**2022 Reinstein Set (VCU Version) – Packet 9**

**Tossups**

1. This person’s wife started the largest non-profit children’s literacy organization in the United States, Reading Is Fundamental. In the preface to this person’s memoir *In Retrospect*, he wrote “Yet we were wrong, terribly wrong.” Before being a cabinet member, this person was the president of Ford Motors, and afterward, he was the president of the World Bank. As a cabinet member, this person developed the policy of mutual assured destruction by developing a second-strike capability in the case of nuclear warfare. For 10 points, name this U.S. Secretary of Defense during the Vietnam War during the presidencies of John F. Kennedy and Lyndon  
[10] Johnson.   
ANSWER: Robert (Strange) **McNamara**

2. These objects were archived in a facility near the Abu Ghraib prison that was destroyed in 2004. In 1686 John Ray emphasized that these objects were fundamentally identical when produced by the same source even if they looked different, in the first formal definition of a species. About 1.8 billion of these things are stored in the "Millennium" facility operated by the UK's Kew Gardens, far more than the capacity of the Svalbard site which is the most secure of these items' "vaults." The removal of these items was the chief function of Eli Whitney's cotton gin. The number of leaves produced by these objects distinguishes monocot or dicot plants. For 10 points, name these small objects from which many plants grow.  
ANSWER: **seed**s

3. In one novel by this author, the narrator is surprised to get a call from Elliott Templeton when in Chicago. This author began that novel with the line “I have never begun a novel with more misgiving.” That novel is about World War I pilot Larry Darrell. This author’s best-known protagonist, like this author himself, was an orphan who became a doctor. That protagonist eventually marries Sally Athelny and takes a job in Dorsetshire [DOR-set-shur]. In the same book, this author wrote about the suicide of Fanny Price. For 10 points, name this author of *The Razor’s Edge* whose character Philip Carey is born with a club foot in *Of Human Bondage*.   
ANSWER: W(illiam) Somerset **Maugham** [**mawm**]

4. The early history of this group of people is described in the *Sharafnama* [shuh-ruf-NAH-muh]. In 1946, these people controlled the Republic of Mahabad [muh-HAH-bahd]. A group using guerrilla tactics to fight for the independence of this group was started in 1978 by Abdullah Öcalan [OH-juh-lahn], who has been a prisoner since 1999. Recent efforts to gain independence for these people have been near the city of Kirkuk [keer-KOOK]. In 1988, the Halabja [huh-LAHB-juh] Massacre of these people took place using mustard gas in Iraq. For 10 points, name this ethnic group that lives in a region that includes parts of Iraq, Iran, Syria, and Turkey.   
ANSWER: **Kurd**s or the **Kurd**ish people [accept **Kurdistan**]

5. Early examples of this technology, such as Audrey by Bell Laborotories and Shoebox by IBM, were developed in the mid-20th century. According to recent rumors, Facebook’s attempts at this technology are codenamed Aloha. One of the products whose primary feature is this technology is the Nuance Ten, which also uses artificial intelligence, neural networks, and deep learning. This technology is often paired with natural-language understanding. Amazon’s Alexa and Apple’s Siri rely on this technology. For 10 points, name this key aspect of hands-free computing that allows users to talk to devices.   
ANSWER: (automatic) **speech recognition** or (computer) **speech recognition** or **speech to text** or **voice transcription** or **STT** or A**SR** [prompt on **voice recognition**]

6. This economist was the subject of a 2016 book by Alison Bashford and Joyce Chaplin that explains how he moved towards an analysis of the impact of the New World and away from a critique of utopianism. This economist was critical of Say’s Law and David Ricardo in his book *Principles of Political Economy*. This economist’s 1798 work *An Essay on the Principle of Population* made pessimistic projections. For 10 points, name this English economist whose so-called “trap” is based on the idea that standards of living cannot rise because increases in goods cause increases in population.   
ANSWER: Thomas (Robert) **Malthus**

