) Handel. A composer from this country depicted his friend Augustus Jaeger in the "Nimrod" movement of his *Enigma Variations* and included a piece popular at graduations in the first of his *Pomp and Circumstance* marches. Edward Elgar hails from, for 10 points, what country where *Water Music* was premiered on the River Thames?

ANSWER: England [or Great Britain; or the United Kingdom; or the U.K.; or the United Kingdom of Great Britain and Northern Ireland]

19. Type of work and author required. One of *these poems* by *this author* calls its subject an "ever-fixed mark" and claims that "Love is not love / Which alters when it alteration finds." An entry in this set of poems discusses a woman with "dun" breasts and "black wires grow[ing] from her head." Many of these poems are dedicated to an unknown "Fair Youth," and the 130th of these poems begins "My (\*) mistress' eyes are nothing like the sun." The 18th of these poems notes that "rough winds do shake the darling buds of May" in response to the rhetorical question "Shall I compare thee to a summer's day?" For 10 points, name this set of 154 poems written by the author of *King Lear*.

ANSWER: sonnets by William Shakespeare [accept equivalent answers such as Shakespearean sonnets; do not prompt on partial answer]

20. A form of this phenomenon allows beta and gamma males of the isopod species *P. sculpta* to find mates. The typical relationship in this phenomenon is reversed in its Mertensian form, which is favored for organisms who are too effective as predators. This phenomenon is used by plants to pseudocopulate with pollinators, and when it is used by a group with aposematic coloring it is termed (\*) Mullerian (moy-LAIR-ian). Organisms that exhibit the Batesian (BATES-ian) form of this phenomenon lack the unfavorable stimulus of their targets, but bear similar markings to confuse predators. For 10 points, name this phenomenon where one organism attempts to pass as another.

ANSWER: mimicry [accept word forms such as mimicking; accept intersexual mimicry, Mertensian mimicry, Emsleyan mimicry, Mullerian mimicry, or Batesian mimicry]

**END OF REGULATION, PROCEED ONLY IF TIED**

21. The partial variety of this property can be described with the Stokes vector, and distance traveled in an electric field can impart increasing amounts of this property in the Faraday effect. This property can be created at an angle defined as the arctangent of two indices of refraction, and the intensity of this property can be calculated as the cosine squared of angle. This property described by Malus' law and (\*) Brewster's angle is the relative directions of the E and B fields of a light wave, and can be either spherical, elliptical, or linear. For 10 points, name this property that restricts the motion of a wave.

ANSWER: polarization

22. In one of this man's plays, the relationship between Catherine and the illegal immigrant Rodolpho angers Eddie Carbone, who fights Rodolpho. In another play by this man, Joe Keller struggles with the guilt of killing 21 men by knowingly selling faulty airplane parts during World War II. In addition to *A View From the Bridge* and (\*) *All My Sons*, this man wrote a play in which Uncle Ben strikes it rich mining diamonds in Alaska, contrasting him with the main character, who kills himself in a car crash to provide insurance for his sons. For 10 points, name this author who created Happy, Biff, and Willy Loman in his *Death of a Salesman*.

ANSWER: Arthur Miller [or Arthur Asher Miller]

## BONUSES

1. Despite winning 13% of the popular vote in the 2015 British general elections, this party only won a single seat in the House of Commons. For 10 points each:

[10] Name this right-wing political party that wants Britain to leave the European Union.

ANSWER: United Kingdom Independence Party [or UKIP; prompt on "Independence Party"]

[10] The UK Independence Party only won one seat because Britain uses this type of voting system, where an election is automatically won by whoever gains the most votes, even without a majority. It's also called a "winner takes all" system.

ANSWER: first-past-the-post [plurality voting system] [prompt on "plurality"]

[10] In American presidential elections, the first-past-the-post system is used to choose electors for this institution, which technically elects the president.

ANSWER: Electoral College

2. At one point, it is suggested that although this phrase is true, "there may still be caves for thousands of years in which his shadow will be shown." For 10 points each:

[10] Name this three-word phrase uttered by a madman after smashing a lantern in a marketplace. It symbolizes the end of objective Christian moral values.

ANSWER: "God is dead" [or "Gott ist tot"]

[10] This philosopher posited that the will to power would be responsible for rebuilding values after the death of God. This formulator of the Übermensch wrote *Thus Spake Zarathustra*.

ANSWER: Friedrich Wilhelm Nietzsche

[10] This other German philosopher took "God is dead" to signify the inevitable death of metaphysics and philosophy. This author discussed "destruktion" in his *Being and Time*.

ANSWER: Martin Heidegger

3. This river's basin contains the only-known habitat of the endangered okapi (**oh-KAH-pee**), whose brown coat contrasts with the zebra-like stripes on its front and hind legs. For 10 points each:

[10] Name this long river in Africa that runs between the two national capitals of Brazzaville and Kinshasa.

