

**The Brief Wondrous Tournament of WAO** - *Málà Yousufzai, served extra spicy*

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Packet by Maryland

## TOSSUPS

1. A planned building in this city would generate enough energy from its wind turbines and solar panels to power five nearby buildings and was modeled on the Brazilian Suite Volland. That skyscraper designed by David Fisher for this city would have 80 floors capable of rotating independently and is called the Dynamic Tower. In 2013, Shanghai Tower overtook this city's Cayan Tower as tallest building with a 90 degree twist. A hotel in this city was designed by Tom Wright to resemble a yacht sail, and stands opposite (\*) Jumeraih Beach. The *Hymenocallis* flower inspired the base of a building in this city designed by Adrian Smith. The world's largest fountain is outside of that building in this city, which has a spiraling Y-shaped plan to reduce wind force and was planned by the firm Skidmore, Owings, and Merrill. For 10 points, name this city home to the Burj al-Arab and the world's tallest building, the Burj Khalifa.

ANSWER: Dubai <Edited>

2. This sort of place partly titles a 1973 book that examines the complete breakdown of a nomadic society in Northern Uganda when their land was converted into a national park. A 2003 book titled for these places profiles a man who founded the Zanmi Lasante hospital in Haiti, the medical anthropologist Paul Farmer. The Ik people are examined in a book titled for this sort of "people" by Colin Turnbull. A parable about a man and an elephant sharing a hut is found in a book titled for one of these places where the god (\*) Ngai is believed to reside. A book titled for this sort of place defends the *irau* ritual of female genital mutilation and has a preface claiming its author is a credible anthropologist, despite being non-Western, because he studied at the London School of Economics under Bronislaw Malinowski. For 10 points, Jomo Kenyatta discussed Gikuyu culture in a book titled for "Facing" what sort of feature?

ANSWER: mountains [or *The Mountain People*; or *Mountains Beyond Mountains*; or *Facing Mount Kenya*] <Edited>

3. A character theorizes that this person was a noble man who was slandered by the weak after symbolically identifying the design on an arch's keystone as a sparrow hawk. This character is condemned to wander the Earth in Jose Saramago's last novel, which is titled for him. A character who parallels this character gives an acclaimed speech at a banquet that he has put on to honor a painting by his rival. Emil Sinclair is told a revised version of this man's story, in which he is not a (\*) villain, by the title character of Hesse's *Demian*. This character is paralleled by Joaquin Monegro, who hates an artist surnamed Sanchez in a Miguel Unamuno novel. In *Beowulf*, Grendel and his mother are descendants of this Biblical man, and thus bear his "mark." For 10 points, name this character who asks God "am I my brother's keeper?" after murdering his brother Abel.

ANSWER: Cain

4. This person bribed the Duke of the Thebaid to ensure that a party of missionaries would reach the court of King Silko before their rival envoys did. This person had 500 prostitutes rounded up and sent to a monastery called Repentance, a policy portrayed positively in a text called *The Buildings*. Another account blames this woman for the assassination of Queen Amalasantha in a bath. This child of a bearkeeper allegedly said "royalty makes a good burial shroud" to convince a man not to (\*) flee one event by boat, after which that man sent Mundus into a crowd. This woman had geese eat grains off her crotch as part of a routine described in a text which also depicts her and her husband as demons, *The Secret History* of Procopius. This ex-prostitute is credited with saving her husband's regime after the Blues and Greens factions started the Nika riots. For 10 points, name this Byzantine empress, the wife of Justinian the Great.

ANSWER: Empress Theodora <Edited>

5. These objects have non-vanishing off-diagonal matrix elements which are equal to the square roots of the natural numbers. The second quantization formalism is expressed in terms of these objects in a Fock space. The Holstein-Primakoff transformation relates the spin operators to these objects for bosons. For bosons, these objects satisfy a canonical commutation relation, while they are related by an anticommutator for fermions. Multiplying these operators gives an operator that (\*) counts the amount of particles in a state, called the number operator. They are used to find the energy eigenvalues of the quantum harmonic oscillator without directly solving the Schrödinger equation. For 10 points, name these operators that increase or decrease a system's eigenvalue by one unit.