7. These general objects were designed according to the philosophy of "emoción" [ay-MOH-see-OHN] by Walter de Silva. Giorgetto Giugiaro used a "folded paper" approach to design these objects and was chiefly responsible for designing one of these objects that uses unpainted stainless steel and a "gull-wing" component. In 1975 a German manufacturer of these objects commissioned Alexander Calder as the first in an ongoing series of designers in a project named for "Art" and these objects. American designers of these objects included Harley Earl and Roy Brown, who created the disastrous Edsel design for a model of these objects. For 10 points, name these objects whose designers may work for Honda or Ford.  
ANSWER: **cars** [accept **auto**mobiles; prompt on "vehicles"; do not accept answers such as "SUVs" or "trucks" since none of the pre-FTP clues apply to them]

8. Proteins whose names indicate that they are similar to this one have a repeating amino acid pattern of glycine [GLIE-seen] followed by two different amino acids. To be stable, this protein requires hydroxy*·*proline [“hide-ROCKS”-ee-PROH-leen] and proline [PROH-leen], which are added to this protein in the presence of vitamin C. Defects in this protein cause Alport syndrome and Ehlers-Danlos syndrome. This protein is the most abundant protein in humans. Combining this sclero*·*protein [SKLAIR-oh-“protein”] with boiling water creates gelatin. This protein has a triple-helix structure. For 10 points, name this protein that is a central component of ligaments and cartilage.   
ANSWER: **collagen**

9. This composer’s friendship with the performer Jules-Bernard Laserre [lah-ser] led to a few of his pieces being written for cello, including a four-minute piece that is often performed for encores, the *Allegro appassionato*. In another piece by this composer, the violinist sometimes tunes the E string to E-flat to make it easier to play a tritone [“TRY-tone”]. This composer started that piece with the harp playing the same note 12 times, and he made heavy use of xylophones to portray skeletons. For 10 points, name this French composer who used Halloween as the setting for his *Danse macabre*.   
ANSWER: (Charles-)Camille **Saint-Saëns** [**san sawn**]

10. A point named for this concept can also be called a cluster point or accumulation point and is used in one topological definition of closedness. A metric space is called complete if, for every Cauchy [koh-shee] sequence in the space, this concept exists and is in the space. The squeeze theorem helps prove this concept by comparing one function to two other functions. A function is continuous where this concept exists and equals the function’s output, and like continuity, this concept is commonly defined using the symbols “delta” and “epsilon”. For 10 points, name this concept in which a function approaches—but might not reach—a value.   
ANSWER: **limit**(s) [accept **limit** points]

11. A probe that studied this region from 2012 to 2019 found a surprisingly high number of electro*·*static double-layer plasma waves and determined that in addition to this region’s two primary subregions, there are transient subregions. This region was discovered using data from Explorer I [1], which was the first U.S. satellite. This region has an inner and an outer part, each of which contains particles traveling between the Earth’s poles. In the inner part of this region, the particles are mostly protons, while the outer part is more varied. This region is part of Earth’s magneto*·*sphere [mag-NEE-toh-“sphere”]. For 10 points, name this region of charged particles that is named after its discoverer.   
ANSWER: **Van Allen** (radiation) belts [prompt on **magnetosphere** before it is mentioned]

12. In one novel by this author, Father Vaughan is described as a privileged person of a good family. This author later reveals that the priest is Sir Frederick in disguise, which means he is the father of Diana Vernon, who was tutored by Frank Osbaldistone [ahz-BAHL-duh-“stone”]. In another novel by this author, the title character is healed by a Jewish woman named Rebecca, who is the daughter of Isaac of York. At the end of that novel, Rebecca leaves England, and the title character marries Rowena. For 10 points, name this early-19th-century author of *Rob Roy* and *Ivanhoe*.   
ANSWER: Sir Walter **Scott**(, 1st Baronet)

13. Three months before this battle, a prisoner exchange freed John Sullivan, who during this battle prevented escapes by controlling a bridge over the Assunpink [ASS-un-“pink”] Creek. One side in this battle was led by Johann [YOH-hahn] Rall, who died the next day from his wounds. This battle changed the momentum of the war, reversing the results of the Battles of Fort Lee and Fort Washington a month earlier. This battle took place the day after Christmas. George Washington crossed the Delaware to get to this battle. For 10 points, name this battle where forces under Washington defeated Hessians in New Jersey.   
ANSWER: Battle of **Trenton**

