

1. This river's "Breaks" region was the hideout for a gang of cattle rustlers targeted by an enforcement group nicknamed "Stuart's Stranglers." Animals crossing this river appear in paintings by Charles Marion Russell, whose name is used for a wildlife refuge on the north bank of this river upstream of the U. L. Bend. This river is formed by the confluence of the Gallatin, Madison, and (*) Jefferson Rivers northwest of Yellowstone National Park. Fort Mandan was built along this river by the Lewis and Clark expedition, which used this river to travel across the present-day Dakotas. For 10 points, name this longest tributary of the Mississippi, which joins it at St. Louis.

ANSWER: Missouri River

<Hoppes>

2. A version of this experiment showing the principle of complementarity was performed by Afshar. Placing a solenoid on one side of the apparatus in this experiment was used to demonstrate the Aharonov-Bohm effect. In this experiment, time averaging the Poynting vectors shows that the maximum resulting intensity is equal to four times the incident intensity. In this experiment, plane waves turn into cylindrical waves. When the difference in path length is equal to an (*) integer multiple of the wavelength in this experiment, constructive interference occurs. This experiment demonstrated the wave nature of light. For 10 points, name this experiment in which a series of fringes appears on a film after light is shone through a namesake apparatus.

ANSWER: Young's double-slit experiment [accept either underlined portion]

<Voight>

3. This composer described a method by which two opposing "poles of attraction" create drama within a piece in his *Poetics of Music*. Late in his life, this composer began using tonal serialism in works such as *The Flood* and his *Requiem Canticles*. In his earlier neoclassical period, this composer wrote a choral symphony for the fiftieth anniversary of the Boston Symphony Orchestra, whose third movement is a setting of the 150th (*) Psalm. This composer of the *Symphony of Psalms* wrote a ballet about a puppet who comes to life and pursues a ballerina, as well as a ballet that caused a riot at its 1913 premiere in Paris. For 10 points, name this Russian composer of *Petrushka*, *The Firebird*, and *The Rite of Spring*.

ANSWER: Igor Fyodorovich Stravinsky

<Thompson>

4. This leader's daughter was the dedicatee of Widukind of Corvey's history of his reign. This ruler had his half-brother killed in Eresburg and quelled a rebellion at the Battle of Andernach. He consolidated his power at Diet of Auerstadt and appointed Bruno I as Archbishop of Cologne, after Conrad the Red defected. After deposing Adalbert and his father Berengar II, he took Adelaide as his wife. Eberhard of (*) Franconia engineered two rebellions against him, conspiring with Henry and Thankmar. He was crowned by John XII after conquering Italy, and was the son of Henry the Fowler. For 10 points, name this ruler who defeated the Magyars at the Battle of Lechfeld and is considered the first Holy Roman Emperor.

ANSWER: Otto the Great [or Otto I; prompt on "Otto"]

<Ueda>

5. **Spencer Tracy made his Broadway debut in this play, which opens with a scene in which one character is continually interrupted before being advised to take the Pennsylvania, rather than the Amelia. The second act climaxes when one character reveals that she has burned a manuscript, thus making it impossible to produce biogene and the omega enzyme. One character in this work mistakenly believes that (*) Marius and Sulla were lovers; that character employs Fabry, Dr. Hallemeier, and Dr. Gall. This play begins with Helena Glory arriving at Harry Domin's factory and ends with Alquist, the last survivor, watching Primus and Helena fall in love. For 10 points, identify this 1920 play in which humans are replaced with automatons, a work of Karel Capek (CHA-peck).**

ANSWER: R.U.R. [or Rossum's Universal Robots]

<Carson>

6. **Berkeley researchers linked this process to the cingulate cortex after asking subjects to describe their fMRI chamber. One test of this phenomenon tested it against self-perception theories by forcing subjects to write essays under "choice" and "no choice" conditions. Aronson identified this process in individuals forced to undergo initiation rituals. In an experiment on this phenomenon, subjects (*) turned a peg for an hour and then reported to others that the task was interesting in exchange for either \$1 or \$20. This term was originally coined in a book about a UFO cult titled *When Prophecy Fails*, written by Leon Festinger. For 10 points, identify this psychological phenomenon denoting the friction caused by holding two conflicting ideas simultaneously.**