ANSWER: ladder operators [**\*\*For alternate answers you need BOTH underlined portions. Prompt on partial answer\*\*** or creation and annihilation operators; or raising and lowering operators]

6. They aren't hot Jupiters, but magnetic torques cause long-period variation in the oblateness of these objects in the Applegate mechanism. Hans Ludendorff found Epsilon Aurigae to be one of these objects, which is likely in a disk of dust. Massive stars appear to evolve unusually slowly in a paradox named for one of these systems containing the "Demon Star". W Ursae Majoris and Beta Lyrae classes of these systems are ellipsoidal. (\*) Light curves for one type of these systems have a large primary dip and a shallower secondary one. A small subgiant and large main sequence star make up their main Algol subclass. Eclipsing ones can be described as "semidetached" or "contact" due to Roche lobe overflow. The discovery of a white dwarf led to reclassification of Sirius as one of these systems. For 10 points, what type of stellar system contains two stars?

ANSWER: (eclipsing) binary star system [accept Algol-type binary or Algol variable or Algol paradox until "Algol" is read]

7. Next to a cannon full of used condoms, this novel's protagonist receives oral sex from his classmate while her father rescues a golfer from a mudflat across the river. A couple in this novel often reference the "Under Toad" after their six-year-old misunderstands the word "undertow." This novel features a society of women who cut their tongues out in honor of the rape victim Ellen James. The title character of this novel pulls into his driveway without his lights on, rear ending a car containing his wife and her student (\*) Michael Milton. The protagonist of this novel writes about a hotel inspector encountering a unicycle-riding bear after he moves to Vienna with his mother, the feminist author of *A Sexual Suspect*, who had conceived him with a wounded Technical Sergeant. For 10 points, name this novel titled for the author of "The Pension Grillparzer" by John Irving.

ANSWER: *The World According to Garp*

8. Gervase of Tilbury claimed that an English scholar and Roger II of Sicily conspired to steal this man's bones. According to legend, this man supported the foundation of the Castel dell'Ovo by burying a golden griffin egg under its wall. In a story from the Power of Woman genre, this man is trapped in a large basket by an emperor's daughter. In the Middle Ages, this author's reputation as a sorcerer inspired a method of divination based on the *Sortes Homericæ* that involved selecting random passages from his work. This man allegedly caused a (\*) ruler's sister Octavia to faint by reading from his best-known work, which that ruler saved from being burnt after this man died in Brundisium. An object from a poem by this author titles a book that discusses the priesthood at Nemi, James Frazer's *The Golden Bough*. For 10 points, name this author of the *Aeneid*.

ANSWER: Virgil [or Publius Vergilius Maro]

9. A plan to get around the result of this project, known as Case Yellow, may have been postponed on account a plane crash in the Mechelen Incident. The namesake of this project, who also served as the chief lobbyist for its funding, was succeeded in his highest position by Paul Painlevé. This project centered around 142 *ouvrages* [oo-vrazh], many of which were concentrated around (\*) Metz, and which were spread out all the way to Dover Beach. This project, funded in 1929 by a grant of 3.3 billion francs, was rendered mostly ineffectual because the enemy it was meant to repel decided to attack through the forest of Ardennes with Panzers, violating Belgian neutrality as it did during World War I. For 10 points, name this line of defenses that failed to protect France from German invasion during World War II.

ANSWER: Maginot Line <Edited>

10. This man has a vision of a "watcher" who tells him to cut down a tree, while leaving its stump in the ground, bound with an iron and bronze band. Following that vision, this man's hair grows as long as eagle feathers and his nails as long as eagle claws, after he eats grass like an ox for seven periods of time. This man's captain Arioch tries to carry out this man's orders to kill wise men. After three men refuse to worship a (\*) golden statue, this man orders them to be thrown into a fiery furnace. This man has a vision of a stone that grows to the size of a mountain after it breaks apart a statue made up of various metals and clay that represents four different kingdoms. This king's son Belshazzar witnesses the words "mene mene tekel upharsin," which are better known as the writing on the wall. For 10 points, Daniel interprets two dreams for which historical king of Babylon?

ANSWER: Nebuchadnezzar II <Edited>

11. A collection partly titled for this sort of person begins "Go, little Book; thyself present, As Child whose Parent is unkent" and features conversations between two of them named Theonot and Hobbinol. In another poem, one of these people is told "When Rivers rage and Rocks grow cold, / And Philomel becometh dumb, / The rest complains of cares to come." A poem spoken by one of these people describes "A gown made of the finest wool" and "A belt of straw and Ivy buds." One of these people named (\*) Colin Clout is the subject of a "calendar" by Edmund Spenser. Walter Raleigh wrote a reply to a poem spoken by a person of this profession who begs "Come live with me and be my love." For 10 points, name this profession of the "Passionate" speaker of a Christopher Marlowe poem and of most characters in pastoral poetry.