14. One sculpture by this artist was originally on display at the Salon des Indépendants [sal-awn dez an-deh-pen-dawnt] in Paris, but it was removed because some viewers found it obscene. This artist complained that the sculpture was an abstract depiction of Princess Marie Bonaparte. This sculptor of *Princess X* made a series of abstract sculptures that the United States insisted should be taxed because they did not qualify as art. In those sculptures, this artist depicted the flight of an animal while giving minimal attention to the animal itself. For 10 points, name this Romanian sculptor who created *Bird in Space*.   
ANSWER: Constantin **Brâncuş**i [kohn-stahn-TEEN **brin-KOOSH**]

15. This woman and her husband were turned into lions after profaning one of the gods. The sons of Thestios [THESS-tee-ohss], who were named Toxeus [TAHK-see-us] and Plexippus [PLEK-sih-puss], were killed after they took a prize from this woman, but Althaea [al-THEE-uh] then killed the man who killed them by burning a log. This woman killed Hylaeus [“hi”-LAY-us] and Rhoecus [ROY-kuss] when those two centaurs tried to attack her. Before Meleager [mel-ee-AY-gur] killed the Calydonian [kal-uh-DOH-nee-un] Boar, this woman injured it. As an infant, this woman was suckled by a bear. For 10 points, name this woman who promised to marry any man who could beat her in a race, and who lost a race because she was distracted by three golden apples.   
ANSWER: **Atalanta**

16. The March 2022 death of Cristina Calderon in this country marked the extinction of the Yamana language. Nine percent of this country's population belongs to the Mapuche [mah-POO-chay] ethnic group, about 90% of which lives in this country. The Mapuche language was used in a speech by this country's president following a December 2020 victory over José Antonio Kast. The so-called "millennial president" of this country is descended from Croatians who immigrated to work in Patagonia. Gabriel Boric [boh-REECH] is the new president of, for 10 points, what country once described by Henry Kissinger as "a dagger pointed at the heart of Antarctica?"  
ANSWER: [Republic of] **Chile** [or República de **Chile**]

17. A character in this novel kisses Fenechka [feh-NECH-kuh], leading to a duel and the same character leaving Marino. This novel begins with Nikolai and his servant Peter waiting for Nikolai’s son. Two of the main characters in this novel were recently students at St. Petersburg University. Characters in this novel debate whether a certain point of view consists of either thinking critically or not respecting anything. In this novel, Arkady [ar-KAH-dee] states that Bazarov [bah-ZAHR-awff] is a nihilist [NY-uh-list]. For 10 points, name this Russian novel written by Ivan Turgenev [tur-“GAIN”-yeff].   
ANSWER: ***Fathers and Sons*** [or ***Otsy i Deti***]

18. In a 1920 speech, Albert Einstein replaced the adjective that usually goes in front of this word with the adjective “gravitational”. In order to study this substance, Georges Sagnac [zhorzh sanh-yahk] demonstrated the Sagnac effect. Lorentz transformations were originally put forth to describe properties of this material, though ironically they are now used to support an alternative theory, special relativity. This substance was *not* found in the Michelson [“Michael-sun”]–Morley experiment, which found that light traveled at the same speed in all directions. For 10 points, name this medium that supposedly propagated light.   
ANSWER: luminiferous **ether** [or **æther**]

19. This leader was criticized for the *Gukurahundi* [goo-kuh-rah-OON-dee] massacres, and Peter Tatchell tried to arrest him when he went to London. This person came to power after fighting a three-way war against Joshua Nkomo [nuh-KOH-moh] and Ian Smith, which led to the Lancaster House Agreement. When this person came to power, he forcibly took land from white farmers so it could be redistributed. By 2009, this leader had his country recognize U.S. dollars as legal tender in order to address hyperinflation. This leader left office in 2017 and died in 2019. For 10 points, name this former president of Zimbabwe.   
ANSWER: Robert (Gabriel) **Mugabe** [**moo-gah-bay**]