ANSWER: cognitive dissonance

<Mukherjee>

7. **During the games in honor of King Pelias, this person won a wrestling match against Peleus. This mortal's son was killed by Amphidicus and was one of the Seven Against Thebes; that son was Parthenopaeus. One of her suitors was killed after his mother Althea burned the log linked to his life. This woman and her lover were harnessed to Cybele's chariot after the goddess turned them into (*) lions for having sex in her temple. She was raised by a she-bear after her father exposed her on a hill as an infant, and became Hippomenes's lover after he threw three golden apples to distract her and win a footrace. Since she was the first to wound the Calydonian Boar, Meleager offered her its hide. For 10 points, name this mythical huntress and follower of Artemis.**

ANSWER: Atalanta

<Mukherjee>

8. **One person in this position resigned after banning the Beach Boys from playing on the National Mall. Another person in this cabinet position supported a proposal to set up a haven for Jewish refugees in Alaska, which was the subject of his undersecretary's Slattery Report. Thomas Ewing was the first person to serve in this post, which was also occupied by James Watt and Harold (*) Ickes. Another person resigned from this post after a series of articles written by Louis Glavis suggested that he was in the pocket of the Guggenheim family. That affair led to the firing of the head of the US Forest Service, Gifford Pinchot. For 10 points, identify this cabinet position held by Richard Ballinger, which is currently held by Ken Salazar.**

ANSWER: Secretary of the Interior

<Mukherjee>

9. **Some species of this phylum form filamentous hormogonia during reproduction. During dormancy, they create thick structures called akinetes. Stromatoliths are primarily composed of these organisms, which form heterocysts in order to perform nitrogen fixation. The evolution of these organisms triggered the Great Oxygenation Event, in which the Earth's atmosphere became oxidizing and oxygen-intolerant organisms went extinct. These organisms express the dye (*)** phycocyanin, and they are one of the most evolutionarily ancient organisms to contain photosystems I and II. These organisms are thought to be the precursors of modern chloroplasts in the endosymbiotic hypothesis. For 10 points, name this type of bacteria named for its blue-green appearance.

ANSWER: cyanobacteria [or cyanophyta; accept blue-green algae or blue-green bacteria before "blue-green", prompt after; prompt on "algae" or "bacteria"]

<Mukherjee>

10. **One of this author's protagonists gets into a car accident on his way to a squash match and is later held hostage by the man he hit, Baxter, who is disarmed and subdued after Daisy recites "Dover Beach". Another of his novels begins with the funeral of Molly Lane and ends with two of her rival lovers, Clive Linley and Vernon Halliday, carrying out a euthanasia pact. This author, who wrote about the neurologist Henry Perowne in (*) *Saturday*, penned a novel which ends with the narrator revealing that while Paul Marshall did marry Lola, Robbie Turner and Cecilia were never reunited.** For 10 points, name this contemporary British author of *Amsterdam*, who wrote about Briony Tallis in *Atonement*.

ANSWER: Ian Russell McEwan

<Mukherjee>

11. **Bodies in this structure are classified as C-type, S-type, and M-type based on composition. Objects in this region are perturbed by thermal photons in the Yarkovsky effect. The outer edges of this region contain D-type objects, which according to the Nice model were captured during the late heavy bombardment. Objects in this region are sorted into Hirayama families based on clumps in a proper inclination vs eccentricity plot. The frost line is found within this region, which contains a series of features created by (*) 4:1 and 5:2 resonances with a nearby massive body; those are Kirkwood gaps. This region contains Vesta, Ceres, and Pallas.** For 10 points, name this region between the orbits of Mars and Jupiter, which is filled with space rocks.

ANSWER: main asteroid belt [prompt on "asteroid" or "asteroid field"]

<Mukherjee>

12. **Astor Piazzolla developed the "new" genre of this dance, whose traditional pattern is known as the 8-count basic. The music for this dance is usually played by a bandoneon. Popularized by Rudolph Valentino in *The Four Horsemen of the Apocalypse*, its main moves include the boleó and sacada. In its "Golden Age," this dance was performed to the songs of Carlos Gardel. It was encouraged by the (*) Perón government, and it originated in the late 19th century in the underworld of Montevideo and Buenos Aires.** For 10 points, name this national dance of Uruguay and Argentina.