ANSWER: shepherds

12. At a building named for this man, Clara Lemlich gave a Yiddish speech that sparked the Uprising of the 20,000. While fouling up the waterways of Gowanda with his glue factory, this man joined other Gramercy Park residents in backing Cyrus Field's planned transatlantic telegraph line. A demonstration by this man convinced the B&O directors that steam power was feasible. He became the oldest presidential candidate for any party ever when, at age (\*) 85, he was the Greenback Party nominee in the 1876 election. This inventor of Jell-O built the first American locomotive, Tom Thumb. He established an "open and free" college where Abraham Lincoln affirmed his opposition to the spread of slavery. For 10 points, name this industrialist, who founded a namesake "Union" in New York City.  
ANSWER: Peter Cooper <Edited>

13. A complex between alpha-lactalbumin and oleic acid has been trialed as a component of this method; the efficacy of that complex is increased by histone deacetylase inhibitors. In addition to HAMLET, one drug serves this method by inhibiting dihydrofolate reductase. This method can use a compound that prevents phosphorylation of cells expressing the (\*) Philadelphia chromosome, called imatinib. Types of drugs frequently used in this method include alkylating antineoplastic agents and mitotic inhibitors. Doxorubicin, cyclophosphamide, and methotrexate are all drugs used in this method. Nausea, vomiting, and hair loss are common side effects of this method of treatment. For 10 points, name this method that uses drugs like cisplatin to treat cancer.  
ANSWER: chemotherapy [accept chemo; prompt on treatments for cancer until the end; grudgingly prompt on immunosuppression or suppression of the immune system]

14. Alon Harel attempted to establish the importance of this concept from intrinsic grounds in *Why this Matters*. Some philosophers hold the "predictive" view that these concepts are only normative insofar as one is concerned with avoiding harm. Joseph Raz argued that the "Source Thesis" that these concepts are grounded on social facts is true because they claim authority. Socrates doesn't appear in a twelve book dialogue titled for these concepts, a dialogue which is Plato's probable (\*) last work. The "positivist" view of these concepts was argued for by H.L.A. Hart. Socrates personifies these concepts as mouthpieces for the argument that ignoring them means breaking an "implied contract" with the state, and thus escaping execution would be wrong, in the *Crito*. For 10 points, name these rules enforced by governments.  
ANSWER: laws

15. John Allegro argued that the original cult centered around this figure originated with groups who ingested psychedelic mushrooms in order to perceive the mind of the divine. A common standard when assessing ideas about this figure is called the "criterion of embarrassment." In the 19th century, a popular book about this figure's actions was written by Ernest Renan. According to Bruno Bauer, this figure was born entirely from the cloth of a literary tradition. (\*) David Strauss's portrayal of this figure was made in direct opposition to the lectures about him by Freiderich Schleiermacher. The magnum opus of Albert Schweitzer is titled *A Quest for the Historical* [this figure], who was a "lord, liar, or lunatic" according to a certain author's "trilemma." For 10 points, name this religious figure, the subject of *The Screwtape Letters* and a book about the "Mere" form of his religion by C.S. Lewis  
ANSWER: Jesus Christ [accept either part] <Edited>

16. In a story written in this language, an English teacher and an accountant quickly fall in love on a tramcar after the city's alarm bell sounds. This language of "Sealed Off" was used to write a story whose title character habitually orders peas with aniseed and warmed wine from a tavern that he returns to after both his legs are broken during a book-stealing attempt. A character from a story in this language is chased by a black dog while stealing turnips from a (\*) convent. In a story in this language, the narrator distrusts his elder brother and believes his fellow villagers to be cannibals, so he ends his account by writing "save the children..." A story in this non-Russian language ends with the hanging of the title peasant, who calls his defeats "spiritual victories." For 10 points, the stories "Diary of a Madman" and "The True Story of Ah Q" were written in what language used by Eileen Chang and Lu Xun?