20. In a novel by this author, the narrator opens a window to let in the protagonist from a fire escape. This author then has the protagonist say “If there’s one thing that I loathe, it’s men who bite”, and she asks the narrator if she can call him Fred. In that novel, this author wrote about a relationship between Mag Wildwood and José Ybarra-Jaegar [hoh-ZAY ee-BAR-ah YAY-gar]. A book by this writer is set in Holcomb, Kansas, and ended up being largely about Richard Hickock and Perry Smith. For 10 points, name this author who wrote about the murder of the Clutter family in *In Cold Blood* and about Holly Golightly in *Breakfast at Tiffany’s*.   
ANSWER: Truman (Garcia) **Capote** [or Truman Streckfus **Persons**]

**Extras**

21. Some organisms in this phylum are eaten by nudibranchs [NOO-dih-branks], who then are protected by maturing structures from this phylum. Some organisms in this phylum have skeleton-like structures made primarily from water, called mesoglea [meh-zoh-GLEE-uh]. The moving animals in this phylum are classified as medusas, while the stationary examples are polyps [PAH-lips]. This phylum is named for cells that are capable of delivering a toxin by stinging other organisms. Some animals from this phylum are responsible for the creation of coral reefs. For 10 points, name this animal phylum that includes sea anemones [uh-NEH-muh-nees] and jellyfish.   
ANSWER: **Cnidaria**ns [**ny-DAIR-ee-u**nz] [accept **coelenterate**s or **coelenterata**]

22. A character in this novel claims that you can remember who discovered America by thinking about cucumbers. That character and her sister are praised by the teacher Miss Beasley. The protagonist of this novel gives birth to Olivia and Adam when she is very young, and her children are sold to Corrine and Reverend Samuel. Later in this novel, the protagonist finds letters that had been written over several decades by her sister Nettie. This novel consists of letters written to God by a woman who is treated horribly by her father and husband. For 10 points, name this novel about Celie [SEE-lee] by Alice Walker.   
ANSWER: *The* ***Color Purple***

23. Because this ion is made of both of the elements used to harden iron or steel, it is used for case-hardening. Though carbon monoxide is typically the biggest problem when inhaling smoke fumes, this ion is a major problem if the smoke is from burning nylon or wool. This ion inhibits cytochrome *c* oxidase [“SIGH-toe-chrome C OX-id-ace”], which means that this ion prevents the production of ATP. The simplest acid with this ion is made by the Andrussow [AN-droo-soh] process, which uses methane, ammonia, and oxygen. This ion has the same chemical formula as the nitrile [NY-“trial”] group. For 10 points, name this poisonous ion that contains one atom each of carbon and nitrogen.   
ANSWER: **cyanide** [accept **cyano**; before “carbon”, accept **C N*−*** [“**C N minus**”] or **C N1*−*** [“**C N** one **minus**”] or **C N*−*1**[“**C N minus** one”]; prompt on **CN**]

24. The fractal named for Helge von Koch [hell-guh vohn “coke”] is built by starting with this shape and repeatedly adding these shapes to the middle of the sides. The Sierpiński [sir-PIN-skee] sieve is a fractal built by starting with this shape and repeatedly removing these shapes from the middle. The area of this shape can be found by multiplying 1*/*2 times the magnitude of a cross product if two of its sides are treated as vectors. The “ambiguous case” is a situation in which there are two possible versions of this shape. Methods to prove that two of these shapes are congruent to each other include “side-side-side” and “side-angle-side”. For 10 points, name this shape with three sides.   
ANSWER: **triangle** [before “ambiguous case”, accept equilateral **triangle**s or equiangular **triangle**s or regular **triangle**s]

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**Bonuses**

1. In this novel, several dogs are shot during an attack on Lucy’s farm. For 10 points each:  
[10] Name this novel about Lucy’s father David Lurie, who used to be a professor of Romantic poetry.   
ANSWER: ***Disgrace***   
[10]When Cape Technical University shut down its Classics and Modern Languages Department, Lurie often taught classes in this subject.   
ANSWER: **communication**s or **communication** skills   
[10] This South African author wrote *Disgrace* as well as *Life & Times of Michael K*.  
ANSWER: J(ohn) M(axwell) **Coetzee** [**kuut-SEE**-uh]

