

## ACF Fall 2013

Packet by Michigan A (Siddhant Dogra, Peter Jiang)

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1. Prekallikrein complexes with a kininogen and Factor XII during the intrinsic pathway for this process. A serine protease found in this pathway is known as the Christmas factor. A hereditary deficiency in a multimeric protein leads to abnormalities in this process in Von Willebrand disease. Thrombin proteolyzes fibrinogen to form a fibrin network at the start of this process, the rate of which is decreased by the drug warfarin, which reduces Vitamin K. Various hemophilias result from a defect in this pathway, which works because platelets aggregate and trap other blood cells. For 10 points, name this process by which the body stops bleeding.

ANSWER: blood coagulation [or blood clotting; or word forms]

2. In a novel by this man, a priest who collects African masks is brutally murdered, influencing Ferdinand's desire to study in America. In that novel, the protagonist meets Nazruddin in London and is betrayed by Metty. Another of this man's protagonists causes the death of his father by drowning after letting a calf get lost while seeing a river for the first time. One of this man's works is set in an African country ruled by the Big Man, and Salim sets up a shop at the title location. He created a reporter in Port-of-Spain whose chief desire is to buy a home for Shama and himself. For 10 points, name this Trinidadian author of *A Bend in the River* and *A House for Mr. Biswas*.

ANSWER: Vidiadhar Surajprasad Naipaul [accept V. S. Naipaul]

3. This man attempted to avoid the Cold War in his "Third Way" policy and after supporting a coup lead by the GOU, he eventually became the head of the Department of Labor. Supporters of this man were killed at an airport in the Ezeiza massacre. This man was exiled and replaced by Eduardo Lonardi but came back to power in 1973, and he was also supported by the descamisados, or "shirtless ones." This man's successor was arrested in 2007 for forced disappearances, and that woman was overthrown in a coup d'état, replaced by Jorge Videla, and was this man's third wife Isabel. For 10 points, name this President of Argentina who was also married to the beloved "Evita."

ANSWER: Juan Domingo Peron

4. One of these pieces opens with a plethora of grace notes in a *vivace* tempo, leading to its nickname "Wrong Note." Another of these pieces carries the melody on the first note of each right hand sextuplet and is nicknamed "Aeolian Harp." Though most of them were collected in the Opus 10 and Opus 25 of their composer, "three new" ones of were written for Moscheles and Fetis. The right hand plays triplets exclusively on black notes in one of these pieces, while another was inspired by the November Uprising. For 10 points, name these works that include the "Winter Wind," "Tristesse," and "Revolutionary" ones, studies for the piano by a certain Polish composer.

ANSWER: Frederic Chopin's etudes [prompt on "etudes"]

5. This book mentions that "every seed-bearing herb" shall be for food. The sixth part of the yearly reading of the Torah focuses on the *Toledot* section of this book, while the Hebrew name for its first chapter comes from its first word, *Bereshit*. Several sections of this book's first chapter end with the phrase, "And there was evening and there was morning." In this book, the central figure instructs, "Increase and multiply and fill the earth" to characters made in "his own image and likeness." This book's third verse has the line, "Let there be light." For 10 points, name this book of the Bible in which God creates the heaven and the earth, the first book of the Bible.

ANSWER: Book of Genesis

6. In 1996, an especially bright object from this region was observed by and named after amateur astronomer Yuji Hyakutake. John Matese and Daniel Whitmire have proposed that a body called Tyche may be found in this region. A series of extinction events roughly every 26 million years led Richard Muller to speculate that a dwarf star called

Nemesis occasionally travels through this region. A similar object named for Hills lies in this region, which is sometimes co-named for Ernst Opik and lies outside the Kuiper belt. For 10 points, name this region that stretches nearly a lightyear out from the Sun, and from which long-period comets are thought to originate.

ANSWER: Opik-Oort cloud

7. James Sovereign and John Hayes were the final two leaders of this organization, which was responsible for an event which killed several Chinese miners in Rock Springs, Wyoming. This organization had rituals outlined in the *Adelphon Kruptos*, and its founder belonged to the Independent Order of Odd Fellows. Jay Gould put down a strike against the Missouri Pacific railroad led by this group, leaders of which were called Grand Master Workmen. This group was led by Uriah Stephens and Terence Powderley, though it lost popularity after the Haymarket Square Riot. For 10 points, name this first large labor organization succeeded by the American Federation of Labor.

