1. Union general Phil Sheridan works as an agent that exploits Native American practioners of this art form, Victor Joseph and Junior Polatkin, in a novel by Sherman Alexie titled for the "Reservation" type of this art form. A poem about this art form notes that it occurs, "When the shoe strings break on both your shoes and you're in a hurry." This genre was performed "by the pale dull pallor of an old gas light" by a man "swaying to and fro on his rickety stool." This genre of music in that poem was performed "down on Lennox Avenue the other night," in which the performer sings, "Ain't got nobody in all this world, Ain't got nobody but ma self." For 10 points, Langston Hughes wrote a poem about the "weary" type of what musical genre?
ANSWER: **blues**

2. The definitive book about this character was written in 2007 by William and Mary professor Scott Reynolds Nelson, who argued that he is buried in a "white house" behind a Virginia penitentiary. This character's wife is sometimes called Julie Ann, and in the stories frequently tells him, "I've been true to you." In one account of his life, he receives fifty dollars from his white captain but dies shortly after telling his son that the "Big Ben Tunnel gonna be the death of me." This character battles a steam powered device while building a railroad tunnel and dies after winning the contest. For 10 points, name this legendary "steel-driving" man from American folklore.
ANSWER: John **Henry** [or **John**]

3. John Stallings's "engulfing" method was used to solve one problem named for this man using the notion of PL-homotopy. A problem named for this mathematician was introduced in the same paper that showed that a certain object had a fundamental group of over 120. Michael Freedman solved a special case of a generalized version of that problem named for this man, which was solved for dimension higher than four by Stephen Smale. Richard Hamilton outlined a method of using Ricci flows to solve that problem named for this man. For 10 points, name this French mathematician who names a conjecture proven by Grigori Perelman which states that every closed, simply connected manifold is homeomorphic to the three-sphere.
ANSWER: Henri **Poincaré**

4. According to Davis and Wilbur, social stratification in this framework is based upon positions rather than individuals. Within this framework, neutrality refers to the amount of emotion is expected to occur during a given interaction. A theory central to this framework states that norms and value shape the means and conditions of a situation in which unit acts take place. The action theory is an idea about this framework, whch treats society as a system of differing parts operating to promote stability. For 10 points, name this way of examining society that is subject to the AGIL paradigm and was advocated by Talcott Parsons.
ANSWER: **structural functionalism** [prompt on **functionalism**]

5. After this man was fatally unhorsed, his body and that of his brother Montagu were displayed at St. Paul's Cathedral. This man used his appointment as Captain of Calais to cross the English Channel and take a political prisoner at the Battle of Northhampton. He was forced to flee at the Second Battle of St. Albans, which he lost to Margaret of Anjou. This man's father was embroiled in a petty feud against the Percys. This man was thwarted when the monarch he had power over secretly married Elizabeth Woodville. Edward IV finally slipped from this man's grasp and defeated him at the Battle of Barnet. For 10 points, name this powerful Yorkist leader in the Wars of the Roses, who was known as the "kingmaker."
ANSWER: Richard **Neville** [or 16th Earl of **Warwick**; accept **Kingmaker** before it is read]

6. The shortest of the Upanishads, the Mandukya, is almost entirely an explication of this practice. A transcendental silence sometimes termed *turiya* is produced as a result of this action. Apart from the swastika, the main symbol of Hinduism is the symbolic representation of this practice. The three main Vedas, as well as the three members of the Trimurti, are represented by the three sounds produced when this action is performed. Performing this action by itself results in the pranava mantra, which is held to be the source of all other mantras, though this action is more usually followed by the word "shanti." For 10 points, name this production of a sacred syllable in Hinduism.
ANSWER: chanting **Om** [or chanting **Aum**; or synonyms of chanting, like **saying Aum**; prompt on **mantra** or **chanting**]

