Minnesota Undergraduate Tournament 2016: A Vat of Ranch Dressing or a Bullet to the Head
Questions by Sam Bailey, Rob Carson, Mike Cheyne, Akhil Garg, Carsten Gehring, Andrew Hart, Ike Jose, Shan Kothari, Cody Voight, Najwa Watson, and NOT Cory Haala
Packet 9: Tossups

1. **The antibodies mAb100 (M-A-B-100) and mAb114 (M-A-B-114) together bind this pathogen. A paper by Gire et al. used 99 genome sequences to determine that this pathogen's substitution rates had recently doubled. This pathogen inhibits PY-STAT1 (P-Y-"stat"-1) nuclear transport by binding KPNA with its VP24 protein. Three chimerized mono•clonal antibodies bind this pathogen's glyco•protein in a potential treatment called (*)** ZMapp. Its four causative agents are related to Reston virus in primates, and the fact its GP gene encodes four proteins distinguishes it from the cause of Marburg disease. This filovirus is named after a river in Zaire, where its second outbreak occurred in 1976. For 10 points, name this hemorrhagic viral disease that caused a 2014 West African epidemic.
ANSWER: **Ebola** virus [or **EBOV** or *Zaire **ebolavirus***; accept **Ebola** virus disease or **EVD** or **Ebola** hemorrhagic fever or **EHF**] <Kothari>

2. **A leader with this papal name died before he could release a bold anti-racist text translated as "On the Unity of the Human Race"; that leader with this name denounced "neopaganism" in a text translated as "With Burning Concern" that was smuggled into Germany. An earlier leader with this papal name had his pronouncements challenged by Ignaz von Dollinger, who disagreed with that leader's denunciations of socialism, liberalism, and the revolutions of (*)** 1848 in the "Syllabus of Errors". That man with this papal name was called "a prisoner in the Vatican" after an invasion by Italy. The ninth pope with this name became the longest-reigning elected pope in church history and convened the First Vatican Council. For 10 points, give this name of twelve popes, the last of whom reigned during World War II.
ANSWER: **Pius** <Cheyne>

3. **This man ignores a coverlet tossed to him by another man while he is being transported in the back of a "rolling box". Missy Anne befriends this man's daughter, who forges a traveling pass for a man named Noah. This man befriends Fiddler after being healed of an injury in part with the help of a** *toubob* **doctor. This man's flamboyant grandson is given the moniker "Chicken George" because he tends to cockfighting birds, and is born after this man's daughter (*)** Kizzy is raped. This man is branded with an "LL" on the *Lord Ligonier* before being bought by John Waller, who gives him the name Toby. This man marries Belle and chooses to have part of his foot cut off rather than be castrated after his fourth and final escape attempt. For 10 points, name this Gambian man based on an ancestor of Alex Haley, a major character in *Roots*.
ANSWER: **Kunta** **Kinte** [accept either underlined portion; accept **Toby** Waller before mentioned; prompt on "Waller"] <Kothari>

4. **Search-and-matching labor market models frequently treat the wage as determined by a process named for this man. He developed that "axiomatic" approach to bargaining in one of the few economics papers he wrote. The folk theorem shows that, given the right discount factor, nearly any outcome is a kind of solution named for this man. He proved the existence of that "solution concept" by showing a best response correspondence from the set of mixed strategies to itself has a (*)** fixed point. In the prisoners' dilemma, the outcome in which both people confess even though it is not Pareto optimal is a type of equilibrium named for this man. For 10 points, name this mathematician who developed a namesake equilibrium notion in game theory.
ANSWER: John Forbes **Nash** Jr. [accept **Nash** equilibrium or equilibria] <Bailey>

5. **One song by this band was released in "Social" and "Unsocial" mixes, one of which contains the chanted initials "D.H.S.S.", and notes that "job or no job, you can't tell me that I'm not" a man before asking "do you enjoy what you do?" In another song, this group's singer describes "a face on a lover with a fire in his heart" before claiming to be "a man undercover but you tore me apart" and vowing "maybe next year...I'll give it to someone special". They donned t-shirts reading "CHOOSE LIFE" for the video of a song that opens with the repeated word (*)** "Jitterbug". This group behind "Last Christmas" vowed "we'll go dancing, everything will be all right" in a song that opens "you put the boom-boom into my heart" and later asks the listener not to "leave me hanging on like a yo-yo". For 10 points, name this George Michael-fronted 80s duo that recorded "Wake Me Up Before You Go-Go".
ANSWER: **Wham**! <Carson>