ANSWER: Chinese [or Zhongwen]

17. By popular legend, a traitorous general only chose to oppose this person on account of the treatment of the general's concubine Chen Yuanyuan. This person's political program, which promised the abolition of the grain tax, was put into slogans by an *ex-juren* named Yan. A horrifying disastrous attempt to defeat this leader's forces resulted in the destruction of China's largest Jewish community, found in Kaifeng, by a man-made flood. Because he was unwilling to surrender to this person, Zhu Youjian ["YO"-jien] hanged himself on the so-called "guilty scholar tree." This person stupidly massacred the family of (\*) Wu Sangui, who then allowed Dorgon and his armies past the Great Wall to defeat this person at Shanhai Pass. This person ruled for one year as the "Dashing King" of the Shun dynasty before he and his peasant followers were crushed by Manchus. For 10 points, name this man who led a rebellion that prompted the fall of the Ming dynasty.

ANSWER: Li Zicheng [prompt on Li] <Edited>

18. While in this place, one artist painted himself as Jean Valjean in a self-portrait that includes a portrait of the artist's close collaborator in the background. Another self-portrait created in this region depicts the painter's disembodied head with a halo and a snake. Women from this area lounge in a bright green pasture in the best-known painting of Émile Bernard. Another painting depicts one of this region's calvary statues in front of a hilly beach. A cloisonist painting set in this region depicts a man climbing over a (\*) stone hedge in the background. Women dressed in this region's traditional black dresses and white bonnets kneel and watch Jacob wrestle the angel another painting. *The Green Christ*, *The Yellow Christ* and *The Vision after the Sermon* were painted in this region's town of Pont-Aven. For 10 points, Paul Gauguin painted in what northwestern region of France before going to Tahiti?

ANSWER: Brittany [or Bretogne] <Edited>

19. The final movement of this composer's Piano Quintet begins in cut time with the cello playing a low F, then jumping up an octave, which is then imitated by the violin and piano; that quintet in F minor was first composed as a string quintet with two cellos. This composer's Piano Trio No. 1, his only piece with two published versions, opens in a major key and ends in a minor key. Late in life, this composer wrote several chamber pieces for Richard Mühlfeld. This composer placed the notes A-G-A-H-E, a reference to his love for Agathe von Siebold, in the first movement of his (\*) String Sextet No. 2 in G major. This composer's more oddly instrumented chamber works include a Clarinet Trio in A minor and a Horn Trio in E-flat major. A piece by him breaks the tradition of the *Missa pro defunctis* by using texts from the Luther Bible and not mentioning Jesus' name. For 10 points, name this composer of *A German Requiem*.

ANSWER: Johannes Brahms

20. The de Pablo group observed thin films of microtubules and kinesin on a spherical surface to behave like one of these materials. They aren't solar cells, but addition of dye to these materials causes the lowering of a transition energy in the Janossy effect. That transition occurs when an external electric or magnetic field is used to change their structure into the bend, splay, or twist alignment and is named for Fredericksz ["Fredericks"]. The benzoate of (\*) cholesterol was the first known version of these materials and a class of them is named for cholesterol. One form of this material is named for its soapy slipperiness and another is named for the threadlike disclinations it exhibits, those are the smectic and nematic phases. These materials are named for possessing long range order but still flowing relatively freely. For 10 points name these materials common in television displays.

ANSWER: liquid crystals [or nematic liquid crystal or other subtypes]

TIEBREAKER/EXTRA TOSSUPS

1. Besides the root, this is the only degree of the C major scale that appears in the C altered scale. This interval number often appeared harmonically in the "contenance angloise" led by John Dunstable. A cycle of dominant-tonic chord progressions moving by this interval number opens "Giant Steps," an example of Coltrane changes. This is the interval number of the smaller pair of imperfect consonances. These intervals are stacked in extended chords. Two scales in a relative relationship have roots this interval number apart. This scale degree is called the (\*) mediant. In a minor key piece, a cadence in the parallel major key is named for Picardy and this interval number. This scale degree is omitted in a power chord. The just interval of this interval number of 5 to 4. For 10 points, name this scale degree that combines with the root and the fifth to form a triad.

ANSWER: third [accept three; accept major third or minor third; accept tertian chord; accept mediant until read; prompt on "E natural" on the first clue] <Edited>

2. In August 2016, this territory's capital hosted a conference at which Ahmad al-Tayeb, the Grand Imam of Al-Azhar, excluded Salafis in a definition of Sunni Islam. In July 2016, this territory's leader launched a reality TV show called *The Team* in which participants compete to be his assistant. This territory's capital is the site of a mosque named after its former leader Akhmad, who was also its current leader's father. Prior to 1991, this territory was combined with its western neighbor (\*) Ingushetia. This territory ruled by Ramzan Kadyrov is bordered to the east by Dagestan. Ichkeria is a name for this territory that was used by a separatist government of this territory that became the Caucasus Emirate. For 10 points, Grozny is the capital of which predominantly-Muslim Russian republic?