ANSWER: tango

<Magin>

13. **One group named for a date in this month stole Simon Bolivar's sword as part of its campaign of protest against the regime of Misael Borrero in Colombia. An uprising against the Ottomans named for this month was brutally suppressed in the Bulgarian Horrors. Power eventually shifted to Park Chung-hee as a result of a movement named for this month that overthrew Syngman Rhee. The slogan "All power to the Soviets" summarized a set of (*) writings named for this month that advocated withdrawal from World War I and an end to Bolshevik support of the Provisional government. Vladimir Lenin authored some "theses" named for this month, in which the American Civil War began and ended. For 10 points, name this month during which U.S. federal taxes are due to the IRS.**

ANSWER: **April**

<Weiner>

14. **In Sean O'Casey's *Shadow of a Gunman*, Donal Davoren quotes this work to describe two powers that "grasp this sorry scheme of things entire, and mould life nearer to the heart's desire". In one section of this work, the speaker posits "never blows so red the Rose as where some buried Caesar bled", while another section asserts "Destiny with Men for pieces plays" on a "Chequer-board of Nights and Days". It includes a stanza beginning "The (*) Moving Finger writes; and, having writ, moves on" and a stanza about the speaker's desire for "A Book of Verses underneath the Bough, A Jug of Wine, a Loaf of Bread – and Thou". For 10 points, identify this collection of poems in quatrains, translated by Edward FitzGerald from the Persian original by Omar Khayyam.**

ANSWER: the **Rubaiyat** of Omar Khayyam [also accept answers that specify that it's Edward FitzGerald's translation, since all the quotes are taken from that]

<Carson>

15. **One part of this object is aligned with Canopus while another is aligned with the sunset of the winter solstice. It stands next to an imprint of a foot in a glass enclosure. Its golden door is surrounded by six tablets and contains three pillars inside. A stripe of marble extends from one side of the silk and gold (*) cloth covering this structure. 360 pagan idols in this structure were destroyed, restoring it to the way Abraham and Ishmael had built it. This object stands about twenty meters from the Zamzam well. One of this object's corners contains the black stone, which is kissed by believers. For 10 points, name this black cube-shaped object located in the Grand Mosque in Mecca, circled repeatedly during pilgrimages.**

ANSWER: **Kaaba**

<Mukherjee>

16. **One artist from this country showed an orange crest pinned to the white robe of a martyred saint in his painting of Saint Serapion. A later artist from this country painted a triptych named for the color blue and included a ladder and a fish out of water in his childlike painting of a clown's birthday party. Another artist from this country painted a portrait of Pope (*) Innocent X that was adapted into Francis Bacon's *Screaming Pope*. That same artist from this home of the Escorial Palace included an exchange of keys in his *Surrender at Breda* and depicted himself wearing a red cross at an easel in a painting named for royal maids of honor. For 10 points, name this country home to the painters Francisco de Zurbaran and Diego Velazquez.**

ANSWER: Kingdom of **Spain** [or Reino de **Espana**]

<Bentley>

17. **The movement of one of these objects is compared to visions of different parts of a house in a proof of causality from Kant's *Critique of Pure Reason*. Locke's *Second Treatise of Government* compares one on a haphazard path to Algiers to a state destined for tyranny. Socrates's execution was delayed by the late return of one from Delos. An identity problem posits one of these objects which has each part of itself (*) replaced but still belongs to Theseus. An allegory describes the insane, frivolous, and directionless passengers on one of these vehicles. For 10 points, name this type of vehicle used in a Platonic metaphor describing society as one "of state" with its navigator thrown overboard, and in a medieval allegory describing one "of fools."**

ANSWER: ships [or boats]

<Jackson>

18. **One of this author's stories ends with the line "I had Barbara," implying that Mrs. Ansley had an affair with Mrs. Slade's husband Delphin. The up-and-coming Mrs. Lemuel Struthers appears in another of this author's novels, which depicts the van der Luydens as the pinnacles of society. In that novel by this author of "Roman Fever," the protagonist marries Mrs. Mingott's granddaughter (*) May Welland. This author wrote a novel about the relationship between Countess Ellen Olenska and Newland Archer, as well as a novel in which the infirmity of Zeena leads the title character to engage in an affair with Mattie, which culminates in a sledding accident. For 10 points, name this American author of *The Age of Innocence* and *Ethan Frome*.**

ANSWER: Edith Wharton [or Edith Newbold Jones]

<Carson>

19. **During one set of riots in this city, Marie Louisa of Savoy was killed. This site of the September Massacres was once ruled by an organization that held archbishop Georges Darboy hostage and had Jaroslaw Dabrowski as a member. This city was renovated by Baron (*) Haussman, and taxi cabs from this city supplied troops at the First Battle of the Marne. One revolt in this city was crushed by Adolphe Thiers. A king once proclaimed that this city was "well worth a mass." For 10 points, name this city where the Marquis de Lafayette led the storming of the Bastille during the French Revolution.**