6. **Numerous folk tales about this empire depict the wily advisor Birbal outwitting greedy courtiers. One of its emperors created a syncretic religion called "Din-I Ilahi". Powerful kingmakers in this empire included the Sayyid brothers, who helped Farrukhsiyar to take the throne. It conquered the Golkonda region, acquiring a diamond known as the Koh-i-Noor that was eventually seized by Nader Shah. This empire was founded after the defeat of (*)** Ibrahim Lodi at the First Battle of Panipat. It went into a decline after a long failed war with the Maratha Empire. Rulers of this empire constructed the Red Fort and a mausoleum in Agra containing the tomb of a ruler's wife, who was named Mumtaz. For 10 points, what Indian empire featured such leaders as Akbar and Shah Jahan, the builder of the Taj Mahal?
ANSWER: **Mughal** Empire [or **Gurkani**] <Cheyne>

7. **This poet used two-syllable lines in his short lyric "Upon His Departure Hence", which begins "thus I / pass by / and die: / as one / unknown / and gone". He wrote "get up, get up for shame, the blooming morne" in a poem whose title is referenced in a line that follows "then while time serves, and we are but decaying". He praised a "careless shoe-string" that presents a "wild civility" and does "more bewitch me, then when art / is too precise in every part" in his poem about slovenly-dressed women entitled (*)** "Delight in Disorder". This poet of "Corinna's Going a-Maying" wrote that "old time is still a-flying" and "tomorrow will be dying" in a *carpe diem* poem that begins "gather ye rosebuds while ye may". For 10 points, name this English poet whose collection *Hesperides* contains his poem "To the Virgins, to Make Much of Time".
ANSWER: Robert **Herrick** <Hart>

8. **Abby Whiteside argued that finger-based technique broke down with these works in an essay on "Mastering" them. One of these works is based around the theme "E-E-E-E-F-E-C-E". Another juxtaposes presto eighth-note triplets in the right hand with quarter-note triplets in the left. Leopold Godowsky based 53 difficult studies on these works. In one of them, the right hand plays in a 16th - dotted-eighth rhythm that creates a series of quickly resolved (*)** minor seconds. One of these works in G-flat major has the right-hand play 16th note triplets on the black keys. Most of these works constitute their composer's Opus 10 and 25, and they include works nicknamed "Winter Wind" and "Wrong Note". One of them composed during the bombardment of Warsaw is called "Revolutionary". For 10 points, name these piano studies by the composer of the *Minute Waltz*, Frédéric Chopin.
ANSWER: piano **étude**s by Frédéric François **Chopin** [or Fryderyk Franciszek **Chopin** for the name; prompt on partial answer; accept just **étude**s after Chopin is mentioned] <Kothari>

9. **A PDE for which this scientist is the alphabetically second namesake reduces to the heat equation when there's no drift and the initial condition is a unit mass at *x* equals zero, describes the time evolution of the probability density of Brownian motion, and is named for this man and Adriaan Fokker. This scientist formulated a statement of the second law of thermodynamics that's also named for Lord Kelvin. Dividing a quantity named for him by two pi (*)** "reduces" said quantity, which is cubed in the denominator of the Rydberg constant. Because the Rayleigh-Jeans law diverges at high frequencies in the so-called ultraviolet catastrophe, this scientist developed a law for black body radiation based on the quantization of energy. For 10 points, name this physicist whose constant equals "6.626 times 10 to the minus 34 Joule seconds" and is symbolized h.
ANSWER: Max **Planck** [or Max Karl Ernst Ludwig **Planck**] <Garg>

10. **In one of this nineteenth-century artist's late paintings, a pair of flying angels lash at the title character with multi-tailed whips as a rearing horse stomps on his chest. That mural depicting *Heliodorus Driven From the Temple* was, like this man's ceiling painting *St. Michael Defeats the Devil*, created for the Church of Saint-Sulpice. In another of his paintings, a man in the foreground milks a mare as curious inhabitants of Tomis crowd around the title poet. Picasso created a series of 15 cubist versions of a painting by this man in which a (*)** turban-wearing black servant looks over her shoulder at the three title characters, one of whom holds the pipe of a hookah. This painter of *Ovid Among the Scythians* placed a boy wielding two pistols next to the *tricolore*-carrying title character of his most famous painting. For 10 points, name this French Romantic painter of *The Women of Algiers* and *Liberty Leading the People*.
ANSWER: Eugène **Delacroix** [or Ferdinand Victor Eugène **Delacroix**] <Carson>