ANSWER: Chechnya [or Chechen Republic; accept Ichkeria before it is read]

## BONUSES

1. An early example of one of these devices was constructed by the Zhang lab at Berkeley using a 36 nm silver film. For 10 points each:

[10] Name these devices which allow for subwavelength imaging. They can overcome the diffraction limit by reducing the loss of evanescent wave components.

ANSWER: **superlenses** [do not accept or prompt on "lens"]

[10] Many superlenses are constructed with metamaterials that possess negative values of this property. Split-ring resonators can be arranged to confer negative values of this property, which causes reverse propagation.

ANSWER: (negative) **index of refraction** [accept word forms]

[10] A negative index of refraction can be achieved if both of these quantities are negative in the same frequency band. The index of refraction is defined as the square root of the product of these two quantities.

ANSWER: **permittivity** and **permeability** [or relative **permittivity** and relative **permeability**; or **mu** and **epsilon**]

2. Definite descriptions, factive verbs, and change-of-state verbs may trigger these propositions, which catastrophically fail if the question of their being true is irrelevant. For 10 points each:

[10] Name these "projecting" propositions that are already assumed to be part of the mutual discourse context, or "common ground." One of these propositions for the sentence "the king of France is bald" is "France has a king."

ANSWER: **presuppositions**

[10] Presuppositions hold when embedded in a negation, the antecedent of a conditional, or these expressions. Any answer to these expressions' "loaded" type still confirms the presupposition, as in "did you stop beating your wife?"

ANSWER: **questions** [accept equivalents like **interrogatives**]

[10] The study of presuppositions is part of this sub-field of linguistics, which studies communication and the dynamics of meaning in context.

ANSWER: **pragmatics** <Edited>

3. This character is reunited with her mother, a cellar-dwelling hermitess, when the latter recognizes the red baby shoe she carries. For 10 points each:

[10] Name this girl who owns the trained goat Djali ["jolly"] and becomes the focus of Archdeacon Frollo's evil plot.

ANSWER: **Esmeralda**

[10] The gypsy girl Esmerelda appears in *The Hunchback of Notre Dame*, a novel by this French author of *Les Misérables*.

ANSWER: Victor **Hugo**

[10] Frantz de Galais becomes a gypsy in this other French novel. The original French title of this only novel by Alain-Fournier refers to Francois Seurel's idol, a schoolboy who falls in love with Yvonne at a mysterious manor.

ANSWER: *Le **Grand Meaulnes*** ["moan"] [or *The **Grand Meaulnes***; or *The **Wanderer***; or *The **Lost Domain***; or *The **Lost Estate***; or *Big **Meaulnes***]

4. Answer the following about homosexuality in British history, for 10 points each.

[10] In the 1889 Cleveland Street scandal, a person of this name was alleged to have visited a gay brothel that the police busted. The British named many places, including a lake in Uganda, after a native German speaker of this name who died in 1861.

ANSWER: **Albert** [accept **Albert** Victor or Prince **Albert**]

[10] In a later scandal, the British government circulated photos of these possibly-forged documents to turn public opinion against a man who supported the Easter Rising.

ANSWER: **Black Diaries**

[10] In this decade, a gay spy named John Vassall blackmailed by the Soviets into spying was exposed in the Profumo Affair that rocked Harold Macmillan's government. Britain decriminalized homosexuality during this decade.

ANSWER: the **1960s** <Edited>

5. Answer the following about films that end by depicting a film crew filming the movie itself, for 10 points each.

[10] The last scene of this film shows a film crew recording Alma as she boards a bus. Alma, a nurse, begins to merge identities with her patient Elisabeth while they stay in a cottage in this Ingmar Bergman film.

ANSWER: **Persona**

[10] Shots of the movie's crew filming it end *Taste of Cherry*, a film from this country directed by a recently-deceased native-born director from here, Abbas Kiarostami.

ANSWER: Islamic Republic of **Iran**

[10] The Alchemist orders the camera to zoom back, revealing the crew filming the scene, at the end of this Chilean director's *The Holy Mountain*. A Frank Pavich documentary chronicles his failed attempt to adapt the novel *Dune*.