ANSWER: Noble and Holy Order of the Knights of Labor

8. This artist's landscapes included a depiction of Lake George, originally titled *Reflection Seascape*, and a painting of Machu Picchu in morning light. This painter's *Sky Above Clouds IV* is the largest painting at the Art Institute of Chicago. The central figure of another painting by this artist models the crucifixion in front of a background of red, white and blue, while another work by this artist on the same subject shows it with calico roses. This artist was married to the founder of the Photo-Secession Movement, Alfred Stieglitz. For 10 points, name this American painter based in New Mexico, who frequently painted flowers and cow skulls.

ANSWER: Georgia Totto O'Keeffe

9. This author claimed he "possessed a well-balanced rather than a keen intellect" in one work, in which he declared "mere elegance of language can produce at best but an empty renown." In a letter to Cicero, this poet told him "it is your turn to be the listener." This man recounted trying to find an easier path on a trip he took to ascend Mount Ventoux. This author of "Letter to Posterity" and *Familiar Letters* wrote an unfinished epic poem whose hero is Scipio Africanus, called *Africa*. He wrote 366 poems addressed to Laura, which are collected in *Il Canzoniere*. For 10 points, name this 14th-century Italian poet whose namesake sonnet is comprised of an octave and a sestet.

ANSWER: Petrarch [accept Francisco Petrarca]

10. One of this man's daughters bribed an oracle to advise her husband Athamas to sacrifice his son Phrixus, who fled on a golden ram. This figure was succeeded by Pentheus, the son of his daughter Agave. Wondering how valuable a serpent could be to the gods, this man himself turned into a snake while ruling in Illyria with his wife, who was a daughter of Aphrodite and Ares. This husband of Harmonia was sent by his Agenor to search for a girl who had been abducted by Zeus in the form of a bull, but an oracle instructed him to follow a cow to a place where he killed a dragon and sowed its teeth in the ground. For 10 points, name this brother of Europa who founded Thebes.

ANSWER: Cadmus

11. Alfred Russell Wallace wrote an essay from Ternate, Indonesia positing this idea. Reverend William McLean brought a suit opposing the "balanced treatment" that required this idea's counterpart be given "equal time," which was also the subject of the Louisiana case *Edwards v. Aguillard*. Supporters of this idea brought suit against the Dover Area School District in 2005 for requiring a statement about "alternatives" to it, and a contentious case about teaching it involved Clarence Darrow's cross-examination of William Jennings Bryan. For 10 points, name this scientific theory about the observed changes in generations of species, scrutinized during the Scopes Monkey Trial.

ANSWER: the theory of evolution by means of natural selection [prompt on "natural selection"; do not accept or prompt on "intelligent design" or "creationism"]

12. These objects give their name to the harmonic functions which give the angular part of solutions to Laplace's equation. A Schmidt corrector plate can be used to correct for an optical effect caused by these objects, which is eliminated at aplanatic points. A solid one has a moment of inertia with a prefactor of two-fifths, and a volume element proportional to the sine of the polar angle and consisting of a distance, a polar angle, and an azimuthal angle make up the coordinate system named for these objects. The surface area of this object is four pi times radius squared. For 10 points, name these round objects which consist of all the points equidistant from a given point.

ANSWER: spheres [accept word forms such as spherical]

13. In one work, this thinker divided religion into world-flying mysticism, world-rejecting asceticism, and inner-worldly asceticism. This thinker claimed that the devaluation of mysticism led to disenchantment in modern culture and defined the state as the entity with a monopoly on the legitimate use of force. This author of *Economy and Society* claimed that man could become trapped in the "iron cage of rationality" as a result of bureaucratic specialization and also wrote *Politics as a Vocation*. For 10 points, name this sociologist who claimed that Lutheran secularism led to a culture of accumulation and trade in *The Protestant Ethic and the Spirit of Capitalism*.