11. **Late in this novel, ten military commandants decree the building of 100 paddleboats, which are sunk by people who swim under and puncture them. A group known as the "original seven" target a convoy of birthday presents early in this novel, which begins when several spirits are released from underneath a tortoise with a stele on its back. An episode from this novel in which a "tiger slayer" avenges the murder of his brother by murdering his brother's wife is the basis of an erotic spinoff translated into English as *The (*)* Plum in the Golden Vase*. This novel, which is attributed to Shi Nai'an, focuses on "stars of destiny" who gather near Mount Liang, and was translated into English by Pearl S. Buck under the title *All Men Are Brothers*. For 10 points, name this member of China's Four Great Classical Novels that centers on 108 bandits who congregate in a swamp.
ANSWER: **Water Margin** [or **Shui Hu** *Zhuan* or **Outlaws of the Marsh** or **Tale of the Marshes** or **Men of the Marshes**; accept *The* **Marshes of Mount Liang** before "Liang"; accept **All Men Are Brother** before "All Men" is read] <Hart>

12. **After hearing of a conspiracy involving King Vitiges, this man exiled Saint Silverius to the east. This man commanded the losing side at Callinicum in modern-day Syria, a battle that prompted the signing of the "Eternal Peace", which lasted only eight years. A popular legend claims this man spent years as a blinded beggar near the Pincian Gate. His wife, Antonina, had an affair with his adopted son, at least according to the *Secret History of (*)* Procopius*. In support of the eunuch Narses, this man teamed with Mundus to slaughter thousands of "Greens" during the Nika riots. This general crushed the Vandals in 534 CE and went on to conquer the capital of the Ostrogoths. For 10 points, name this Byzantine general who served Justinian and reconquered much of the Western Roman Empire.
ANSWER: Flavius **Belisarius** <Cheyne>

13. **In 1985, David Deutsch extended a thesis named after this man and his American teacher to suggest that all physical processes can be modeled. The arithmetic hierarchy is linked to a group of quantities named for this scientist by Post's theorem; those namesake "degrees" of this scientist quantify the unsolvability of a set of problems. Both Rule 110 in Conway's game of life and the esoteric programming language Malebolge have the "completeness" property named after this man. This man is the alphabetically second namesake of a thesis stating that all "reasonable" models of computation reduce down to a (*)** device that manipulates symbols on an input tape. His namesake "machines" manipulate symbols on a tape to model an ideal computer. For 10 points, name this man who worked at Bletchley Park during World War II and helped break the German Enigma machines.
ANSWER: Alan **Turing** [or Alan Mathison **Turing**; accept Alonzo **Church** until "American" is read] <Jose>

14. **A complete set of these figures in soapstone, which adorns the Santuário do Bom Jesus de Matosinhos in Congonhas, is the magnum opus of the disfigured Brazilian mestizo sculptor Aleijadinho (ah-lay-hah-DEEN-yoh). The west facade of the Amiens cathedral contains sculptures of these figures, below each of which are two quatrefoil panels illustrating their lives. Twelve panels surrounding the center of the ceiling of the Sistine Chapel contain five ancient sibyls and seven of these biblical figures. While sculpting one of these figures, (*)** Donatello apocryphally yelled "speak, damn you, speak!" at the marble. Donatello's sculpture of one of these figures has a bald head that earned it the nickname *Zuccone*. Habakkuk is one of, for 10 points, what set of twelve "minor" Old Testament figures who claimed to foretell the future?
ANSWER: twelve minor **prophet**s <Hart>

15. **This man's adventures are the ostensible subject of a satire on Louis XIV by François Fénelon. In one story, he meets and befriends a man bringing a cargo of iron to Temesa who introduces himself as a king of the Taphians. This character opts to decline a gift of a team of horses and instead requests a plate, upon which he receives a mixing bowl made by Hephaestus. As an infant, this character becomes part of a plot to enforce the Oath of Tyndareus when Palamedes places him in (*)** front of a plow. He befriends Peisistratus upon his arrival in Pylos, where he meets with Nestor, after which he visits Menelaus in Sparta; on both of those journeys he is accompanied by Mentor, who is actually Athena in disguise. Along with the herdsmen Philoetius and Eumaeus, this man joins his father in exterminating the 108 suitors of his mother in a hall in Ithaca. For 10 points, name this son of Penelope and Odysseus.
ANSWER: **Telemachus** <Carson>