2. This is the most widely practiced denomination of Islam. For 10 points each:  
[10] Name this denomination that broke with Shi’a Islam over who should succeed Muhammad.   
ANSWER: **Sunni** Islam [or **Sunni**sm]   
[10] This movement within Sunni Islam is named after an 18th-century religious leader and has close ties to the Saudi royal family.   
ANSWER: **Wahhab**ism   
[10] Muhammad ibn Abdal Wahab wrote a book named for this Arabic term, which means the oneness of God.   
ANSWER: **tawhid**

3. This act criminalized making false statements critical of the federal government. For 10 points each:  
[10] Name this act signed by President John Adams the same year he signed the Alien Friends Act, Alien Enemy Act, and Naturalization Act.   
ANSWER: **Sedition** Act   
[10] Thomas Jefferson and James Madison wrote these responses stating that the Alien and Sedition Acts were illegal. These responses are named for the states that passed them.  
ANSWER: **Kentucky** and **Virginia** Resolutions [either order; prompt on **Kentucky** or **Virginia** alone]   
[10] The harshest sentence under the Sedition Act was given to David Brown by this Supreme Court associate justice who was later impeached by the House but acquitted by the Senate.  
ANSWER: Samuel **Chase**

*Virginia content question - non-Virginia tournaments may read bonus 4a instead.*  
4. For 10 points each, answer the following about recent removals of Robert E. Lee:  
[10] A sculpture of Robert E. Lee was the last statue removed from this Richmond street, where four other Confederate statues departed in 2020.  
ANSWER: **Monument Avenue**  
[10] Mechanicsville High School was previously named for Lee and this Mississippian, who lived at a house on Clay Street from 1861 to 1865.  
ANSWER: Jefferson (Finis) **Davis**  
[10] A 2017 vote to remove a statue of Lee in Charlottesville was the nominal event being protested by this deadly rally in August 2017.  
ANSWER: **Unite the Right**

*At VCU site: Read the above bonus and skip bonus 4a.*  
4a. This complex was built in the 12th century under the patronage of the Khmer [kuh-mair] king Suryavarman II [sur-yah-VAR-mun "the second"]. For 10 points each:  
[10] Name this group of Buddhist temples in northwestern Cambodia. Because it was originally a Hindu site prior to religious changes decades after it was built, this site takes the shape of the mythical Mount Meru.,  
ANSWER: **Angkor** Wat  
[10] Many of the sculptures at Angkor Wat use this technique in which an image is sculpted out of background material at a shallow depth intended for front-on viewing, without regard to the image being readable from the side.  
ANSWER: **bas-relief** [bah-ril-yef] [or **low relief**; prompt on "relief"]  
[10] Angkor Wat is unusual among Cambodian temple complexes because its entrances do not face in this direction. In North America, Jews and Muslims face in this direction while praying.  
ANSWER: **east**

5. This play ends with the lines “Give me your hands, if we be friends, and Robin shall restore amends.” For 10 points each:  
[10] Name this play by William Shakespeare in which Puck speaks after a group wedding that includes Theseus and Hippolyta [hih-PAH-lih-tuh].   
ANSWER: *A* ***Midsummer Night’s Dream***   
[10]This character is the king of the fairies in *A Midsummer Night’s Dream*.  
ANSWER: **Oberon** [**OH-bur-ahn**]   
[10] Finish the line spoken by Puck that begins “Lord, what fools...”   
ANSWER: “Lord, what fools **these mortals be**!”