ANSWER: (Maximilian Karl Emil) Max Weber

14. The dedicatee of this poem is told, "now you're really in the total animal soup of time" in one of its sections. One figure described in this poem has fingers that are "ten armies" and eyes that are "a thousand blind windows." This poem describes "an eli eli lamma lamma sabacthani saxophone cry" and describes a "sphinx of cement and aluminum" that it connects to the god Moloch. The third section of this poem speaks directly to Carl Solomon and repeats the line, "I'm with you in Rockland." This poem begins with the speaker stating that he "saw the best minds of [his] generation destroyed by madness." For 10 points, name this poem by the Beat poet Allen Ginsberg.

ANSWER: "Howl"

15. This man produced an album of songs from George Gershwin's *Porgy and Bess* with Ella Fitzgerald. This man often performed with the pianist Earl Hines, such as in his version of Joe Oliver's "West End Blues." This man's bands included his Hot Seven and Hot Five, with whom he engaged in scat singing in the song "Heebie Jeebies." In one song, this man told the title figure "you're lookin' swell" and "it's so nice to have you back where you belong." This man performed that song with Barbra Streisand while in another work he sang about "trees of green, red roses too." For 10 points, name this trumpet player who performed "Hello Dolly" and "What a Wonderful World."

ANSWER: Louis Armstrong [prompt on "Satchmo"]

16. The anion of this compound attacks a trialkylboron compound to produce boric acid and an anti-Markonikov alcohol in Brown hydroboration-oxidation. Alkyl derivatives of this compound also promote anti-Markonikov addition of hydrobromic acid to alkenes because its weak single bond is a radical initiator. Iron and this compound oxidize wastewater in Fenton's reagent. It spontaneously disproportionates because its central atom's oxidation state is -1. Superoxide dismutase synthesizes oxygen and this compound. In response, catalase breaks down this compound in namesake organelles in the liver. For 10 points, name this disinfectant with formula  $H_2O_2$ .

ANSWER: hydrogen peroxide [or  $H_2O_2$  before mention; prompt on "peroxide"]

17. Chris Chambliss was initially prevented from completing this action against Kansas City due to an onrush of fans. In *Good Will Hunting*, Sean Maguire meets his wife by skipping a game in which this action occurs off a pitch from Pat Darcy. Jack Buck exclaimed "I don't believe what I just saw!" after one occurrence of this feat, which Jim Thome has achieved 13 times in his career, more than any other player. Kirk Gibson did this while pinch-hitting, while Bobby Thomson did this in the "Shot Heard 'Round the World." Joe Carter and Bill Mazeroski are the only people to ever end the World Series doing this. For 10 points, name this type of home run which ends a ball game.

ANSWER: hitting a walk-off home run [prompt on game-winning home run or game-ending home run]

18. According to Plutarch, the last significant male of this family name befriended Marphadates and made an unarmored last stand at Philippi. To prevent interference with Cicero's prosecution, Clodius sent another member of this family to Cyprus. One member of this family advocated overworking slaves in "On Agriculture" and reportedly ended every speech with the phrase "Carthage must be destroyed." The most famous member of this family tried Catiline for proscription and joined Pompey against Caesar before committing suicide in Utica. For 10 points, give this name shared by a 2<sup>nd</sup> century BCE statesman and a Stoic, respectively known as the "Elder" and "Younger."

ANSWER: Cato [accept Marcus Porcius Cato, since both of the famous people were named that]

19. In a novel by this author, a character commits a faux pas by wearing Caroline's dress, which had previously belonged to the title character, at a party. Colonel Julwin investigates a crime in that novel, in which a housekeeper obsessively protects the reputation of a deceased woman. This author also wrote a short story in which Mr. Trigg is killed by the titular animals, while Nat Hocken weathers their attack by shutting himself in his home. This author's most famous novel sees Mrs. Danvers attempt to make the narrator jealous of the title character, who had previously married Maxim de Winter and lived in Manderley. For 10 points, name this author of "The Birds" and *Rebecca*.

ANSWER: Daphne du Maurier

20. This philosopher argued that the only way to exercise freedom is to act morally, because otherwise one's actions are bound by one's conditional desires. This thinker defined the title concept of one of his essays as "man's emergence from his self-imposed immaturity." He postulated that our senses perceive only phenomena and not noumena, so we can never truly know the "thing-in-itself." This author of "What is Enlightenment?" argued that we should act only according to maxims that could be made universal law, which he called the "categorical imperative." For 10 points, name this German author of *Groundwork of the Metaphysics of Morals* and *Critique of Pure Reason*.