7. A high B-flat flourish in the closing cadenza coda of a concerto by this composer was removed because it was too difficult for the soloist to read off a score. This composer's sextet for string quartet, piano, and clarinet consists of material salvaged from a symphony he dedicated to Carlos Chavez, who also premiered a tone poem this man based on folk songs like "La Jesusita" and "El Mosco." For conductor Eugene Goosens, this composer produced a piece that opens with loud percussion followed by the trumpets playing the rising notes F-B flat-F; that piece was inspired by Henry Wallace's optimistic speech on the outlook of the middle class. For 10 points, name this American composer of *El Salon Mexico* and *Fanfare for the Common Man.*
ANSWER: Aaron **Copland**

8. Rudolf Peierls proved that the two-dimensional Ising model was guaranteed to exhibit one of these events. An example of these events can be characterized by a critical exponent, which allows one to place systems into universality classes. The existence of a latent heat is a defining characteristic of another type of these events. An order parameter that is zero on the high temperature side of these events and jumps to non-zero below the temperature, accompanied by a symmetry breaking, was described by Lev Landau. On pressure-temperature diagrams, these events occur when crossing the plotted lines, and their discontinuous variety can be described the Clausius-Clapeyron relation. For 10 points, what changes in a state of matter include sublimation and melting?
ANSWER: **phase transition**s

9. This country's national television station produced a historical drama about a ruler's "sword," which, during filming, had one of its stars burned and others killed during a fire at the 1990 Premier Studios. The Stardust Awards are given out in this country, which is also the site of the acclaimed Whistling Woods International Institute. One of its industries had its famous nickname coined by the *Junior Statesman* youth magazine, which is published from Connaught Place. This country produces "filmi" music, which is frequently performed by "playback singers." This country's most popular genre of film is called "masala," and its movies typically feature extraneous scenes of dancing women called "item numbers." For 10 points, name this country whose "Bollywood" film industry is based in Mumbai.
ANSWER: Republic of **India**

10. This is the main color of Elizabeth I's dress in Marcus Gheeraerts the Younger's *Ditchley Portrait*. A drawing by Willem de Kooning was changed to be this color by Robert Rauschenberg, who himself created a series of three monochromatic paintings of this color. This color titles a painting that includes a menorah at the bottom center and a burning synagogue on the right. Kazimir Malevich painted a tilted square of this color on a background also of this color. A different-colored triangle penetrates a circle of this color in an El Lissitzky propaganda poster urging the viewer to beat a group named for this color "with the Red Wedge," an allegory for the Russian Civil War. For 10 points, name this color that is frequently the color of blank canvas.
ANSWER: **white**

11. This issue was at the heart of Measure 4, a referendum approved by North Dakota voters in June 2012. A group embroiled in this issue claims that its bone of contention was inspired by Louis Sockalexis. Due to its demographic makeup, this issue does not effect the University of North Carolina at Pembroke. This issue was ameliorated by the adoption of Otto the Orange by one group, and K.C. Wolf was adopted by another group because of this issue. An individual has attempted to bypass this issue by founding the Original Americans Foundation and honoring Code Talkers during a game against the 49ers. For 10 points, identify this issue which often targets Dan Snyder and concerns the use of the nicknames and logos of organizations such as the Cleveland MLB team and the Washington NFL team.
ANSWER: **Native American Mascot** debate [or any reasonable equivalents such as **Indian mascots**; **Native American** logos; or specific examples such as **Washington Redskins** controversy]

12. A character in this novel initially confuses a woman with a ballet dancer named Sonia, and that character later scrawls a poorly-spelled letter warning his roommate to stay away from Marleen. The protagonist of this novel pretends to sing madrigals at a party where he falls asleep with a lit cigarette and sets a table on fire. This novel features a pretentious artist whose voice is often described as "braying," named Bertrand. This novel climaxes with the title character drunkenly imitating his boss while giving a speech on "Merrie England," after which he leaves town with Christine Callaghan. For 10 points, name this novel whose title character is the history professor James Dixon, a work of Kingsley Amis.
ANSWER: ***Lucky Jim***