6. Arthur Collier advanced this doctrine by positing God's ability to make the mind unaware of whether a centaur, once conceived of, actually exists or not. For 10 points each:  
[10] Identify this philosophical doctrine that branched off from British empiricism in texts such as *Three Dialogues Between Hylas and Philonous* [fye-loh-NOO-uss]. This doctrine believes that minds and perceptions are the only things that really exist.  
ANSWER: **idealism** [accept subjective **idealism** or **immaterialism**]  
[10] This cleric wrote *Three Dialogues Between Hylas and Philonous* and advanced his "master argument" in *A Treatise Concerning the Principles of Human Knowledge*.  
ANSWER: George **Berkeley**  
[10] Berkeley's 1709 book advanced a "new theory" of this human sense, which Plato attributed to the "emission" of rays.  
ANSWER: **vision** [or eye **sight** or **seeing**]

7. This phenomenon occurs below the Curie temperature. For 10 points each:  
[10] Name this type of magnetism that occurs in iron, cobalt, and nickel.  
ANSWER: **ferro**magnetism   
[10] Ferromagnets exhibit this dependence on prior conditions rather than only present conditions, exemplified by the fact that a ferromagnet remains magnetic after an external magnetic field is removed.   
ANSWER: **hysteresis**   
[10]This element has a Curie temperature of 19 kelvins, but it is combined with iron and boron to make a strong permanent magnet that is often used to produce sounds and vibrations in cell phones.   
ANSWER: **neodymium** [**nee-oh-“DIE”-mee-um**] [accept **Nd**]

8. In this novel, George Hurstwood steals money from Fitzgerald and Moy’s in Chicago; then he moves to New York City and changes his name to “George Wheeler”. For 10 points each:  
[10] Name this novel in which the title character performs in the play *Under the Gaslight*.  
ANSWER: ***Sister Carrie***   
[10]*Sister Carrie* was written by this naturalist author of *An American Tragedy*.  
ANSWER: Theodore (Herman Albert) **Dreiser** [**“DRY”-zur**]   
[10] Theodore Dreiser tried to get this other naturalist author to write a review of *Sister Carrie*, but this author did not do so because he disliked the book. Dreiser wrote an article about this author of *The Rise of Silas Lapham*.   
ANSWER: William Dean **Howells**

9. The atomic bomb dropped on Hiroshima used uranium, but the bomb dropped on Nagasaki used this element. For 10 points each:  
[10] Identify this element named after an object that was considered to be a planet at the time.   
ANSWER: **plutonium** [accept **Pu**]   
[10] This person and Edwin McMillan shared a Nobel Prize for discovering plutonium and other transuranic [“trans”-yur-AN-ik] elements.   
ANSWER: Glenn T(heodore) **Seaborg**   
[10]Plutonium is often used in these reactors that create fissile [FISS-“isle”] material faster than they use it.   
ANSWER: **breeder** reactors

10. This poem states “But at my back I always hear time’s winged chariot hurrying near.” For 10 points each:  
[10] Name this poem that begins “Had we but world enough and time.”  
ANSWER: **“To His Coy Mistress”**   
[10]This English poet wrote “To His Coy Mistress” and “Flecknoe”.   
ANSWER: Andrew **Marvell**   
[10]The poem “To His Coy Mistress” states that this location is “a fine and private place”. The poem adds “But none, I think, do there embrace.” Use the same term that the poem uses.   
ANSWER: the **grave**

11. This producer created *Grey's Anatomy* in 2005, and remains its showrunner and head writer. For 10 points each:  
[10] Name this television creator of *Private Practice* and *Scandal*, who began developed twelve new series for Netflix in 2017 after a falling-out with Disney.  
ANSWER: Shonda **Rhimes**  
[10] Rhimes's first Netflix hit was this 2020 series that adapts Julia Quinn's novels about the debutante scene in Regency-era London. Reg\'e-Jean Page [REG-ay zhahn "page"] became the breakout star of this series.  
ANSWER: ***Bridgerton***  
[10] This actress starred from 2014 to 2020 in the Rhimes series *How to Get Away with Murder*. This Oscar winner for *Fences* will portray Michelle Obama in the 2022 series *The First Lady*.  
ANSWER: Viola **Davis**

12. This painter’s fresco *The Last Judgment* covers the altar wall of the Sistine [SISS-teen] Chapel. For 10 points each:  
[10] Name this artist who also painted the Sistine Chapel’s ceiling.   
ANSWER: **Michelangelo** (di Lodovico) **Buonarroti** (Simoni) [accept either underlined name]   
[10] This panel on the Sistine Chapel ceiling shows God almost touching a man’s hand.  
ANSWER: *The* ***Creation of Adam*** [or ***Creazione di Adamo***]   
[10] The Vatican also contains this 18th- and 19th-century sculptor’s *Monument to the Royal Stuarts* and his *Perseus Triumphant*.   
ANSWER: Antonio **Canova**