ANSWER: Congo River [or Zaire River]

[10] The emergence of the Congo River may have originally caused the speciation of the bonobo, which only lives south of the river, from this other species of ape, which only lives north of the river. This species has long been studied by Jane Goodall.

ANSWER: chimpanzees [or common chimpanzees or robust chimpanzees]

[10] The lower course of the Congo River is largely unnavigable due to the existence of this 200-mile-long series of rapids, which are named for a 19th-century explorer.

ANSWER: Livingstone Falls

4. This man's vice presidential candidate James Stockdale infamously opened a TV debate with the phrase "Who am I? Why am I here?" For 10 points each:

[10] Name this third-party candidate, a billionaire who received 18.9% of the popular vote in the 1992 U.S. presidential election.

ANSWER: Ross Perot (**puh-ROH**) [or Henry Ross Perot]

[10] The 1992 election was won by this Democratic candidate, whose presidency later became mired in the Monica Lewinsky scandal.

ANSWER: Bill Clinton [or William Jefferson Clinton; or William Jefferson Blythe III]

[10] During a TV debate in the election, Perot criticized this landmark 1992 trade agreement by telling voters to listen for the "giant sucking sound" of American jobs heading to Mexico.

ANSWER: NAFTA [or North American Free Trade Agreement]

5. Two members of this family are the title characters of *Franny and Zooey*. For 10 points each:

[10] Name this recurring family that shows up in works like *Uncle Wiggily in Connecticut*, in which Eloise mourns the death of a member of this family named Walt.

ANSWER: Glass family

[10] This author of stories about the Glass family is thought to be represented by Buddy Glass. This author of *Nine Stories* wrote *The Catcher in the Rye*.

ANSWER: Jerome David Salinger

[10] Buddy Glass is the purported author of *An Introduction* to this character, published in a volume alongside *Raise High the Roof Beam, Carpenters*. This character shoots himself in his hotel room after talking with Sybil Carpenter about banana-fish.

ANSWER: Seymour Glass [prompt on "Glass"]

6. This man became president after the failed June Days Uprising, which began in response to the Second Republic's plans to close down the National Workshops. For 10 points each:

[10] Name this man who ruled France as emperor for much of the late 19th century. He was the nephew of a previous French emperor.

ANSWER: Napoleon III [or Louis-Napoleon Bonaparte; do not prompt on "Napoleon"]

[10] The June Days Uprising occurred during this year of many revolutions throughout Europe.

ANSWER: 1848

[10] Napoleon III ruled France until 1871, when he was captured alongside Marshal Patrice McMahon at this disastrous battle.

ANSWER: Battle of Sedan

7. This technology's side-scan variety is used to scan wide swathes of the ocean floor. For 10 points each:

[10] Name this technology, which comes in active and passive forms. Its use is impeded by the thermocline.

ANSWER: sonar [accept side-scan sonar or active sonar or passive sonar; accept Sound Navigation And Ranging; do not accept "radar"]

[10] This ability is often compared to sonar because it can detect objects using sound. Animals that possess this ability can use it to detect flying insects, as in bats.

ANSWER: echolocation

[10] This organ is found in cetaceans like dolphins, which use it in echolocation. This fatty organ is used to transmit sound, which is then picked up in the lower jaw.

ANSWER: melon

8. This process is responsible for the gradual creation of neutrons in the core of a growing star as outside pressure continues to increase. For 10 points each:

[10] Name this type of inverse beta decay in which the namesake particles are pushed toward the nucleus to decrease atomic number.

ANSWER: electron capture

[10] This process is responsible for providing the outward energy that stabilizes a star. Mature stars use the CNO cycle in this process, which merges small nuclei together to create energy.

ANSWER: nuclear fusion

[10] This isotope fuses with a single proton to produce helium-3 in its namesake burning, part of the proton-proton chain. This isotope of hydrogen contains one neutron and is found in heavy water.

ANSWER: deuterium [or deuterons; or D; prompt on "2H"; prompt on "heavy hydrogen"]

9. This character finds himself in a long-running feud between the Grangerfords and Shepherdsons, and later becomes entangled in a con act with a Duke and a Dauphin. For 10 points each:

[10] Name this character who escapes the clutches of Miss Watson and sails the Mississippi River with the slave Jim.

ANSWER: Huckleberry Finn [accept either underlined name; accept *The Adventures of Huckleberry Finn*]

[10] This American author wrote both *The Adventures of Huckleberry Finn* and its prequel *The Adventures of Tom Sawyer*.