13. An artificial form of this protein contains a myristic acid molecule bound to lysine B29. Mice with a particular mutation in carboxypeptidase E exhibit increased levels of the "pro-" form of this protein. This protein's signaling leads to the closure of the Kir6.2 potassium channel, which is also called the sulfonyurea receptor. Tumors secreting it can be diagnosed using a 72-hour fast. A disease in which this protein is lacking in the blood is caused by autoantibodies to glutamic acid decarboxylase. Measuring the C-peptide level is a way of distinguishing between artificial and natural forms of this hormone, which decreases the flux of fatty acids from adipose tissue and inhibits gluconeogenesis. For 10 points, name this protein produced in the beta cells of the islets of Langerhans, whose secretion or function is impaired in diabetics.
ANSWER: **insulin**

14. Heilbronner proposed an extremely unusual form of this property which may be present in the cyclotetraenyl anion. Molecules with this property are depicted in the Frost circle, which describes the energy levels of the highest occupied and lowest occupied molecular orbitals. Fluorescent spectroscopy of proteins yielding a strong absorptivity at 280 nanometers corresponds to an amino acid with this property, which is tryptophan. While the cyclopentadienyl ion has this property, cyclopentadiene does not. Molecules that contain a multiple of four pi electrons have the "anti" form of this property, while molecules that contain two plus a multiple of four pi electrons have this property according to Hückel's rule. For 10 points, identify this property which grants unusual stability due to conjugation around a ring, typified by benzene.
ANSWER: Mobius **aromaticity** [or **aromatic** compounds; or word forms; prompt on **conjugation**]

15. This is the title activity performed by a red-haired Jewish character nicknamed "mask-face" for his gigantic facial birthmark. This activity is excellently performed by a bachelor in a railway car, who shows up the aunt of some children, in a story by Saki. An oft-quoted dictum by Joan Didion states that we perform this activity on ourselves "in order to live." A character talented at performing this activity helps out in the store of Riad Halabi and falls in love with Rolf Carle. That character talented at this activity is Isabel Allende's Eva Luna. The daughter of a grand vizier repeatedly performs this activity for Shahryar, who marries her. For 10 points, name this activity which Scheherazade performs for 1001 nights.
ANSWER: **storytell**ing [or obvious equivalents]

16. This man formed a cautious alliance with the fascist Integralist movement, and he was asked to join the World War II Axis after fulfilling Nazi demands to deport Olga Benário Prestes to Germany, though he declined. Following on assassination attempt on this man, he wrote the Letter of Testament. This man served in the government of Washington Luis, who this man helped overthrow in 1930. His first rule was ended by a coup led by Gaspar Dutra and this man committed suicide in 1954 to end his short stint as elected President. He used the "Cohen Plan" to establish the Estado Novo. For 10 points, name this long-time president and dictator of Brazil.
ANSWER: Getulio Dornelles **Vargas**

17. This country employed a female security agent known as "Bloody Luna." In 1963, the last of its "cursed soldiers" was slain while trying to resist the government. This non-American country had an election which famously used an adapted poster from the movie *High Noon*, with Gary Cooper's character wearing a certain party's badge on his chest. That party's leader would later initiate "war at the top" as this country's president. A Senate was created here after the 1989 Round Table Agreement. In 2010, its president died in a plane crash while on his way to commemorate this country's victims in the Katyn Forest massacre during World War II. A president of this country was once an electrician who led protests at the shipyards in Gdansk. For 10 points, name this European country once led by Solidarity leader Lech Walesa.
ANSWER: Republic of **Poland**

18. A location in this novel is an inhabited spider-web built over an abyss. Several men in this book gathered together at Zobeide after they had an identical dream of a naked long-haired woman running away from them and escaping. This novel's title group is divided into eleven groups, including "Thin," "Continuous", and "Hidden" examples. A character in this book has to gesture and point to objects in an imperial garden before he learns to speak Tartar. This book's title areas, such as Octavia, Diomira, and Berenice, are framed by a dialogue between Kublai Khan and Marco Polo. For 10 points, name this novel by Italo Calvino which describes dozens of imagined urban areas.
ANSWER: *__Invisible Cities__* [or *Le __città invisibili__*]