13. This person has the fourth-most time served in the U.S. Cabinet, which she belonged to from 1933 to 1945. For 10 points each:  
[10] Name the first female cabinet member.   
ANSWER: Frances **Perkins** [or Fannie Coralie **Perkins**]   
[10] Frances Perkins held this position, which recently has been held by Eugene Scalia [skuh-LEE-uh] and Marty Walsh.   
ANSWER: Secretary of **Labor**   
[10]After the National Industrial Recovery Act was declared unconstitutional, Perkins oversaw the implementation of this 1938 law that established a federal minimum wage.  
ANSWER: **Fair Labor Standards** Act of 1938 or **FLSA**

14. Tay-Sachs and Gaucher disease are caused by problems with this organelle. For 10 points each:  
[10] Name this organelle that contains enzymes.   
ANSWER: **lysosome**(s) [**“LIE”-soh-sohm**]   
[10] This other organelle is similar to a lysosome but has more catalase [“CAT-uh-lace”] to break down a specific chemical.   
ANSWER: **peroxisome**(s) [**puh-“ROCK”-sih-sohm**z]   
[10] The lysosomal [“lice”-oh-SOH-mull] disease mannosidosis [muh-NOH-sih-DOH-siss] leads to a build-up of this type of sugar that is made of a few saccharides [“SACK-uh-rides”]—more than two, but not many more.   
ANSWER: **oligosaccharide**s [**OH-lih-goh-“sack-uh-ride**s”]

15. This name for the Qing [cheeng] dynasty came from the clan that started it. For 10 points each:  
[10] Give this name that is the shortened name of a region of China and also the name of a haircut that the Qing dynasty required.   
ANSWER: **Manchu**   
[10]The Qing dynasty survived this enormous rebellion that was started in 1850 by a person who claimed to be the younger brother of Jesus.   
ANSWER: **Taiping** (Heavenly Kingdom) Rebellion   
[10] The Qing dynasty ended in 1912, though their last emperor—Puyi—became the puppet ruler of Manchukuo [man-choo-kwoh] after this 1931 incident in which a bomb went off near a railway controlled by Japan.   
ANSWER: **Mukden** incident

16. A 1966 book by Peter Berger and Thomas Luckmann is titled for this phenomenon as applied to "reality." For 10 points each:  
[10] Bruno Latour and Steve Woolgar proposed that "scientific facts" are produced by what process, in which human perception and consensus subjectively creates something that may not have an independent existence?  
ANSWER: social **construction**  
[10] A common example of social construction is this aspect of human beings, as opposed to measurable physical attributes such as skin color. Johann Blumenbach created a fivefold system that divides humans by this characteristic, examples of which Blumenbach labeled "Caucasian" and "Ethiopian."  
ANSWER: **race**  
[10] This linguist who wrote *The Blank Slate* and *The Better Angels of Our Nature* is a critic of extensive social construction theories.  
ANSWER: Steven (Arthur) **Pinker**

17. The First Transcontinental Railroad was completed near the town of Promontory in this state. For 10 points each:  
[10] Name this U.S. state that contains Great Salt Lake.   
ANSWER: **Utah**   
[10]This national park in Utah is near Moab and is named for the shape of its rock formations.   
ANSWER: **Arches** National Park   
[10] This mountain range, in the north part of Utah, is part of the Rockies and includes Mount Nebo [NEE-boh] and the Timpanogos [tim-uh-NOE-gus] Cave National Monument.  
ANSWER: **Wasatch** Range or **Wasatch** Mountains