ANSWER: Paris

<Hothem>

20. **A tandem version of this technique uses collision-induced dissociation to find the sequence of a peptide. One version of this technique equalizes the kinetic energy of the analyte fragments and measures their time-of-flight to distinguish them. An ionization process like MALDI or ESI is used to prepare samples undergoing this technique, and basic versions of these devices use perpendicular electric and magnetic fields to select particles by their (*) velocity. This technique's output is a series of peaks, each of which corresponds to a fragment of the compound being analyzed. For 10 points, identify this technique, which identifies compounds in a sample by analyzing their mass-to-charge ratios.**

ANSWER: mass spectrometry [accept mass spectroscopy]

<Mukherjee>

21. **This trait was the subject of the controversial Section 28 of the British Local Government Act. A reformer who wrote under the name “Numa Numantius” coined the term “Unring” for it, and it was celebrated by the Uranian Poets in England. Several of Wilhelm II's advisors were accused of it in the Eulenberg Affair. Several members of the SA, including Ernst (*) Rohm, were known to have this trait. One figure imprisoned for it wrote a letter to Lord Alfred Douglass from Reading Gaol entitled "De Profundis." Edward II was a noted practitioner of it, with Hugh Despenser and Piers Gaveston. For 10 points, identify this character trait for which Oscar Wilde was imprisoned.**

ANSWER: homosexuality [or obvious equivalents as either a trait or a practice]

<Mukherjee>

22. **The difference between the partial sum of this function and the natural log is one way of defining the Euler-Mascheroni constant. This function is used to prove that an ant crawling on a continuously growing rope will reach the end. The sum of this function from one to infinity over the integers is equal to the Riemann zeta function of 1. Its integral diverges when taken from one to infinity in accordance with the p series test, and its antiderivative is (*) $\ln(x)$ (EL en of x). This function's graph is a hyperbola whose branches are in the first and third quadrant and whose asymptotes are the x and y axes. This function taken over the natural numbers gives the harmonic series. For 10 points, name this function, which finds the reciprocal of a number.**

ANSWER: $1/x$ [or one over x; or one divided by x; or x to the negative 1; accept harmonic series at any time before mention; accept any letter instead of x; accept reciprocal until mention, prompt after]

<Mukherjee>

23. **The main character of one of this author's novels leaves the title location after having a vision of a skyscraper as the Tower of Babel. In another of his novels, Janey Williams becomes the secretary of the advertising executive J. Ward Morehouse. That novel collects song clippings and headlines in sections called (*) "newsreels" and uses stream-of-consciousness in sections called "The Camera Eye." He included the biographical sketch "The Body of an American" in a trilogy whose middle book takes place during World War I and whose final book depicts the opulence of the 1920s. For 10 points, name this American author of *Manhattan Transfer* whose novels *The 42nd Parallel*, *1919*, and *The Big Money* make up his *USA Trilogy*.**

ANSWER: John Roderigo Dos Passos

<Gupta>

24. **Men who fought at this battle included Raoul II of Tosny and Walter Giffard, two of the “companions” of the victor. The victor in this battle got Pope Alexander II to override a decision of the *witan*. In preparation for this battle, the victors landed at Pevensey although they had planned to land on the Isle of Wight. Battle Abbey was built on the site of this battlefield. The defenders in this battle were originally positioned on (*) Senlac Hill. The losing side had previously lost over a thousand housecarls at a battle that killed Tostig and Harold Hardrada; that earlier battle was fought at Stamford Bridge. It was chronicled in the Bayeux Tapestry and was a defeat for Harold Godwinson. For 10 points, name this 1066 victory for William the Conqueror.**

ANSWER: Battle of Hastings

<Bentley>

1. Sandra Fluke, a law student at this university, testified before Congress in February 2012 that its refusal to cover birth control as part of the student health plan caused financial hardship for many. For 10 points each:

[10] Name this Catholic university.

ANSWER: **Georgetown** University

[10] This conservative radio host lost many sponsors after he publicly called Fluke a "prostitute."

ANSWER: Rush **Limbaugh**

[10] Fluke cried while describing a friend with this medical condition who became infertile after her insurance refused to pay for the birth control used to treat it. It often co-occurs with diabetes, obesity, and hirsutism and is a common cause of irregular periods.