16. **A thinker writing in this language explored how we "accept a void in ourselves" in *Gravity and Grace*, examined the causes of unhappiness in her book *The Need for Roots*, and described the *Iliad* as a "poem of force". That author was praised as "the only great spirit of our times" by a thinker who used this language to write an essay that warns against the "unity of nihilism", declares that "man is the only creature who refuses to be what he is", and defines its title figure as "a man who says (*)** no".** A book written in this language by the author of *The Rebel* claims that "there is no fate that cannot be surmounted by scorn", asserts that revolt rather than suicide is the proper response to life's absurdity, and notes that "we must imagine" the title figure "happy", despite the futility of his task. For 10 points, name this language used by Simone Weil and the author of *The Myth of Sisyphus*, Albert Camus.
ANSWER: **French** [or le **français**] <Carson>

17. **The Z type of these compounds is rare and acts as a Lewis acid. The charge of these compounds change as X or L types of bonds undergo exchange reactions. These molecules remove degeneracy in asymmetrically occupied orbitals with the Jahn-Teller (YAHN "teller") distortion. These compounds are responsible for linkage isomer•ism, which can change the color of solutions. D orbitals experience large splitting in the strong-field type of these compounds, which are ranked in a (*)** spectro•chemical series. Cyclo•penta•dienyl is a type of these compounds with a hapticity of five that forms the sandwich compound ferro•cene with iron. The chelating agent EDTA is an example of these compounds. For 10 points, name these Lewis bases that can form coordination complexes by binding to central metal atoms.
ANSWER: **ligand**s [accept **chelating** agents before "chelating"] <Garg>

18. **This was the home state of first U.S. minister to Mexico and flower namesake Joel Poinsett. A politician from this state named George McDuffie came up with an economic idea called the "forty bales" theory. Another politician from this state wrote the long *Disquisition on Government* and developed the "positive good" theory. When debating a man from this state, a Massachusetts senator insisted (*)** "liberty and union, now and forever"; that argument involved this state's Robert Hayne debating against Daniel Webster. A vice president from this state wrote an "exposition and protest" in 1828, which argued that a law was unconstitutional. For 10 points, name this state represented by John C. Calhoun, whose protest against the "Tariff of Abominations" sparked the Nullification Crisis.
ANSWER: **South Carolina** <Cheyne>

19. **One relationship in this novel begins after a man takes a servant to be bled and suggests that a woman go horse riding with him to improve her health. Chapter 15 of this novel includes the dramatic stage entrance of a famous tenor named Edgar Lagardy at a performance of Donizetti's opera *Lucia di Lammermoor* attended by three of this novel's central characters. After moving to Yonville, one of this novel's characters botches an attempt to fix Hippolyte's clubfoot. Monsieur (*)** Lheureux drives this novel's central couple to financial ruin, after which its title character persuades Justin to open a container of arsenic and swallows a fatal dose. This novel's title character has lovers named Rodolphe Boulanger and Léon Dupuis. For 10 points, name this novel about an adulterous woman named Emma by Gustave Flaubert.
ANSWER: *__Madame Bovary__* <Hart>

20. **The leader of this religion advocated only eating one meal a day in his book series *How to Eat to Live*. A negative figure in this religion was a big-headed dissident who went to Patmos with 59,999 followers. This religion publishes *The Final Call* newspaper and has a security group known as the "Fruit". It believes in a craft the size of a planet known as the (*)** "Mother Plane or "Mother Wheel", which is believed to be the same object mentioned in the Book of Ezekiel. This religion teaches that Dr. Yakub created a race of "devils", and its current leader once organized the Million Man March. For 10 points, name this religion led by Louis Farrakhan, whose membership is mostly African-Americans, and whose leaders have included Elijah Muhammad and Malcolm X.
ANSWER: **Nation of Islam** [or **NOI**; do not accept or prompt on "Islam"] <Cheyne>