19. This museum houses a version of *The Birth of Venus* with fifteen putti and a dolphin. The portrait of *Whistler's Mother* is the capstone of this museum's American collection. Visitors to this museum are greeted by Bartholdi's ten-foot-tall bronze replica of the Statue of Liberty. When it was created, this museum inherited the painting collection of the Luxembourg Museum. In 2007, a vandal entered this museum and punctured *Pont d'Argenteuil* by Monet. This building was originally designed by Victor Laloux as an attraction for the 1900 World's Fair, and wasn't fully converted into a museum until 1986. For 10 points, name this art museum housed in a former Parisian railway station that is famed for its Impressionist and Post-Impressionist collections.
ANSWER: Musee d'**Orsay** [or **Orsay** Museum; or **Gare d'Orsay** until "railway" is read]

20. An attempt to end this operation triggered the first use of Tiger tanks and was the Sinyavino Offensive, which was countered by Operation Northern Light. Early on in this battle, food supplies were destroyed at Badajevski, but were partially mitigated by a supply route nicknamed the "Road of Life." Georgy Zhukov commanded the defense of the city involved in this event before it was surrounded by Army Group North in September 1941; it would not break free of the encirclement until January 1944. For 10 points, name this protracted battle between the Soviets and the Nazis, fought for approximately 900 days in what was formerly St. Petersburg.
ANSWER: the siege of **Leningrad** [or the **900 Days** or **900 Day** Siege before mention, do not accept siege of **St. Petersburg**]

21. The size of particles that can be carried by a river is proportional to this power of the flow velocity. The deuterated version of DMSO has this many deuterium atoms, and the DnaB helicase in eukaryotes is an oligomer with this many subunits. A common nonpolar solvent is a mixture of isomers of the alkane containing this many carbons. In transition metal chemistry, fac-mer isomerism occurs in complexes containing this many ligands, which have d-orbitals split into t sub 2g and e sub g levels. In the first step of glycolysis, this position of glucose is phosphorylated by glucokinase, and glucose, fructose, and galactose all have this many carbons. For 10 points, give this number, which is also the number of ligands in an octahedral complex and the atomic number of carbon.
ANSWER: **six** [or **6**]

22. A detailed account of the foundation of this organization was written by future Pennsylvania senator Harris Wofford. Faith in this organization was shaken in 1976 when one of its members, Deborah Gardner, was murdered by another. Jimmy Carter re-established the autonomy of this organization, citing his mother's fulfilling involvement in it as a seventy-year old. It was formalized by Executive Order 10924, having first been proposed in a speech given at the University of Michigan. The first director of this organization, Sargent Shriver, was the brother-in-law of the president who envisioned it. Most members of this organization work for two years after graduating from college. For 10 points, name this humanitarian volunteer program established by John F. Kennedy.
ANSWER: **Peace Corps**

23. A chapter in this novel opens with instructions on how to pay the cable bill, and its protagonist is fascinated by one character's ambition to set a record for sitting in a cage full of poisonous snakes. Its main character adds an initial to his name to be taken more seriously as an academic and studies German with Howard Dunlop in preparation for a conference. This novel's protagonist's former wives are all connected to the intelligence community, unlike his current wife, who obtains the experimental drug Dylar by engaging in an affair with Willie Mink. Its protagonist is exposed to Nyodene D following the "Airborne Toxic Event." For 10 points, identify this novel about Professor of Hitler Studies Jack Gladney, a work of Don DeLillo.
ANSWER: ***White Noise***