ANSWER: **polycystic ovary** syndrome [or **PCOS**; accept **Stein-Levinthal** syndrome, **polycystic ovary** disease, **functional ovarian hyperandrogenism**, **ovarian hyperthecosis**, or **sclerocystic ovary** syndrome]

<Wynne>

2. The final movement of classical symphonies was usually in this form. For 10 points each:

[10] Name this musical form, in which a main theme plays and is restated after every subsequent theme. It is commonly represented by the pattern A-B-A-C-A.

ANSWER: **rondo**

[10] This composer's opus 129 is a piano rondo and capriccio nicknamed "Rage Over a Lost Penny." During his late period, he composed the *Missa Solemnis* and the *Grosse Fugue*.

ANSWER: Ludwig van **Beethoven**

[10] Mozart included a "Rondo Alla Turca" in the final movement of his eleventh piece of this type. Beethoven composed thirty-two of them, including ones nicknamed "Appassionata" and "Moonlight."

ANSWER: **piano sonata** [prompt on "sonata"]

<Magin>

3. Jack London railed against the immigration of people from this country in his allegorical short story "The Unparalleled Invasion" and his essay "The Yellow Peril." For 10 points each:

[10] Name this country where Pearl Buck served as a missionary. Buck wrote about a native of this country who pulls a rickshaw to earn money for his wife O-Lan in *The Good Earth*.

ANSWER: Republic of **China** [or **Zhongguo**; or **Zhonghua** Renmin Gongheguo; accept People's Republic of **China** but do not accept "Taiwan" or "Formosa"]

[10] In this Amy Tan novel, four daughter-mother pairs, including chess prodigy Waverly Jong and her mother Lindo, play mahjong as they relate stories about their lives in China and America.

ANSWER: *The **Joy Luck Club***

[10] This five-part memoir by Maxine Hong Kingston includes sections about the heroics of Fa Mu Lan and about Kingston's own evasion of an arranged marriage with a mentally challenged boy who lugs around a box of pornography.

ANSWER: *The **Woman Warrior**: Memoirs of a Girlhood Among Ghosts*

<Jackson>

4. The average seek time of these devices is a measure of their speed. For 10 points

[10] Identify these usually magnetic media used to store data permanently. They contain rotating platters and read-write heads, and they commonly use the serial ATA or serial SCSI ("scuzzy") connection standards.

ANSWER: **hard disk** [or **hard drive** or **hard disk drive** or **HDD**; prompt on "secondary memory" or "memory"]

[10] This is the action of dividing a hard drive into several logical units or "slices." This action can be used to install more than one operating system onto a single drive.

ANSWER: disk **partitioning**

[10] This protocol is used to combine several hard drives into a single logical unit. It involves redundantly dividing the disks into several levels. Two parity blocks are used in setups that implement the 6th level of this type of configuration.

ANSWER: **RAID** [or **redundant array of independent disks**; or **redundant array of inexpensive disks**]

<Mukherjee>

5. As a member of the House of Lords, Lord Byron defended these people when legislation was drawn up to make their primary actions a capital offense. For 10 points each:

[10] Name this group of English skilled workers who destroyed the automatic looms they feared were making them expendable.

ANSWER: **Luddites** [or **Ludds**]

[10] E.P. Thompson wrote he wished to save the "Luddite cropper" and "utopian artisan" from the "enormous condescension of posterity" in a book about the making of this group. Friedrich Engels wrote a book on "The Condition of" this group "in England in 1844."

ANSWER: the **working class**

[10] During the Luddite uprisings, three men were killed at Burton's Mill near this English city, known as "cottonopolis" for its central role in the Industrial Revolution.

ANSWER: **Manchester**

<Bailey>

6. In "Johannes Agricola in Meditation," Robert Browning poked fun at this view and one of its advocates. For 10 points each:

[10] Name this extreme form of sola fide which precluded the need for any moral law and provided the reason for the banishment of Roger Williams and Anne Hutchinson.

ANSWER: **antinomianism** [or word forms]

[10] A subset of this group in Munster supported antinomianism. This denomination is known for repeating a sacrament in adulthood that is usually performed on infants.

ANSWER: **Anabaptists** [or **Anabaptism**]

[10] One outspoken opponent of Anabaptists was this author who railed against the use of indulgences in his *Ninety-Five Theses*.

ANSWER: Martin **Luther**

<Gupta>

7. The SA node is found in the wall of this chamber of the heart, which accepts blood from the vena cava. For 10 points each:

[10] Name this chamber in the heart. It accepts deoxygenated blood from the body and passes it through the tricuspid valve into its corresponding ventricle.