ANSWER: Immanuel Kant

21. A national park in this state contains Going-to-the-Sun Road and the Lewis Overthrust. Granite Peak, the highest point in this state, can be found in a mountain range that this state shares with its southern neighbor, the Beartooth Mountains. Fort Peck Lake is formed behind a dam near the city of Glasgow in this state, which also contains Flathead Lake, a remnant of Glacial Lake Missoula. This state contains the northern part of the Big Horn Mountains and the eastern portion of the Bitterroot Range, which it shares with another state's panhandle. Among this state's most populous cities are Butte, Great Falls, and Billings. For 10 points, name this state with capital at Helena.

ANSWER: Montana

X. One event in this country may have begun due to the death of James Scobie and was a rebellion that arose due to an increase in fees for mining licenses. In this country, a revolt that started after the arrest of John Macarthur eventually included the deposition of William Bligh by George Johnston. One event in this country's history saw children taken from their parents to be raised by whites; those children were later referred to as the Stolen Generations. The Rum Rebellion and Eureka Stockade occurred in this country, which is also home to the Aborigines. For 10 points, name this country with current Prime Minister Tony Abbott and capital Canberra.

ANSWER: Australia

X. A character in one short story by this author receives a nickel for Christmas and declares that she will use it to buy a paper windmill. That character makes regular trips to Natchez to procure medicine for her grandson, who swallowed lye years ago. This creator of Phoenix Jackson in "A Worn Path" also wrote about the estate overseer Troy Flavin, who marries into the wealthy Fairchild family in one of her novels. Another of this author's novels sees Judge's eye surgery bring Laura McKelva Hand to New Orleans, where she deals with her stepmother Fay. For 10 points, name this Southern author of *Delta Wedding* and *The Optimist's Daughter*.

ANSWER: Eudora Alice Welty

X. Models for the action of these proteins include the cooperative autocatalysis model and the heterodimer model. Examples of them in yeast include Mod5, which promotes drug resistance, as well as URE3 and PSI. They are produced by the abnormal Sc version of PrP. Stanley Prusiner received the Nobel Prize for discovering how these objects propagate. They cause a disease that was distributed via cannibalism among the Fore tribe of Papua New Guinea, called kuru, as well as Creutzfeldt-Jakob diseases and mad cow disease. For 10 points, name these misfolded proteins that cause correctly-folded proteins to become similarly misfolded when they enter the body.

ANSWER: prions

1. This man explored “prestige suggestion” by using a quote alternatively attributed to Jefferson and to Lenin. For 10 points each:

[10] Name this psychologist who conducted a conformity experiment in which people judged the lengths of lines.

ANSWER: Solomon (Eliot) Asch

[10] Asch was an American member of this German school of psychology, which believes the whole is greater than the sum of its parts and counts Max Wertheimer, Kurt Koffka, and Wolfgang Kohler among its founding members.

ANSWER: Gestalt psychology

[10] Early Gestalt psychologists described this phenomenon, in which a series of rapidly shown objects seems to give the idea of continuous movement when none truly exists.

ANSWER: phi phenomenon

2. A species of seal is named after this body of water, which lies east of the Sayan Mountains. For 10 points each:

[10] Name this Siberian lake, the deepest and most voluminous body of freshwater on Earth.

ANSWER: Lake Baikal [or Ozero Baykal; or Baygal nuur]

[10] Water from Lake Baikal is drained via the Angara River to this Siberian river that flows north to the Kara Sea. Along with the Ob and Lena Rivers, it is one of the three main rivers that flow north out of Siberia.

ANSWER: Yenisei River

[10] The banks of the Angara river contain this Russian city of nearly 600,000, a Siberian cultural hub and the administrative center of a namesake oblast that contains Lake Baikal.

ANSWER: Irkutsk [accept Irkutsk Oblast]

3. This element violates the octet rule by forming bonds only using its three valence electrons. For 10 points each:

[10] Name this metalloid with atomic number 5.