ANSWER: Mark Twain [or Samuel Langhorne Clemens]

[10] This semi-autobiographical travel novel by Twain follows his exploits in the Wild West with his brother Orion. It was published as a prequel to his first book *Innocents Abroad*.

ANSWER: Roughing It

10. In Haida mythology, a trickster god with this animal form uses its tongue to coax the first humans out of a clam shell. For 10 points each:

[10] Name this animal, two of which serve as Odin's messengers under the names Huginn and Muninn, or Thought and Memory.

ANSWER: raven [do not accept "crow"]

[10] This hero's death at the hands of Lugaid is foreshadowed when a raven lands on his shoulder. This Irish warrior singlehandedly defeats Queen Medb's (**MAYVE's**) army at the Cattle Raid of Cooley.

ANSWER: Cú Chulainn (coo HULL-en) [or Sétanta]

[10] Memory is also personified by Mnemosyne, a Greek Titaness who is mother to these nine goddesses that collectively name the discipline of the arts concerned with sound.

ANSWER: Muses [or Mousai]

11. This event began after the New York police raided a gay bar in Greenwich Village. For 10 points each:

[10] Name these 1969 "riots" that are often considered a watershed moment for the gay rights movement in the United States.

ANSWER: Stonewall Riots [accept answers like Stonewall Uprising or Rebellion]

[10] Exactly one year after the Stonewall Riots began, activists throughout the country led the first of these parades, which commemorate the riots' anniversary and celebrate LGBT culture.

ANSWER: gay pride parades [accept anything that mentions pride]

[10] Another pivotal moment in the American gay rights movement was the 1998 torture and murder of this Wyoming college student, who names a 2009 act extending hate crime law to cover crimes committed on the basis of sexual orientation.

ANSWER: Matthew Shepard [or Matt Shepard; or Matthew Wayne Shepard; accept Matthew Shepard and James Byrd, Jr. Hate Crimes Prevention Act]

12. In the beginning of this book, a group of students tour a laboratory where the Bokanovsky process separates human embryos into different mental classes. For 10 points each:

[10] Name this dystopian novel by Aldous Huxley.

ANSWER: Brave New World

[10] In *Brave New World*, this strongly-principled character struggles to adapt to life in dystopian England after he leaves the Savage Reservation in New Mexico.

ANSWER: John the Savage

[10] At the end of *Brave New World*, John isolates himself in one of these buildings, where he whips himself every day before he finally succumbs to a mass orgy and commits suicide.

ANSWER: lighthouse



13. This man is spotted in the bushes with Paquette, whom he later finds out gave him syphilis. For 10 points each:

[10] Name this advocate of "metaphysico-theologo-cosmonigology." This man gets himself and his pupil sentenced to *auto-da-fé* after harping on the merits of optimism with a member of the Inquisition.

ANSWER: Doctor **Pangloss** [or Professor **Pangloss**]

[10] Pangloss appears in *Candide*, a novella by this French author who also wrote *Zadig*.

ANSWER: **Voltaire** [or François-Marie **Arouet**]

[10] Voltaire wasn't a very big fan of this later French Enlightenment author, calling this author's *Emile* a "hodgepodge of a silly wet nurse." Voltaire said this man's *Discourse on Inequality* made people want to walk on four paws like a beast.

ANSWER: Jean-Jacques **Rousseau**

14. The existence of more than one of these objects was a consequence of the Shapley-Curtis debate, which asked whether the entire universe was contained within a single one. For 10 points each:

[10] Name these large collections of stars which can exist as elliptical blobs or rotating spirals.

ANSWER: **galaxies** [accept **elliptical galaxies** or **spiral galaxies**]

[10] This group of galaxies includes the Large and Small Magellanic Clouds, the Andromeda galaxy, and our own, the Milky Way.

ANSWER: **Local Group** [prompt on "Virgo supercluster", "Local supercluster", or "Laniakea supercluster"]

[10] Every spiral galaxy in the Local Group except Triangulum has one of these structures. These structures are found in 2/3 of all spiral galaxies in the universe, and can be found on the bottom half of the tuning fork diagram.

ANSWER: **bar** [accept **barred spiral**]

15. This painting was acquired by Francis I and then the Louvre, leading Janson's *History of Art* to claim "To some extent its fame is a product of its ownership." For 10 points each:

[10] Name this icon of art history, a Leonardo da Vinci portrait of a woman with an "enigmatic smile".

ANSWER: the **Mona Lisa** [accept **Monna Lisa**, **La Gioconda**, **La Joconde**]

[10] This avant-garde artist painted a mustachioed version of the *Mona Lisa* with the derisive title *L.H.O.O.Q.*, and synthesized Cubist and Futurist influences for his controversial *Nude Descending a Staircase No. 2*.