ANSWER: **right atrium** [or **RA**]

[10] The SA node sends electrical signals through the atria to the AV node. They then pass through the bundle of His and into these structures, which transmit the electricity through the ventricles.

ANSWER: **Purkinje** fibers

[10] This is the name of the wall separating the two ventricles and the two atria from each other. It has a muscular and a membranous portion.

ANSWER: **septum** [or **interventricular septum**; or **interatrial septum**; accept **septa** instead of **septum** for all answers]

<Mukherjee>

8. The speaker of this poem relates that when he is "in vacant or pensive mood," certain objects "flash upon that inward eye / which is the bliss of solitude." For 10 points each:

[10] Identify this poem, whose speaker describes a host of golden flowers on a lake as being "continuous as the stars that shine / and twinkle on the Milky Way."

ANSWER: "**I Wandered Lonely As a Cloud**" [or "The **Daffodils**"]

[10] This author of "I Wandered Lonely As a Cloud" worked on the long autobiographical poem *The Prelude* for most of his life. He and Coleridge collaborated on *Lyrical Ballads*, which ends with his poem "Tintern Abbey."

ANSWER: William **Wordsworth**

[10] Wordsworth offers "thanks to the human heart by which we live" in the final stanza of this poem, which recalls "a time when meadow, grove, and stream" seemed to be "apparell'd in celestial light."

ANSWER: "**Ode: Intimations of Immortality** from Recollections of Early Childhood" [or "**Ode on Intimations of Immortality** from Recollections of Early Childhood"; prompt on "Ode"]

<Carson>

9. One text from this movement argues that consumerism and the nuclear family symbolically create eunuchs out of women. For 10 points each:

[10] Name this movement concerned with equal political, economic, and social rights for women.

ANSWER: **feminism** [accept more specific answers that contain the word **feminism**, such as second-wave **feminism**]

[10] This thinker described "The Problem that Has No Name" and was the president of the National Organization of Women, spearheading the second wave of feminism. She wrote *The Feminine Mystique*.

ANSWER: Betty **Friedan**

[10] This work by Mary Wollstonecraft viciously attacks Rousseau's *Emile* for its exclusion of women from the pursuit of ideal education.

ANSWER: A ***Vindication of the Rights of Woman***: with Strictures on Political and Moral Subjects

<Gupta>

10. The Thach Weave maneuver was developed to counter these craft, which had superior maneuverability to the Spitfire but were fragile enough to be taken down by one burst of gunfire. For 10 points each:

[10] Identify this fighter plane used by the Japanese Navy during World War II.

ANSWER: Mitsubishi A6M **Zero** [or **Zeke**]

[10] The Thach Weave was first used in this June 1942 battle, a major Allied victory. The JN-25 code was broken immediately before this battle, during which the *Yamato* and *Akagi* faced off against the *Enterprise* and *Hornet*.

ANSWER: Battle of **Midway**

[10] Claire Chennault commanded this group of American pilots who flew for the Republic of China during World War II. Their fighters had shark mouths painted on them.

ANSWER: **Flying Tigers** [or 1st **American Volunteer Group** or **AVG**]

<Mukherjee>

11. While dying, this character sings the aria "When I am Laid in Earth." For 10 points each:

[10] Name this Queen of Carthage, the title character of a Henry Purcell opera about her love for Aeneas.

ANSWER: **Dido**

[10] "When I am Laid in Earth" is this type of aria, which was often the emotional climax of a Baroque opera. It is usually set over its namesake descending bass line.

ANSWER: **lament** [or **lamentation**; or **lamento**]

[10] Some of Purcell's songs were used in this 1728 ballad opera by John Gay about a gang of thieves led by Macheath.

ANSWER: *The **Beggar's Opera***

<Thompson>

12. Upon returning to the title location of the novel in which he appears, this man forgets a vision he had in a snowstorm. For 10 points each:

[10] Identify this character who meets Ludovico Settembrini, Clavdia Chauchat, and Leo Naphta while attempting to recover from tuberculosis at the International Sanatorium Berghof.

ANSWER: **Hans Castorp** [accept either underlined answer]

[10] Hans Castorp is the protagonist of *The Magic Mountain*, a novel by this German author of *Death in Venice*. Adrian Leverkühn intentionally contracts syphilis to enhance his artistic skills in his novel *Doctor Faustus*.

ANSWER: Paul Thomas **Mann**

[10] Members of the central family in this 1901 novel, Mann's first, include Christian, who unsuccessfully tries to make it in South America. This novel is subtitled *Decline of a Family*.