ANSWER: boron

[10] Borane, or BH<sub>3</sub>, is a classic example of one of these compounds, which are defined as electron pair acceptors. They often function as electrophiles.

ANSWER: Lewis acids [prompt on “acids”]

[10] When a Lewis base interacts with an electron-deficient acid, it donates both of its electrons to form this type of covalent bond. In coordination complexes, these bonds usually don’t change the metal’s oxidation state.

ANSWER: dative bonds

4. He was allegedly present during the Night of Power and was declared the first of the Companions of the Prophet. For 10 points each:

[10] Name this confidante of Muhammad who accompanied Muhammad on the *Hijra*, led conquests of Iraq and Syria as Muhammad’s successor, and gave him his daughter Aisha in marriage.

ANSWER: Abu Bakr as-Šiddīq [or Abdullah ibn Abi Quhafa]

[10] Abu Bakr was the first of this many Caliphs who are called “Righteously Guided.”

ANSWER: four

[10] This family, initially comprised of the Marwanids and Sufyanids, ended up taking the Arab Caliphate after the Righteously Guided Caliphs. It was supplanted by the Abbasids following the Battle of the Zab River.

ANSWER: Umayyad Dynasty [or Umayyad Caliphate]

5. A poem written in this language warns, “Beware...beware...of my hunger and my anger!” For 10 points each:

[10] Name this language used in the poem “Identity Card” by Palestinian poet Mahmoud Darwish. It is also the mother tongue of Syrian poet Adunis.

ANSWER: Arabic

[10] This Egyptian author used Arabic for his novels about Al-Sayyid’s extensive family, *The Cairo Trilogy*. He also wrote *Children of Gebelawi*.

ANSWER: Naguib Mahfouz

[10] In a common archetypal story from Arabic literature, Qays goes crazy while writing poems for a girl and receives a nickname meaning “crazy,” later dying at her grave. Name either the girl or the moniker bestowed upon her lover.

ANSWER: Layla and Mainun [accept either]

6. This figure had nine mothers called the Billow Maidens, who were all daughters of Aegir. For 10 points each:

[10] Name this watchman of the Norse gods. He stood guard over the bridge of Bifrost and had ears so keen that he could hear the grass growing.

ANSWER: Heimdallr

[10] Heimdall owned the Gjallarhorn, which he was prepared to blow to signal this event. This massive battle between the gods and the forces of Muspellheim saw the deaths of Thor, Odin, Heimdall, and almost everyone else.

ANSWER: Ragnarok

[10] This fire giant led the forces of Muspellheim at Ragnarok. Wielding a flaming sword, this husband of Sinmara killed Freyr and brought forth flames that swallowed the world.

ANSWER: Surtr

7. Those of degree two can be solved using the quadratic equation. For 10 points each:

[10] Name these mathematical functions, equal to a sum of various powers of a variable, each multiplied by a constant. An example is “3  $x$  squared plus 2  $x$  plus 4.”

ANSWER: polynomials

[10] This theorem states that every non-constant polynomial with real or complex coefficients has at least one complex root.

ANSWER: fundamental theorem of algebra

[10] Another topic in algebra, Galois theory, was developed in part to explain this theorem, which states that there is no general solution for polynomials of degree five or higher.

ANSWER: Abel-Ruffini theorem [or Abel’s theorem; or Abel’s impossibility theorem]

8. This agreement applied to the children of people who hadn’t had a conversion experience. For 10 points each:

[10] Name this agreement which allowed the children of members of the Congregationalist Church in New England to be baptized if their parents had been baptized.

ANSWER: Half-Way Covenant

[10] Religious reform in Massachusetts Bay was also spearheaded by this advocate of antinomianism. She was expelled from the colony after leading some Sunday school sessions that aggravated John Winthrop.

ANSWER: Anne Hutchinson

[10] Disgust with the privileges granted by the Half-Way Covenant prompted the first of these religious revivals led by Jonathan Edwards. The second one led to the rapid emergence of Baptism and Methodism in the 1820s.