18. The Houses of Lancaster and York were both branches of this royal house, which came from the house of Anjou [AN-joo]. For 10 points each:  
[10] Name this royal house that ruled England from 1154 to 1485.   
ANSWER: House of **Plantagenet** [**plan-TAJ-ih-nut**] or **Plantagenet** dynasty or **Plantagenet**s   
[10] The last Plantagenet monarch is generally considered to be this member of the House of York who died at the Battle of Bosworth Field.   
ANSWER: **Richard III** [prompt on **Richard**]   
[10] The House of Lancaster descended from this son of Edward III and father of Henry IV.  
ANSWER: **John of Gaunt** [prompt on **John**]

19. Glenn Miller mainly played this instrument. For 10 points each:  
[10] Name this brass instrument with a slide.   
ANSWER: (slide) **trombone**   
[10]This other trombonist often teamed up with Kai Winding [WIN-deeng]. Their pairing was called “Jay and Kai”.   
ANSWER: (James Louis) “J.J.” **Johnson**   
[10]Glenn Miller often performed this song whose lyrics begin “I stand at your gate” and end “We can stay, till break of day.”   
ANSWER: “**Moonlight Serenade**”

20. This diagram is a plot of luminosity versus temperature. For 10 points each:  
[10] Name this diagram used to classify stars.   
ANSWER: **Hertzsprung–Russell** diagram [accept **H–R** diagram]   
[10] This two-word phrase can be used to label the *y*-axis of the Hertzsprung-Russell diagram rather than luminosity.   
ANSWER: **absolute magnitude**s   
[10] Another famous diagram in astronomy is Edwin Hubble’s galaxy sequence, which is nicknamed after this object due to its shape.   
ANSWER: **tuning fork** [accept **tuning-fork** diagram; prompt on **fork**]

**Extras**

21. James Gleick [rhymes with “bike”] wrote a book about the development of this branch of mathematics. For 10 points each:  
[10] Name this study of dynamical systems that are very sensitive to initial conditions.  
ANSWER: **chaos** theory   
[10] Chaos theory is often explained using this “effect” in which an insect flaps its wings, eventually leading to a tornado.   
ANSWER: **butterfly** effect   
[10] Chaos theory and the butterfly effect are based on the work of this mathematician and meteorologist, whose namesake system has a solution called his namesake “attractor”.  
ANSWER: Edward (Norton) **Lorenz**

22. For this type of probability, a vertical bar is written between two events. For 10 points each:  
[10] Name this measure of the probability of one event given that another event has occurred.  
ANSWER: **conditional** probability [or **conditioned** probability]   
[10] This theorem states that the probability of *A* given *B* equals the probability of *B* given *A*, times the probability of *A*, divided by the probability of *B.*  
ANSWER: **Bayes**’ theorem   
[10] If two standard dice are rolled and the first die is a 5, what is the probability that the sum of the dice is 10?  
ANSWER: **1/6** [or **1 in 6**; accept 0**.16** repeating with any reasonable number of 6’s stated]

23. Any three points determine a plane, unless the points have this property. For 10 points each:  
[10] Name this property that exists for points in a plane if the slopes between any pair of them are equal.   
ANSWER: **co-linear**ity or being **co-linear** [prompt on answers referring to lying on a **line**]  
[10] A theorem named for this person states that extensions of opposite sides of a hexagon meet at collinear points if the hexagon vertices are on a conic section.  
ANSWER: Blaise **Pascal** [accept **Pascal**’s theorem]   
[10] Find the *y*-coordinate of a point if its *x*-coordinate is 10 and the point is collinear with the point “zero comma 5” and the point “2 comma 9”.   
ANSWER: **25** [accept **(10*,* 25)**]

24. The S.I. unit of capacitance is a shortened version of this person’s name. For 10 points each:  
[10] Name this scientist whose law of induction states that electromotive force equals the opposite of the derivative of magnetic flux with respect to time.   
ANSWER: Michael **Faraday** [accept **Faraday**’s law; prompt on **farad**]  
[10] The negative sign in Faraday’s law—indicating that the inductive force opposes the voltage—is credited to this person and is sometimes treated as a separate law named for him.   
ANSWER: Emil **Lenz** [**lents**] [accept **Lenz**’s law]   
[10] The Maxwell–Faraday equation says that the opposite of the derivative of magnetic field with respect to time equals this calculus operation applied to the electric field.  
ANSWER: **curl**