ANSWER: **Buddenbrooks**: *Decline of a Family* [or **Buddenbrooks**: *Verfall einer Familie*]

<Bentley>

13. Identify some things about momentum in quantum mechanics, for 10 points each:

[10] The momentum and position of a particle cannot both be precisely measured according to this fundamental rule of quantum mechanics named for a German.

ANSWER: **Heisenberg uncertainty** principle [prompt on partial answer]

[10] This value is equal to the Planck's constant divided by the momentum. It is the wavelength of a particle of matter.

ANSWER: **de Broglie** wavelength

[10] The Davission-Germer experiment proved de Broglie's formula by showing that electrons have a wavelength. The experiment worked by firing electrons at a target made of this element.

ANSWER: **nickel** [or **Ni**]

<Mukherjee>

14. This party was called the PNR when it was founded by Plutarco Calles, and prominent leaders of this party have included Lázaro Cárdenas, who formed a public energy company. For 10 points each:
[10] Name this party that held the presidency of its country continuously from its formation in 1929 to 2000.

ANSWER: **PRI** [or **Partido Revolucionario Institucional**; or **Institutional Revolutionary Party**]

[10] PRI held power in this North American country, which, along with the US and Canada, signed NAFTA in 1994.

ANSWER: **Mexico** [or **United Mexican States**]

[10] This leftist movement was formed in response to Mexico signing NAFTA. This group takes its name from a revolutionary figure who allied with Francisco Madero against Porfirio Diaz.

ANSWER: **Zapatistas** [or **ZALN**; or **Zapatista Army of National Liberation**; or **EZLN**; or **Ejército Zapatista de Liberación Nacional**]

<Kandlikar>

15. This figure was killed by the children of Borr and Bestla. For 10 points each:

[10] Name this primordial giant whose corpse was used to create the universe.

ANSWER: **Ymir** [or **Aurgelmir**]

[10] This figure, along with his brothers Vili and Ve, killed Ymir. He later married Frigg and became head of the Norse pantheon.

ANSWER: **Odin** [or **Wotan**; or **Wodonaz**]

[10] This grandfather of Odin and first Norse god was licked out of a block of ice by the primordial cow Audhumla.

ANSWER: **Buri**

<Mukherjee>

16. Answer the following about potential obstacles of successful fiscal policy, for 10 points each:

[10] This phenomenon may take place when a government attempts to raise demand when there is full employment. The increase in interest rates pushes down private investment, leaving total investment none the larger.

ANSWER: **crowding out** [or word forms]

[10] The Barro-Ricardo equivalence theorem predicts these policies will have no effect on output if they are debt-financed. \$275 billion of the cost of the ARRA came from pursuing them on payroll and income.

ANSWER: **tax cuts** [accept equivalents]

[10] Robert Barro argued that this value, the change in national income divided by change in government spending, is virtually zero. In a different context, this term can also refer to the ratio of commercial bank money to central bank money in a fractional-reserve system.

ANSWER: fiscal/money **multiplier**

<Bailey>

17. Its founder's son Dale started a museum at this site. For 10 points each:

[10] Identify this utopian community founded in Indiana in 1824. Its predecessor was originally founded by George Rapp, and among its tenets was the banning of money and that all religions were equally invalid.

ANSWER: **New Harmony**

[10] This founder of the New Harmony commune was a Welsh Utopian who, upon his return to London, founded the Grand National Consolidated Trades Union.

ANSWER: Robert **Owen**

[10] Robert Owen's son, Robert Dale Owen, wrote the bill that founded this Washington, DC museum complex. Charles Lang Freer donated his private collection to it, and its Air and Space Museum aroused controversy for its display of the Enola Gay.

ANSWER: **Smithsonian** Institution

<Mukherjee>

18. Several of these figures were depicted "As Landscape," while a sculpted one "on a bench" created in 1972 can be found at the Hirshhorn Museum in Washington, D. C. For 10 points each:

[10] Identify these figures, most famously painted using bold lines in frontal poses in a series that the artist created after he met his future wife, Elaine Fried.

ANSWER: The **Women** Series [or **Woman**]

[10] The *Women* series was painted by Willem de Kooning, a leader of this art movement along with painters like Barnett Newman and Arshile Gorky.

ANSWER: **Abstract Expressionism**

[10] This other Abstract Expressionist is known for works like *Moon-Woman Cuts the Circle* and *Autumn Rhythm*, the latter often inaccurately described as a "drip painting."