ANSWER: Alejandro **Jodorowsky** <Edited>

6. The distribution associated with this test statistic is normalized by a gamma function and it is a special version of the Gamma distribution. For 10 points each,

[10] Name this test statistic which is equal to to sum of the square of the difference between observed data and theory divided by the theory value. Its most common version is named for Pearson.

ANSWER: **Chi-squared** statistic

[10] The reduced chi-squared is given by the ordinary chi-squared statistic divided by this number. This number equals the number of data points minus the number of fit parameters.

ANSWER: **degrees of freedom**

[10] For two independent chi-square distributed variables a and b, from populations with degrees of freedom x and y, the variable "quantity a over x close quantity over quantity b over y close quantity" should follow this distribution.

ANSWER: **F** distribution

7. In this play, the dead in a cemetery listen as “Blessed Be the Ties That Bind” is sung during the funeral of Emily Gibbs. For 10 points each:

[10] Name this Thornton Wilder play titled for the village of Grover’s Corner, New Hampshire.

ANSWER: **Our Town**

[10] In Act III of *Our Town*, Emily Gibbs relives the day of one these events in 1899 with the help of the Stage Manager, though decides to return to 1913 after asking “Do any human beings ever realize life while they live it?”

ANSWER: a **birthday** [or her twelfth **birthday**]

[10] In the first act of the play, the Stage Manager describes how the Cartwrights are creating one of these things to commemorate the building of a new bank, and suggests that the play itself be put in it.

ANSWER: a **time capsule** [or descriptive answers such as a **collection** of items for people of the **future** to dig up, since it’s not actually called a “time capsule” in the play]

8. Answer the following questions about the textual organization of the Qur’an, for 10 points each:

[10] With the exception of the ninth *sūrah*, every *sūrah*, or chapter, in the Qur’an begins with this phrase, which means “In the name of God, the Most Gracious, the Most Merciful.”

ANSWER: **basmala** [or **bismillāh**ir-rahmānir-raḥīm]

[10] Following the basmala, 29 *sūrahs* begin with *muqatta’āt*, which are combinations of between one and five of these things.

ANSWER: Arabic **letters**

[10] The *sūrahs* are categorized based on whether they were revealed before or after the hijrah, the migration of Muhammad and his followers from Mecca to this second-holiest city of Islam.

ANSWER: **Medina** [or **Yathrib**]

9. In *The Waste Makers*, Vance Packard discussed three types of this phenomenon involving function, quality, and desirability. For 10 points each:

[10] Identify this phenomenon, whose “planned” type involves products that are designed to have a limited lifespan.

ANSWER: **obsolescence** [or word forms such as being **obsolete**]

[10] Obsolescence is an inevitable product of this law, which states that the number of transistors per square inch on integrated circuits doubles every year.

ANSWER: **Moore’s** law

[10] A classic example of planned obsolescence was the Phoebus Cartel’s plan to limit the lifespan of these products. The “Centennial” one of these products has worked in Livermore, California, since 1901.

ANSWER: light **bulbs** <Edited>

10. Name these French feminists from diverse origins and time periods, for 10 points each.

[10] This French activist protested slavery in her play *Zamore and Mirza*. She was executed in 1793, two years after writing her *Declaration of the Rights of Woman and the Female Citizen*.

ANSWER: Olympe de **Gouges** [oh-LAMP duh GOO]

[10] This medieval feminist, who criticized the immorality of the *Romance of the Rose*, promoted female education in *The Book of the City of Ladies*.

ANSWER: Christine de **Pizan**

[10] This expat hosted a Parisian salon that became a haven for anti-WWI activists and started an *Academy of Women* as a counterpart to the French Academy. Biographies like Jean Chalon’s *Portrait of a Seductress* made this author of *Thoughts of an Amazon* better known for being an open lesbian than intellectual work.

ANSWER: Natalie Clifford **Barney** <Edited>

11. This novel uses mock-heroic language for a passage in which this novel’s protagonist is seduced by Mrs. Waters as he stuffs his face at an inn. For 10 points each:

[10] Name this novel, titled for a character who breaks his arm while catching Sophia Western as she falls from a horse in its Book IV.

ANSWER: **Tom Jones** [or *The History of Tom Jones, a Foundling*]

[10] *Tom Jones* is the best-known novel of this author, who parodied Samuel Richardson in *Shamela* and *Joseph Andrews*.