Tiebreaker. **Vladimir Nabokov's 1969 suggestion in *Vogue* to map out this kind of activity in a famous novel is retold at the beginning of a 2014 *New Yorker* essay by Ferris Jabr about why this activity "helps us think". A long poem subtitled for this activity opens with an invocation to the title goddess of the crossroads. The history of herring fishing and a stay in a hospital in Norwich are presented during a tour of Norfolk via this means of transportation in (*)** W.G. Sebald's *The Rings of Saturn*. The "art" of doing this activity in London is the conceit of John Gay's long poem *Trivia*. Jean-Jacques Rousseau never completed a set of ten works presented as "reveries" of a "solitary" person engaging in, for 10 points, what mode of transportation that William Blake wondered in his poem "Jerusalem" if "those feet in ancient time" did upon "England's mountains green"?
ANSWER: **walk**ing [accept **hike** or **hiking** or other obvious equivalents] <Hart>

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Packet 9: Bonuses

1. State some facts about "America's Rabbi", Shmuley Boteach (boh-TAY-ek), for 10 points each:
[10] In his book titles, Boteach is oddly fond of appending this adjective to nouns like "Sex", "Adultery", "Emotions", and "Jesus". More generally, it is applied to food that meets the dietary guidelines of Jews.
ANSWER: **kosher** [or **kashrut**]
[10] Boteach is part of this movement founded by Shneur Zalman and expanded greatly under Rabbi Menachem Mendel Schneerson. This Crown Heights-based group reaches out non-practicing Jews with Mitzvah tanks.
ANSWER: **Chabad**-**Lubavitch** [accept either underlined portion]
[10] Boteach is a fan of these communities, as he wrote in a column about his "spiritual night" in the ones surrounding Hebron, like Kiryat Arba. He compared people who boycott businesses in these communities to the Nazis.
ANSWER: Israeli **settlement**s in Palestine [or obvious equivalents; accept **yeshuvim** or **hityashvut** or **hityashvuyot** or **hitnachlut** or **hitnachluyot**] <Kothari>

2. An adherent of this political philosophy was married to Diana Mitford. For 10 points each:
[10] Name this political philosophy subscribed to by the controversial British activist Oswald Mosley, who led his followers against anarchists and other protesters in the 1936 Battle of Cable Street in London.
ANSWER: **fascism** [accept word forms, do not accept "Nazism"]
[10] A colleague of Mosley's was William Joyce, who used this name during radio broadcasts in which he nasally proclaimed "Germany calling" and obnoxiously laughed, in an attempt to lower the English people's wartime morale.
ANSWER: Lord **Haw-Haw**
[10] Mosley lost much of his support in the U.K. after Germany began bombing London and other cities in this massive aerial campaign during the early 1940's.
ANSWER: The **Blitz** [or the **Battle of Britain**] <Cheyne>

3. John Wieners's collection *Behind the State Capitol, or, Cincinnati Pike* was published by a Boston press named for "good poets" with this characteristic. For 10 points each:
[10] Name this characteristic shared by the contemporary poets Eileen Myles, Frank Bidart, and Richard Blanco.
ANSWER: **LGB**T or **gay** or **lesbian** or **homosexual**ity [accept equivalents; accept Good **Gay** Poets Press]
[10] This gay poet, whose homoerotic poem "Please Master" caused a 2015 scandal when it was read in a high school English class, also wrote "A Supermarket in California" and "Howl".
ANSWER: Allen **Ginsberg** [or Irwin Allen **Ginsberg**]
[10] This 88-year-old former Poet Laureate of New York wrote the poetry collection *Self-Portrait in a Convex Mirror*, which discusses his homosexuality.
ANSWER: John **Ashbery** [or John Lawrence **Ashbery**] <Hart>

4. Answer the following about molting in animals, for 10 points each:
[10] In ec•dyso•zoan **(ek-DIE-soh-ZOH-uhn)** invertebrates, molting is promoted by hormones like 20-hydroxy•ec•dysone, which, like cholesterol, belongs to this group of four-ring organic compounds; anabolic ones can spur muscle growth.
ANSWER: **steroid**s
[10] Amphibians increase their rate of skin sloughing in response to this fungal disease, which thickens the skin, preventing nutrient intake and breathing. This disease is causing worldwide declines in amphibian populations.
ANSWER: **chytrid**•io•my•cosis [or **chytrid** disease; or amphibian **chytrid** fungus; *B*atra•cho•chytrium *dendro•ba•tidis*; or *B*atra•cho•chytrium *salaman•dri•vorans*]
[10] Shedding in mammals is caused by light-sensitive variations in the amount of this hormone released by the pineal gland. Circadian rhythms are regulated in part by this drowsiness-inducing hormone, which inhibits production of a similarly named skin pigment.
ANSWER: **melatonin** <Kothari>