1. This operation gives the slope of a tangent line of a graph at a given point. For 10 points each:
[10] Name this operation which gives the instantaneous rate of change of a variable in terms of another variable.
ANSWER: **differentiation** [or **derivative**]
[10] This theorem states that for a function from R-n to R with continuous second partial derivatives, the order of mixed second partial differentiation doesn't matter.
ANSWER: **Schwarz**'s theorem [or **Claraut**'s theorem]
[10] For a scalar function f, this function returns a vector whose elements are the first partial derivatives of f for each variable.
ANSWER: **grad**ient [or **del**]

2. A 2014 examination by Tate Museum cataloguer Matthew Imms demolished the authenticity of a series of watercolors of this scene, which depicted a similar event seven years later. For 10 points each:
[10] Name this common scene of two oil paintings, one of which was painted by the artist on his boat near Waterloo Bridge. The more famous of these paintings of an 1834 event shows a throng of spectators gazing at the red reflection of water near Westminster Bridge.
ANSWER: *Burning of the Houses of Parliament* [or *Burning of the Houses of the Lords and Commons*; or *Burning of Parliament*; be lenient with linking words in the titles]
[10] This British artist of the *Burning of the Houses of Parliament* paintings celebrated the progress of the Industrial Revolution in *Rain, Steam, and Speed.*
ANSWER: Joseph Mallord William **Turner**
[10] Turner, who was also mindful of the horrors of the Industrial Revolution, symbolically represented them as grotesque creatures composed of red and pink swirls in this 1845 seascape.
ANSWER: *Sunrise with Sea Monsters*

3. Although he claimed neutrality during World War II, he supported Germany by sending the Blue Division to fight against communism. For 10 points each:
[10] What military leader participated in a coup by José Sanjurjo and Emilio Mola to become the dictator of Spain in the 20th century?
ANSWER: Francisco **Franco** Bahamonde
[10] Franco established the political party that came to rule Spain by merging the Carlists and this namesake fascist group, organized by Primo de Rivera.
ANSWER: **Falange** Española [**Falangist** party]
[10] Franco's plan for succession drastically changed course following the dramatic 1973 assassination of this prime minister by the ETA, in which his Dodge was propelled entirely over a building by a car bomb and landed on a second-floor balcony on the next street.
ANSWER: Luis Carrero **Blanco**

4. It was based on the Soviet MGB, and its motto was "Sword and Shield of the Party." For 10 points each:
[10] Name this former intelligence agency, which at its height employed one in seven citizens as an informer.
ANSWER: **Stasi** [or Ministerium für **Sta**ats**si**cherheit; or Ministry of **State Security**]
[10] One of the greatest triumphs of the Stasi was its infiltration of the office of Willy Brandt, the Chancellor of this country.
ANSWER: **West Germany** [or **Federal Republic of Germany**, do not accept "German Democratic Republic"]
[10] Under the influence of Stasi agents, Brandt promoted this policy of reconciliation with the Warsaw Pact and East Germany.
ANSWER: Neue **Ostpolitik**

5. A woman in this play dances and tells Clay to "do the nasty. Rub bellies." For 10 points each:
[10] Name this play in which Lula flirts with and mocks the African-American Clay on the New York subway. It ends with Lula stabbing Clay through the heart.
ANSWER: ***Dutchman***
[10] *Dutchman* is the best known play by this African-American author, who was a controversial Poet Laureate of New Jersey. This man changed his name from "LeRoi Jones" after becoming a black cultural nationalist.
ANSWER: Amiri **Baraka** [or Imamu Amear **Baraka**]
[10] Baraka's poem "Somebody Blew Up America" wonders "who told 4000 Israeli workers…to stay home" on this day. He suggests Israel was involved in the terrorist attacks on this day.
ANSWER: **September 11**, 2001 [or **9/11**]