ANSWER: Marcel **Duchamp**

[10] In the Louvre, the *Mona Lisa* hangs directly across from *The Wedding at Cana*, a massive painting by this Venetian Renaissance painter. His Last Supper was renamed to *The Feast in the House of Levi*.

ANSWER: Paolo **Veronese** [accept Paolo **Calari**]

16. This class of people dominated the Taira and Minamoto clans, which fought each other during the 12th-century Genpei War. For 10 points each:

[10] Name this Japanese class of warrior nobles who were known for their skill at swordsmanship and martial arts.

ANSWER: **samurai**

[10] The samurai arose as a distinct class during this classical period of Japanese history, which lasted from the 8th to 12th centuries. The Fujiwara clan controlled the weak imperial court in this period, which was ended by the Kamakura Shogunate.

ANSWER: **Heian** Period

[10] Samurai traditionally followed this "way of the warrior", an ethical code that was similar to the western concept of chivalry.

ANSWER: **bushido**

17. This group collaborated with Mary J. Blige for the remix of their single "F for You," the fourth song on their debut album *Settle*. For 10 points each:

[10] Name this English electronic music band of the brothers Howard and Guy Lawrence, whose most popular singles include "Latch" and "Omen."

ANSWER: **Disclosure**

[10] Both "Latch" and "Omen" feature Sam Smith, who won the 2014 Grammy Award for Record of the Year for this gospel ballad, which begins, "Guess it's true, I'm not good at a one-night stand."

ANSWER: **"Stay with Me"**

[10] Disclosure's recent single "Magnets" features this singer, who contributed the song "Yellow Flicker Beat" to the original soundtrack for the film *The Hunger Games: Mockingjay – Part 1*.

ANSWER: **Lorde** [or Ella Marija Lani **Yelich-O'Connor**]

18. This is the only force able to change the flavor of quarks. For 10 points each:

[10] Name this third strongest of the four fundamental forces, which turns neutrons into protons in beta-minus decay.

ANSWER: **weak** nuclear force [or **weak** interaction]

[10] The relatively unimportant neutral vertex of the weak force is responsible for mediating scattering between these particles, which can oscillate between three flavors.

ANSWER: **neutrinos**

[10] The weak force is mediated by these two particles, which have masses on the scale of iron nuclei. One of these particles can have a charge of either positive or negative one, while the other has no charge. Name either.

ANSWER: **W** (gauge) **bosons** or **Z** (gauge) **boson** [accept either thing; **W-plus** or **W-minus** gauge **bosons**]

19. Monks of this religion traditionally wear face masks and carry brooms with which they sweep the ground in front of them. For 10 points each:

[10] Name this religion whose adherents observe five vows, or *yamas*, of which four are truthfulness, refusal to steal, chastity, and lack of material possession.

ANSWER: **Jainism** [or **Jain**; or **Jain** dharma; or word forms]

[10] Central to Jainism is the belief in nonviolence, which is usually translated as this Sanskrit word.

ANSWER: **ahimsa** [do not accept "himsa"]

[10] The Jain festival of Paryushan is devoted to this activity, which is also observed by Muslims during daylight hours of Ramadan.

ANSWER: **fasting** [or **not eating**; or word forms; or obvious equivalents]

20. The orchestration of this composer's *Pavane for a Dead Princess* gives the melody to a solo horn. For 10 points each:

[10] Name this French composer who called for the same two melodies to be repeated over a constant snare drum rhythm in his *Boléro*.

ANSWER: Maurice **Ravel** [or Joseph-Maurice **Ravel**]

[10] A repetitive woodblock beat provides the backdrop to *Short Ride in a Fast Machine*, a piece by this composer whose *On the Transmigration of Souls* commemorates the victims of 9/11.

ANSWER: John **Adams** [or John Coolidge **Adams**; do not accept "John Luther Adams"]

[10] Much of this composer's three *Gymnopédies* repeat the same melody and bass line throughout each piece.

ANSWER: Erik **Satie** [or Éric Alfred Leslie **Satie**]

21. The Vikings went on all sorts of wacky misadventures throughout the medieval world! For 10 points each:

[10] Around the year AD 1000, the settlement of Vinland was briefly established in modern-day Newfoundland by this Viking explorer, the son of Erik the Red.

ANSWER: Leif Erikson [or Leif the Lucky or Leifur Eiríksson; prompt on "Erikson"]

[10] In the 9th century, a coalition of Viking warriors known as the "Great Heathen Army" conquered most of England; they were only stopped at the Battle of Edington by this most famous king of Wessex.

ANSWER: Alfred the Great

[10] In the 10th century, the Byzantine emperor Basil II formed this elite unit of imperial bodyguards, which mostly employed Viking immigrants.

ANSWER: Varangian Guard