5. This composer's sunny *Italian Serenade* for string quartet was arranged for chamber orchestra by Max Reger. For 10 points each:
[10] Name this late Romantic devotee of Wagner who is most famous for moody, chromatic settings of songs by Eichendorff and Goethe, as well as his opera *Der Corregidor*, composed not long before he went insane from syphilis.
ANSWER: Hugo Philipp Jacob **Wolf**
[10] Wolf was mentored by this older composer, whose own experiments with radical chromaticism include the *Bagatelle sans tonalité*, sometimes included among the *Mephisto Waltzes*. He also wrote *Years of Pilgrimage*.
ANSWER: Franz **Liszt** [or **Liszt** Ferencz]
[10] Liszt dedicated his B minor piano sonata to this composer, whose final insanity may also have been caused by syphilis. He wrote symphonies nicknamed "Spring" and "Rhenish", as well as *Scenes from Childhood*.
ANSWER: Robert **Schumann** <Kothari>

6. Answer the following about Russian hero Alexander Nevsky, for 10 points each.
[10] "Alexander Nevsky was the son of a man with this name. A more famous Russian with this name was a Grand Prince of Kiev and Novgorod known as the "Wise".
ANSWER: **Yaroslav**
[10] Nevsky defeated the Teutonic Knights in this April 1242 battle at Lake Peipus, which smashed the eastward expansion of the Knights.
ANSWER: Battle on the **ice**
[10] A female Russian ruler with this name created the Imperial Order of St. Alexander Nevsky. A more famous female Russian ruler with this name was served by men like Grigory Potemkin.
ANSWER: **Catherine** [or **Catherine** the Great, number does not matter; or **Yekaterina**] <Cheyne>

7. The semi-empirical mass formula for these things does not predict the "magic numbers" of their components. For 10 points each:
[10] Name these things that are most stable when they are composed of the "magic numbers" of 2, 8, 20, 28, 50, 82, or 126 protons and neutrons. They were discovered in Rutherford's gold foil experiment.
ANSWER: atomic **nuclei** [or atomic **nucleus**]
[10] Maria Goeppert-Mayer and Hans Jensen created this nucleus model based on the magic numbers. This model relies on the Pauli exclusion principle to prevent nucleons from colliding with each other in different quantum states.
ANSWER: nuclear **shell** model
[10] This term is the first shell in the nuclear shell model. This shell, along with one-p-three-halves and one-p-one-half, form the nucleus with magic number 8.
ANSWER: **1 s** <Garg>

8. The Cuernavaca cathedral is one of the fourteen 16th-century monasteries on the slopes of this mountain that make up a World Heritage Site. For 10 points each:
[10] Name this volcanic peak, its country's most active, which is linked to the nearby Iztaccíhuatl **(eez-tahk-see-hwa-tal)** by the Paso de Cortés. It has displayed varying activity since a December 1994 eruption.
ANSWER: **Popocatépetl (po-po-ca-TEH-"petal")** [or el **Popo**]
[10] Popocatepetl is slightly more than 40 miles southeast of this capital city, the oldest such city in the Americas. It was built on the ruins of the Aztec city of Tenochtitlan.
ANSWER: **Mexico City** [or **Ciudad de Mexico**]
[10] Until volcanic activity melted the ones on Popocatepetl, it, Iztaccihuatl, and this other volcano were the only mountains in Mexico that supported glaciers. After Mount Kilimanjaro, this peak is the second-most prominent volcano in the world.
ANSWER: **Pico de Orizaba** [or **Citlaltépetl**] <Carson>