6. The statue *Alba* by George Kolbe is found in this structure, whose main building sits atop a travertine plinth opposite a pool. For 10 points each:
[10] Name this building designed for the 1929 International Exposition, which was held in the capital of Catalonia.
ANSWER: **Barcelona Pavilion**
[10] The Barcelona Pavilion was constructed by this German-American International Style-architect, who designed the Farnsworth House, collaborated with Philip Johnson on the Seagram Building, and used the phrase "less is more."
ANSWER: Ludwig **Mies** van der Rohe
[10] Mies's Barcelona Pavilion was recognized as a significant International Style building in the 1932 MoMA exhibition, which conferred similar honors upon the Lovell House designed by this Austrian-American architect of many prominent modernist buildings in Southern California.
ANSWER: Richard Joseph **Neutra**

7. The "predicate" type of this stance states that the predicates used to describe mental events can't be reduced to those that describe physical events. For 10 points each:
[10] Name this stance in the philosophy of mind which states that the mind and body differ in some way.
ANSWER: **dualism**
[10] The modern form of dualism was originally espoused by this philosopher, whose ideas were criticized as making a "category mistake" in Gilbert Ryle's *The Concept of Mind.*
ANSWER: Rene **Descartes**
[10] Proponent of naturalistic dualism David Chalmers came up with this important problem in the philosophy of mind, which asks "why do qualia exist?" or "why is there a subjective component to experience?"
ANSWER: **hard problem** of consciousness

8. Part 2 of this book, titled "Can Capitalism Survive," argues that capitalism will give way to socialism but in a different way than Marx envisioned. For 10 points each:
[10] Name this book that opens with "The Marxian Doctrine" and argues that the introduction of new products should force the collapse of existing businesses.
ANSWER: *Capitalism, Socialism and Democracy*
[10] *Capitalism, Socialism and Democracy* was written by this Austrian economist.
ANSWER: Joseph **Schumpeter**
[10] Schumpeter advocated this two-word phrase to describe the tendency of capitalism to advance through learning from, or causing, business failures.
ANSWER: **creative destruction**

9. This man fearfully hid in jars because he was afraid of the beasts his servant brought to him. For 10 points each:
[10] Name this Greek ruler of Mycenae Tiryns whose cousin became his slave after murdering Megara.
ANSWER: **Eurystheus**
[10] Eurystheus first hid in the jar after Heracles slew this fearsome feline as part of his first labor. Heracles wore its invulnerable skin around after slaying it, which frightened Eurystheus.
ANSWER: **Nemean Lion**
[10] Zeus inadvertently made Eurystheus king of Mycenae by wording a proclamation poorly under the influence of this goddess. Zeus subsequently threw this goddess of delusion from Mount Olympus.
ANSWER: **Ate** (AH-tay)

10. Participants in this revolt had their capital at al-Mukhtara and initially defeated the forces of al-Muwaffaq before he suppressed the rebellion. For 10 points each:
[10] Name this rebellion that was led by such men as Riyah and Ali ibn Muhammad, and which involved hundreds of thousands of the namesake East African slaves.
ANSWER: **Zanj** Rebellion
[10] Ali ibn Muhammad promoted this strain of Islam. This sect included a number of egalitarian ideas, which appealed to the slaves taking part in the Zanj Rebellion.
ANSWER: **Kharijite** [or **Khawarij**]
[10] One egalitarian idea of the Kharijites was that even a black slave could rise to this title. Ali ibn Muhammad claimed to be descended from Ali, the fourth one of these according to Sunnis and first according to Shi'ites.
ANSWER: **caliph**s [or **khalifah**s]

11. This man composed a number of pieces of chamber music with unusual configurations, such as a *Duo for Violin and Cello* and a *Serenade for Two Violins and a Viola.* For 10 points each:
[10] Name this Hungarian ethnomusicologist who composed a famous *Cello Sonata* and used a cimbalom throughout the suite he extracted from his opera about a braggart soldier, *Hary Janos.*
ANSWER: Zoltan **Kodaly** (ko-DAI)
[10] Kodaly deemed the first string quartet by this countryman of his "a return to life." This composer of *The Miraculous Mandarin* produced *Duke Bluebeard's Castle* and a *Concerto for Orchestra.*
ANSWER: Bela Viktor Janos **Bartok**
[10] Kodaly composed a setting of this hymn in honor of the 250th anniversary of the liberation of Budapest from the Turks. Handel produced three settings of this hymn, which was apocryphally composed by St. Ambrose for the baptism of St. Augustine.
ANSWER: *Te Deum* [or *A Song of the Church*]