ANSWER: **Great Awakenings** [or **First Great Awakening**; or the **Second Great Awakening**; prompt on “awakening”]

9. This composer used Paganini’s 24th caprice as the basis for his *Variations on a Theme of Paganini*. For 10 points each:

[10] Name this composer who broke tradition by using the Luther Bible in his *German Requiem*. He wrote the *Academic Festival Overture* for the University of Breslau, which gave him an honorary degree.

ANSWER: Johannes **Brahms**

[10] Brahms notably wrote one of these songs, utilizing lyrics from *Des Knaben Wunderhorn*. Brahms’s song of this type was dedicated to Bertha Faber and her young child, and was intended to help him go to sleep.

ANSWER: **lullaby** [or **Cradle Song**; or **Wiegenlied**]

[10] Brahms’s first symphony, which was dubbed “Beethoven’s 10th” for its similarity to Beethoven’s symphonies, was written in this key. Beethoven’s 5th was also written in this key, commonly used for dramatic pieces.

ANSWER: **C minor** [do not accept or prompt on “C” or “C major”]

10. This character is captured along with Roland Weary at the Battle of the Bulge. For 10 points each:

[10] Name this character who hides in a meat locker during the firebombing of Dresden and is later shown in a zoo with the adult actress Montana Wildhack while in Tralfamadore.

ANSWER: **Billy Pilgrim** [accept either underlined name]

[10] This author wrote about Billy Pilgrim “unstuck in time” in his novel *Slaughterhouse-Five*. Felix Hoenikker discovers the substance ice-nine in this author’s novel *Cat’s Cradle*.

ANSWER: Kurt **Vonnegut**, Jr.

[10] Some of Billy’s thoughts in *Slaughterhouse-Five* are attributed to the science-fiction novels of this fictional writer. This character gets his finger bitten off by Dwayne Hoover in Vonnegut’s *Breakfast of Champions*.

ANSWER: **Kilgore Trout** [accept either part]

11. Shamans conduct rituals called *gut* in Muism, a traditional religion from this nation. For 10 points each:

[10] Name this East Asian nation which is home to the Unification Church, led by a man who calls himself the Messiah.

ANSWER: **South Korea** [or the **Republic of Korea**; prompt on “Korea”; do not accept “Democratic People’s Republic of Korea”]

[10] The founder of Korea’s Unification Church is this man, who leads the so-called “True Family” and wrote the *Divine Principle* governing his church.

ANSWER: Sun Myung **Moon**

[10] Moon is known for presiding over massive ceremonies of this type. In Judaism, these ceremonies take place under a canopy called a *chupah* and after presenting the ring, the groom breaks a piece of glass with his foot.

ANSWER: **weddings** [or **marriages**]

12. This equation’s namesake and formulator used it to predict the existence of antimatter. For 10 points each:

[10] Name this relativistic equation that uses a four-component wavefunction and applies to particles with spin equal to one-half, such as the electron.

ANSWER: **Dirac** equation

[10] The Dirac equation is a generalization of this equation of quantum mechanics. It describes how wavefunctions evolve, and is named for an Austrian physicist who imagined a cat in a superposition of alive and dead states.

ANSWER: **Schrodinger** equation

[10] The two forms of the Schrodinger equation are distinguished by whether they depend on this quantity or not. The version that does depend on it takes the derivative of the wavefunction with respect to it on one side.

ANSWER: **time**

13. This politician succeeded James Callaghan following the Winter of Discontent. For 10 points each:

[10] Name this female British Prime Minister, sometimes known as the “Milksnatcher” or the Iron Lady.

ANSWER: Margaret **Thatcher**

[10] Patrick Magee of the IRA attempted to assassinate Margaret Thatcher in a Brighton bombing of one of these establishments. In 1946, the Irgun bombed British administrators at one of these establishments called King David.

ANSWER: **hotels**

[10] Margaret Thatcher lost popularity following the introduction of the Community Charge tax, a factor which likely played a role in her being succeeded as Prime Minister by this man.

ANSWER: John **Major**

14. This work depicts the author of *The Interior Castle* during an encounter with an angel. For 10 points each:

[10] Name this marble sculpture in the Cornaro Chapel whose titular nun contorts in pleasure as an angel prepares to strike her with a spear.