ANSWER: Henry **Fielding**

[10] This teacher and barber-surgeon, who is long suspected to be Tom's father, criticizes David Garrick's acting for being too realistic while visiting a theater. This character shares his name with a type of animal that Tom is blamed for shooting after it is killed by Black George.

ANSWER: Mr. **Partridge**

12. Answer the following about mythological fingernails, for 10 points each.

[10] In Norse myth, Naglfar is one of these objects made entirely out of the fingernails and toenails of the dead. Traditional Germanic burials, such as the one found at Sutton Hoo, often placed kings in these objects.

ANSWER: **ships**

[10] Since nails are allegedly neither animate nor inanimate, Vishnu's avatar Narasimha was able to use his nails to kill the demon Hiranyakashipu. Narasimha was half human and half one of these animals.

ANSWER: **lions**

[10] In a story from these people, humanity obtains fire after a hero tricks Mahuika into giving him her fingernails one by one. These peoples' sky-father and earth-mother lived in such a tight embrace that all their sons were suffocated until the forest god Tane [tah-nay] forced them apart.

ANSWER: **Maori** [prompt on Polynesians] <Edited>

13. Russell-Silver syndrome is a primordial type of this condition whose most common type is caused by mutations in the FGFR3 protein. For 10 points each:

[10] Name this condition that can be caused by Laron syndrome, but is most commonly caused by achondroplasia.

ANSWER: **dwarfism**

[10] Like Angelman and Prader-Willi syndromes, the inheritance pattern of Russell-Silver syndrome is commonly influenced by this epigenetic phenomenon that occurs when only the maternal or paternal gene is expressed.

ANSWER: genomic **imprinting**

[10] Genomic imprinting is caused by DNA methylation which in mammals almost exclusively occurs at sites in the DNA of these two nucleotides. Islands of these nucleotides surround the promoters of "housekeeping" genes.

ANSWER: **cytosine** and **guanine** [accept **CpG** sites or **CG** sites]

14. An argument of this name can be summarized as “If there were objective values, then they would be entities...utterly different from anything else in the universe.” For 10 points each:

[10] Name this property that, according to an anti-moral realism argument by J. L. Mackie, ethical values possess. As an adjective, this term denotes a branch of philosophy practiced by Eve Sedgwick and Jack Halberstam.

ANSWER: **queerness** [or **queer** theory]

[10] Besides the argument from queerness, another of J. L. Mackie’s signature positions was that these statements aren’t actually propositions at all. These conditionals take the form “if it were the case that A, then it would be the case that B.”

ANSWER: **counterfactuals**

[10] Mackie also supported this position by formulating the logical problem of evil, which Alvin Plantinga worked on refuting. Outside of biology, Richard Dawkins is best known for championing this position.

ANSWER: **atheism** [or equivalent of **God** does **not exist**]

15. Kenneth Jackson documented the support of redlining by the Home Owners Loan Corporation in a book analogizing suburbs to this kind of concept. For 10 points each:

[10] Name this concept. Ray Allen Billington was best known for defending a theory about this concept, which in part claims it acted as a “safety valve” for urban discontent.

ANSWER: the **frontier** [accept **Crabgrass Frontier**]

[10] Frederick Jackson Turner’s “The Significance of the Frontier in American History” was inspired by the census of this year, which declared the frontier officially closed.

ANSWER: **1890** [prompt on 90]

[10] *Crabgrass Frontier* profiles suburban communities, called this man’s namesake “towns,” that consisted of plain white houses built them for World War II veterans on Long Island.

ANSWER: William **Levitt** [accept **Levitt & Sons**] <Edited>

16. One of these texts opens every chapter of a novel about Tita’s love for Pedro, who is married off to her sister Rosaura. For 10 points each:

[10] Identify this sort of text, examples of which such include “Chabela Wedding Cake,” which appears in Laura Esquivel’s novel *Like Water for Chocolate*.

ANSWER: **recipes**

[10] Recipes also appear in *Gabriela, Clove, and Cinnamon*, a novel by this Brazilian author. Vadinho comes back from the dead after his wife has remarried in this author’s *Dona Flor and Her Two Husbands*.

ANSWER: Jorge **Amado**

[10] An author with this surname included a recipe in each chapter of her memoir *Monsoon Diary*.

Another author with this surname wrote about a man nicknamed “Railway” who loves the dancer Rosie in the novel *The Guide*.