12. Answer the following about twist endings in a certain author's stories, for 10 points each.
[10] At the end of this story from *Mosses from an Old Manse,* Aylmer's scientific experiments seem to "perfect" the body of his wife, but unfortunately for both of them, Aylmer's potion ends up killing her as well.
ANSWER: "The **Birth-Mark**"
[10] "The Birth-Mark" is by this New England-based author of "Young Goodman Brown."
ANSWER: Nathaniel **Hawthorne**
[10] In this Hawthorne story, Matthew and Hannah join a group of adventurers looking for the title object. The nasty "Cynic" is blinded after he removes his glasses and looks straight at the object.
ANSWER: "The **Great Carbuncle**"

13. Styles of this activity include the high-register *sygyt* and the more baritone *Kargyraa.* For 10 points each:
[10] Name this style of music popular in the republic of Tuva and the country to its south, whose performers vibrate their vestibular folds.
ANSWER: **throat-sing**ing [or **Khoomei**; or **Hooliin Chor**; prompt on **overtone sing**ing or **harmonic sing** ing; prompt on **overtone chant**ing]
[10] Aficionados of throat-singing in this aforementioned country use melodies passed down by their yurt-dwelling ancestors living in the northern Gobi desert.
ANSWER: **Mongolia** [or **Mongyol ulus**]
[10] Throat-singing and fermented mare's milk are also popular among the Bashkir, a Turkic group living in the environs of this mountain range, which includes Narodnaya.
ANSWER: **Ural**(s) Mountains

14. In *The Clouds,* Strepsiades's slave of this name destroys the roof of the Thinkery with a a hatchet. For 10 points each:
[10] Give this Greek name most famously held by a slave who often corrects his Underworld-bound master Dionysus in *The Frogs.*
ANSWER: **Xanthias** [do not accept "Xanthus"]
[10] This Ancient Greek comic playwright had his work adapted into a disastrous 1974 musical in New Haven, where the title croaking chorus of his *The Frogs* was played by the Yale varsity swim team and water splashed out of the pool, forcing several actors to perform on tiptoe.
ANSWER: **Aristophanes**
[10] Another Xanthias serves Anticleon in this other Aristophanes play, which centers on a mock-trial wherein a household dog accuses another of stealing cheese.
ANSWER: The *****Wasps***** [or *****Sphekes*****]

15. This man formed the rock band "ton bundle." For 10 points each:
[10] Name this influential Michigan-based pastor. He has been accused of promoting universal salvation in such books as *Love Wins* and *What We Talk About When We Talk About God,* and he stars in the Christian "NOOMA" videos.
ANSWER: Robert "Rob" **Bell** Jr.
[10] Universal salvation is one perspective to address the problem of Hell within Christianity. This author of *Mere Christianity* and the Narnia books said people choose Hell, not God.
ANSWER: Clive Staples **Lewis**
[10] In most modern Bible translations, this Hebrew word is not translated as "hell," but rather the "grave" or the "pit." The New Testament sometimes use the word "Hades" in the same way as this word, which is interpreted to mean the temporary residence of the dead.
ANSWER: **Sheol**

16. Servants on this island often whack their masters with pebble-filled bladders on sticks to prevent them from being lost in thought. For 10 points each:
[10] Name this fictional island whose advances in science and mathematics allow it to rule over Balnibarbi. Its inhabitants build houses and tailor clothes with compasses, rulers, and quadrants.
ANSWER: **Laputa**
[10] This traveler visits the floating island of Laputa in a Jonathan Swift satire after escaping the giant Brobdingnagians and being tied down by the tiny Lilliputians.
ANSWER: Lemuel **Gulliver** [or **Lemuel** Gulliver]
[10] Gulliver visits this real-world country at the end of his third voyage before returning to England. A British author whose family moved from this country wrote *An Artist of the Floating World* about a painter here.
ANSWER: **Japan** [or **Nippon**; or **Nihon**]