ANSWER: *The **Ecstasy of Saint Theresa*** [or *L'Estasi di Santa Teresa*]

[10] *The Ecstasy of Saint Theresa* was sculpted by this 17th century Baroque artist, who also depicted the Ganges and Danube as part of his *Fountain of the Four Rivers*.

ANSWER: Gian Lorenzo **Bernini**

[10] Another fountain in Rome is the Trevi Fountain. In a famous scene from this film, which popularized the term “paparazzi,” Marcello swims in the Trevi Fountain with an actress named Sylvia.

ANSWER: *La **Dolce Vita*** [or *The **Sweet Life***]

15. The speaker of this poem warns the title figures “for having lost but once your prime / You may for ever tarry.” For 10 points each:

[10] Name this poem in which the speaker also tells the title figures to “gather ye rosebuds while ye may.”

ANSWER: “**To the Virgins, To Make Much of Time**”

[10] The writer of “To the Virgins, To Make Much of Time,” Robert Herrick, was one of the leading Cavalier Poets, along with this poet of “To Althea, From Prison,” in which he wrote that “Stone Walls do not a Prison make.”

ANSWER: Richard **Lovelace**

[10] This Cavalier Poet is better known for a play in which Sir Epicure Mammon desires the philosopher’s stone. That play is *The Alchemist*.

ANSWER: Ben **Jonson**

16. One of these enzymes is responsible for telomerase, lengthening chromosomes. For 10 points each:

[10] Name these enzymes which synthesize DNA from an RNA transcript and is required for retroviruses to create copies of themselves.

ANSWER: **reverse transcriptases** [or **RTs**]

[10] A reverse transcriptase is one of the nine genes possessed by this retrovirus, which infects CD4+ T helper cells in the immune system. When the T-cell count drops below a certain limit, having this virus is called AIDS.

ANSWER: **human immunodeficiency** virus [or **HIV**]

[10] Three nitrogen atoms are double bonded together off of a nucleoside in the structure of this antiretroviral medication, the first approved by the federal government for treating AIDS.

ANSWER: **AZT** [or **zidovudine**; prompt on “Retrovir”]

17. This philosopher applied Lamarckian concepts of evolution to society in order to defend individual liberty in his *Social Statics*. For 10 points each:

[10] Name this philosopher who coined the term “survival of the fittest” in his *Principles of Biology*, and whose ideas gave rise to Social Darwinism.



ANSWER: Herbert **Spencer**

[10] Despite Spencer's strong personal influence on this American industrialist, this author of "The Gospel of Wealth" was a leading philanthropist. He also founded a university he now co-names with Andrew Mellon.

ANSWER: Andrew **Carnegie**

[10] This contemporary American philosopher and author of *Consciousness Explained* used the theory of evolution as an explanation for the origins of the human mind in his *Darwin's Dangerous Idea*.

ANSWER: Daniel Clement **Dennett** III

18. Among this artist's still-life paintings is a depiction of purple and white flowers in a vase, *Lilacs in a Window*. For 10 points each:

[10] Name this American Impressionist who showed a family in a rowboat in *The Boating Party*. The subject she is most famous for is exemplified in her *The Child's Bath*.

ANSWER: Mary Stevenson **Cassatt**

[10] This French Impressionist, a friend of Mary Cassatt, painted a figure holding onto a curtain while getting out of the tub in *The Morning Bath*. He was a lover of horses and ballet, and also painted *L'Absinthe*.

ANSWER: Hillaire-German Edgar **Degas**

[10] This painting by Degas, set in an American city, depicts the office of his uncle Michel Musson when his business went bankrupt. Degas' brother Achille also appears in this work.

ANSWER: *The **Cotton Exchange** in **New Orleans*** [accept anything mentioning a **cotton** business in **New Orleans**]

19. At the end of this play, the actor commits suicide and Pepel is found to have killed the landlord. For 10 points each:

[10] Name this play in which Luka lies to the inhabitants of the title location, an underground lodging house, in order to give them hope.

ANSWER: *The **Lower Depths*** [or **Na dne**]

[10] This author wrote *The Lower Depths*. The failed textile factory previously run by Peter and Nikita is the subject of his novel *The Artamonov Business*.