ANSWER: **Narayan** [or R. K. **Narayan**; or Shoba **Narayan**]

17. Answer the following questions about Indian Ocean trade, for 10 points each.

[10] Many Arab merchants in the Indian Ocean made use of dhows, which are ships with this kind of sail. These sails have a triangular shape, allowing ships to sail towards the direction of the wind by tacking.

ANSWER: **lateen** sails [or **lateen** rig]

[10] This European country began trading in the Indian Ocean after the voyages of its native Vasco de Gama, who entered the Indian Ocean by sailing around the Cape of Good Hope.

ANSWER: (Kingdom of) **Portugal**

[10] In 1498, Vasco de Gama's first voyage brought him to this spice port in Kerala, where he was received by its zamorin. Under British rule, this city became the capital of the Malabar District of the Madras Presidency.

ANSWER: **Calicut** [or **Kozhikode**; do not accept "Calcutta" or "Kolkata," which is a different city altogether] <Edited>

18. The Swain equation relates two forms of this effect with a power law whose exponent is 1.442. For 10 points each:

[10] Name this effect, in which the rate of a reaction changes due to the substitution of an atom with a different mass number such as the substitution of deuterium for hydrogen.

ANSWER: **kinetic isotope** effect [or **KIE**, prompt on partial answer]

[10] Kinetic isotope effects can be modeled by an equation containing terms representing excitation, symmetry, mass moment-of inertia, and this property. A lower value of this property means a higher activation energy for bond cleavage is required.

ANSWER: **zero-point energy**

[10] The zero point energy as explanation for the KIE was first postulated by chemist-turned philosopher Michael Polanyi and this scientist. He also co-names an alternative to the Arrhenius equation with Polanyi.

ANSWER: Henry **Eyring**

19. Since it used German styles in orchestral composition, this piece was very unpopular when it premiered in the political environment of the Franco-Prussian war. For 10 points each:

[10] Name this one movement piece, which uses a "cyclic" form. Its second movement *Allegretto* contains a melody for English horn played above harp and strings, which was mocked as old-fashioned by contemporaries.

ANSWER: Cesar **Franck's Symphony** in D minor [prompt for composer on Symphony in D minor]

[10] This one-movement symphony by Jean Sibelius opens with timpani hits on G before strings play a rising C major scale and A-flat minor chord. Once titled *Fantasia sinfonica*, it represents Aino with a 3/2 trombone theme.

ANSWER: Symphony No. **7** in C major

[10] This composer of *Adagio for Strings* modeled his *Symphony in One Movement* on Sibelius' seventh.

ANSWER: Samuel **Barber**

20. Answer the following about the Ottoman Empire in Italian Renaissance art, for 10 points each.

[10] Paolo Veronese, a painter from this city, painted a portrait of Sultan Bayezid I and depicted a defeat of the Turks in his *Allegory of the Battle of Lepanto*. Canaletto, a painter from this city, painted its Grand Canal.

ANSWER: **Venice**

[10] A member of this family influenced the Persian painter Behzad with his Ottoman-inspired miniature *A Seated Scribe*. That member of this family, Gentile, was inspired by his journeys in the empire to paint *St. Mark Preaching in Alexandria* with his brother Giovanni.

ANSWER: **Bellini**

[10] A knight holding a red flag holds a captured Turk wearing a turban on the left side of this painting. The figures in this Titian painting stand on a diagonal marble staircase in front of two giant pillars.

ANSWER: *The **Pesaro Madonna*** [or *The **Madonna** of the **Pesaro** Family*] <Edited>

#### EXTRA BONUSES

1. Every graph of degree at least 6 has either a clique of 3 “friends” or an independent set of 3 “enemies” in a special case of a theorem of this mathematician, whose numbers solve the “party problem.” For 10 points each:

[10] Name this British philosopher whose namesake theory counts the smallest number needed to guarantee a given property. His namesake sentences contrast theoretical and observable terms.

ANSWER: Frank P. **Ramsey**

[10] This Hungarian mathematician developed Ramsey theory after Ramsey’s untimely death. His prolific work in number theory includes an elementary proof of the prime number theorem, and he wrote papers with over 500 other authors.

ANSWER: Paul **Erdős** (“AIR-dish”)

[10] This other Hungarian’s enumeration theorem generalizes Burnside’s lemma and can count isomers or necklaces. Colored balls are copied and replaced in this man’s urn model, and he abused induction to “prove” all horses are the same color.

ANSWER: George **Pólya** (“POH-ya”)