17. Charles Young was a decorated member of this group, which built the first trail to the summit of Mount Whitney. For 10 points each:
[10] Give this unofficial nickname of members of the U.S. 10th Cavalry regiment, which was later extended to members of all black regiments that fought against American Indians.
ANSWER: **buffalo soldier**s
[10] In this 1906 incident, a regiment of buffalo soldiers stationed in a Texas town were accused of killing a white bartender, leading them to be dishonorably discharged en masse under the orders of Theodore Roosevelt.
ANSWER: **Brownsville** Affair [or **Brownsville** Incident]
[10] Due to his friendliness with members of the 10th Cavalry Regiment, this commander of a Punitive Expedition against Pancho Villa received the pejorative nickname "Black Jack."
ANSWER: John Joseph "Black Jack" **Pershing**

18. The dependence on this value on the friction of the system leads to the Kramers turnover phenomenon. For 10 points each:
[10] Identify this reaction constant symbolized with a lowercase k.
ANSWER: reaction **rate** constant
[10] When the rate constant of a reaction is in the units of molarity times inverse-sections, this is the overall order of the reaction.
ANSWER: **zero**
[10] For reactions with a fast first step, this approximation can be used to calculate the rate constant. This approximation, which differs from the steady-state approximation, assumes that the reactant and intermediate are at equilibrium.
ANSWER: **pre-equilibrium** approximation

19. In cancer cells, this process is accelerated by the Warburg effect. For 10 points each:
[10] Name this process in which the namesake monosaccharide is made into two molecules of pyruvate. It consists of investment and payoff phases.
ANSWER: **glycloysis**
[10] In the first step of glycolysis, hexokinase transforms glucose into this molecule, which traps it in the cell.
ANSWER: **glucose-6-phosphate** [or **G6P**; or **6-phosphoglucose**]
[10] Glucose-6-phosphate is also posed at the start of this metabolic pathway, whose purpose is to regenerate NADPH and to generate 5-carbon sugars.
ANSWER: **pentose phosphate** pathway [or **pentose phosphate** shunt; or **PP** shunt; or **hexose monophosphate** pathway; or **HMP** shunt]

20. In a fluid, this effect can create a series of hexagonal cells named for Benard, and whether this effect is free or forced is dependent on the ratio of the Grashof number to the square of the Reynolds number. For 10 points each:
[10] Name this mode of heat transfer which involves the bulk motion of fluids.
ANSWER: **convection**
[10] This dimensionless quantity, which is the product of the Grashof and Prandtl numbers, has a critical value at which heat transfer changes from primarily due to conduction to primarily due to convection. Its namesake also names a type of scattering proportional to the minus fourth power of wavelength.
ANSWER: **Rayleigh** number
[10] This equation, which applies when the product of the Reynolds and Prandtl numbers is greater than 0.2, is used to calculate the Nusselt number in a cylindrical convective flow.
ANSWER: **Churchill-Bernstein** equation

21. "Super" versions of these structures are proposed to have caused huge increases in juvenile crust production rate. For 10 points each:
[10] Identify these large structures that may stretch all the way from the D double prime layer and are hypothesized to be the cause of hotspots away from plate boundaries.
ANSWER: mantle **plumes**
[10] This boundary between the mantle and the crust was discovered when its Croatian namesake found that seismic waves accelerate when they hit this region.
ANSWER: **Moho**rovicic discontinuity [or **Moho**rovicic boundary; or **Moho**rovicic layer]
[10] This discontinuity separates the upper mantle and lower mantle. Named for the depth at which it appears, it occurs below the 410-kilometer discontinuity.
ANSWER: **660**-kilometer discontinuity