ANSWER: (Paul) Jackson **Pollock**

<Bentley>

19. The genes coding for it are extremely polymorphic, and in humans it is alternatively known as the human leukocyte antigen and is encoded by 6 different loci. For 10 points each:

[10] Identify this extremely variable glycoprotein that is responsible for identifying cells as self and non-self. All cells express the class I variety, while class II is used to present foreign antigens.

ANSWER: **major histocompatibility complex** [or **MHC**]

[10] These surgical procedures require matching of MHC between donors and acceptors. MHC mismatch in this procedure causes acute rejection, and chronic rejection is staved off using immunosuppressants.

ANSWER: organ **transplants** [or more specific answers, e.g. **kidney transplant**]

[10] One common immunosuppressant is methotrexate, which stops the reduction of this vitamin from its di-hydro form to its tetra-hydro form. This vitamin is taken by pregnant women to prevent spina bifida.

ANSWER: **folate** [or **folic acid**, **vitamin B9**, **folacin**]

<Mukherjee>

20. One of the title characters of this story sees a man “neither negro nor Indian” after kicking a skull next to a tomahawk. For 10 points each:

[10] Identify this short story in which the second title character sells his soul to Old Scratch in exchange for knowledge of the location of Captain Kidd's buried treasure.

ANSWER: “The **Devil and Tom Walker**”

[10] “The Devil and Tom Walker” is a short story by this American author of “Rip Van Winkle” and “The Legend of Sleepy Hollow.”

ANSWER: Washington **Irving**

[10] The story of “The Devil and Tom Walker” is related in the fourth section of *Tales of a Traveller*, which was ostensibly written by this character, whose namesake collection of stories includes “The Spectre Bridegroom” and “Rip Van Winkle.”

ANSWER: **Geoffrey Crayon**, Gentleman [accept either underlined answer]

<Bentley>

21. Experiments conducted by Dr. Benway in the Reconditioning Center in Freeland in this location produced zombie-like humans called INDs. For 10 points each:

[10] Identify this fictional location home to the corporation Islam, Inc. and four parties called the Liquefactionists, the Senders, the Factualists, the Divisionists. Bill Lee travels here from Tangiers in the novel *Naked Lunch*.

ANSWER: **Interzone**

[10] This pioneer of the "cut-up" technique and author of *Junkie* wrote *Naked Lunch* several years after accidentally killing his wife Joan Volmer in a drunken game of William Tell.

ANSWER: William Seward **Burroughs II**

[10] Burroughs was a prominent member of this bohemian, counter-cultural American literary movement, one center of which was Lawrence Ferlinghetti's City Lights Bookstore. Other major figures in it included Gregory Corso and Neal Cassady.

ANSWER: the **Beat** Generation [or the **Beat** movement; or **Beatniks**]

<Bentley>

22. The Steinhart-Hart equation gives the temperature dependence of this quantity in semiconductors, and the current density is equal to the electric field divided by this quantity. For 10 points each:

[10] Name this value of a material, symbolized rho. It is an intrinsic measure of how much it retards current flow.

ANSWER: **resistivity** [do not accept "resistance"]

[10] Resistance is most commonly measured in this SI unit, which is symbolized omega and is equal to one volt per ampere.

ANSWER: **ohm**

[10] This device is an arrangement of four resistors, one with unknown resistance, and a galvanometer in a square shape. It is used to measure the resistance of the unknown resistor.

ANSWER: **Wheatstone** bridge

<Mukherjee>

23. There is dispute over whether this country's second-largest city is named "Derry" or "Londonderry." For 10 points each:

[10] Name this country, a member of the United Kingdom. Due to 1920 partitioning, this country is the only part of its island to be part of the United Kingdom, despite calls from nationalists to reunite with its neighbor.

ANSWER: **Northern Ireland** [or **Tuaisceart Eireann**; or **Norlin Airlann**; do not accept or prompt on "Ireland"]

[10] This 1998 agreement, also known as the Belfast or Stormont Agreement, helped to make Northern Ireland more self-governing and eased the violent tensions in the country.

ANSWER: **Good Friday** Agreement

[10] The Good Friday Agreement is said to have more or less ended this period of conflict in Northern Ireland, which featured paramilitary fighting, the assassination of Lord Mountbatten, and the shooting of demonstrators on Bloody Sunday.

ANSWER: The **Troubles** [or Na **Trioblodi**]

<Cheyne>