ANSWER: Maxim **Gorky** [or Aleksey Maksimovich **Peshkov**]

[10] Maxim Gorky's novel *Mother* was viewed as an exemplar of Socialist Realism, which was developed in this nation of his birth. Many works from that period in this nation glorified the ideas of Vladimir Lenin.

ANSWER: **Russia** [accept **Soviet Union** or **USSR** or **Union of Soviet Socialist Republics** or **CCCP**]

20. One slogan advertising these products allegedly went "As soon as a coin in the coffer rings, a soul from purgatory springs." For 10 points each:

[10] Name these objects advertised by people like Johann Tetzel on behalf of the Vatican. They claimed to ensure salvation for the buyer or a relative in exchange for a nominal fee.

ANSWER: **indulgences**

[10] This author of the *95 Theses* was a critic of indulgences and other Church dogmas. He famously stated "Here I stand. I can do no other" at the Diet of Worms, and his doctrines initiated the Protestant Reformation.

ANSWER: Martin **Luther**

[10] This confederation of electorates in the Holy Roman Empire fought for Lutheranism against Charles V before being routed at the Battle of Mühlberg.

ANSWER: **Schmalkaldic League** [or **Schmalkaldischer Bund**]

21. Ahead of rivals like Wells Fargo and Bank of America, this bank is the largest in the world by assets. For 10 points each:

[10] Name this retail bank, created in a merger in 2000, which acquired Bank One in 2004. During the 2008 crash, it acquired Bear Stearns Washington Mutual under pressure from the Fed.

ANSWER: **JP Morgan Chase** & Co. [prompt on partial answers]

[10] This Federal Reserve chairman teamed up with Secretary of Treasury Hank Paulsen to convince Chase to make the acquisition. He was nominated for a second term in 2010.

ANSWER: Ben Shalom **Bernanke**

[10] Fed scrutiny of JP Morgan Chase amped up in 2012, when it was discovered that trading done by Bruno Iksil cost the bank 2 billion dollars. The press gave the incident this two-word derisive nickname.

ANSWER: **London Whale** Incident

X. The title character of one short story by this writer is cleared of responsibility for a robbery near Red Dog, but his attempts to buy the freedom of his friend lead to that friend's hanging. For 10 points each:

[10] Name this author of "Tennessee's Partner." Stumpy and Kentuck look after the child of Cherokee Sal in "The Luck of Roaring Camp," a short story by this editor of *The Overland Monthly*.

ANSWER: (Francis) Bret **Harte**

[10] In this short story by Bret Harte, John Oakhurst commits suicide after realizing that he cannot weather a snowstorm in a cabin because Uncle Billy ran away with the title group's horses and mules.

ANSWER: "The **Outcasts of Poker Flat**"

[10] A frequent critic of the dialect employed by Harte in his stories was this author and occasional collaborator. This author also attacked James Fenimore Cooper in a document about his "Literary Offenses."

ANSWER: Mark **Twain** [or Samuel Langhorne **Clemens**]

X. Name some of the rare instances in which European powers actually cooperated, for 10 points each:

[10] An 1856 document called the "Declaration of" this city restricted the tactics that could be employed by a nation's navy during wartime. The treaty ending the Crimean War was also signed here.

ANSWER: **Paris**

[10] An 1884-1885 conference took place in this German city, catalyzing the Scramble for Africa by carving up areas of Africa for European colonial powers. An 1878 Congress here put out a treaty overriding the Treaty of San Stefano.

ANSWER: **Berlin**

[10] The 1648 Peace of Westphalia ended this long bloody war between Catholicism and Protestantism, confirming the guarantee of religious toleration given by the Peace of Augsburg.

ANSWER: **Thirty Years'** War

X. This effect can be characterized by measuring the stopping potential needed to bring the generated current to zero. For 10 points each:

[10] Name this effect in which incoming photons cause the release of electrons when they hit a metal surface if the photons have energy greater than the work function of the metal.

ANSWER: **photoelectric** effect

[10] The photoelectric effect was first observed in 1887 by this German physicist. His name is given to the SI unit of frequency, or cycles per second.

ANSWER: Heinrich **Hertz**

[10] Hertz was surprised to find that the kinetic energy of the excited electrons was independent of this property of the incoming light. Integrating this property with respect to area gives radiant power.

ANSWER: **intensity**