9. Answer the following about pioneering social scientist Gregory Bateson, for 10 points each.
[10] A Bateson-led group of researchers published a paper suggesting that problems in communicating with schizophrenics were due to these dilemmas, in which an individual receives two messages that conflict with each other such that satisfying one will inherently fail to satisfy the other.
ANSWER: **double bind**s
[10] An essay in Bateson's *Steps to an Ecology of Mind* examines the alcoholic mind through the framework of this then-recently-developed field that focuses on feedback-modulated complex systems. Its founder, Norbert Wiener, defined it as "the scientific study of control and communication in the animal and the machine".
ANSWER: **cybernetic**s
[10] Bateson's early anthropological work was often conducted in collaboration with this woman, his first wife. She collaborated with James Baldwin on *A Rap on Race* more than 40 years after writing *Coming of Age in Samoa*.
ANSWER: Margaret **Mead** <Carson>

10. Answer the following about author V.S. Pritchett, for 10 points each.
[10] After spending several years in the leather trade, Pritchett had a literary debate about whether working-class characters could be presented in serious terms with this British author, who took an elitist position and penned *The Time Machine* and *The War of the Worlds*.
ANSWER: H.G. **Wells** [or Herbert George **Wells**]
[10] Pritchett wrote an acclaimed literary biography of this man subtitled "a spirit set free". Pritchett's own prolific story output was inspired by this man's stories, such as "Ward No. 6" and "The Black Monk".
ANSWER: Anton **Chekhov** [or Anton Pavlovich **Chekhov**]
[10] Pritchett resented his father for forcing him to burn a manuscript about a battle for this structure. The American author of the periodical *Salmagundi* wrote a series of "tales" of this place after visiting it in 1828.
ANSWER: the **Alhambra** [or al-**Hamra** or Calat **Alhamra**; accept *Tales of the **Alhambra*** (by Washington Irving)] <Hart>

11. After Christianization, this deity became identified with St. Elijah the Thunderer, a variant form of the Old Testament prophet that emphasized this deity's tendency to ride around in a chariot wrecking shit. For 10 points each:
[10] Name this supreme Slavic deity of thunder and lightning who regularly clashed with Veles, the serpent god of the watery underworld. His Baltic equivalent is married to the earth goddess Zemyna.
ANSWER: **Perun** [or **Perkun**as; or **Perkon**s]
[10] Another bearded god who had a recurring conflict with a huge serpent, rode in a chariot pulled by goats, wielded a hammer that always returned to him, and represented thunder and lightning was this Norse deity, who loves smashing jotuns with Mjolnir.
ANSWER: **Thor** [or **Donar**; or **Thunor**]
[10] Another attribute shared by both Perun and Thor was an affinity for this plant. A particularly sacred one named for Thor grew near Hesse until St. Boniface cut it down in the eighth century. What a jerk.
ANSWER: **oak** tree [or **quercus**; prompt on "tree(s)" <Carson>

12. This painting may depict either Pepita Tudo, the mistress of its commissioner Manuel de Godoy, or the 13th Duchess of Alba, with whom its artist was rumored to be having an affair. For 10 points each:
[10] Name this circa-1800 portrait of a reclining woman with her hands behind her head who gazes directly at the viewer. It sparked controversy for, among other things, its unashamed depiction of its subject's pubic hair.
ANSWER: The **Nude Maja** [or La **maja desnuda**; accept other translational equivalents like "The **Naked Maja**"]
[10] The Nude Maja and its counterpart, The Clothed Maja, were painted by this Spanish Baroque artist, a court painter to Charles IV whose other works include the "Black Paintings" and The Third of May, 1808.
ANSWER: Francisco **Goya** [or Francisco José de **Goya** y Lucientes]
[10] Goya was commissioned by Charles III and Charles IV to paint 63 of these often-huge artworks, which were then used as the basis for the creation of decorations to be hung in El Escorial and El Pardo. Pope Leo X commissioned a series of ten of them depicting the lives of Peter and Paul from Raphael.
ANSWER: tapestry **cartoon**s [or **cartone**s para tapices; do not accept "tapestries"] <Carson>

13. Handspring Puppet Company produced a Jane Taylor play in which a version of this character tries to hides his role in a government death squad from the Truth and Reconciliation Commission in South Africa. For 10 points each:
[10] Name this vulgar, rotund man who is the main character of three plays by Alfred Jarry.
ANSWER: Pere **Ubu**
[10] In Ubu Roi, Ubu murders the king of this country before assuming his throne. A Nobel laureate from this country wrote With Fire and Sword and Quo Vadis.
ANSWER: **Poland**
[10] Jarry was a precursor of this movement, for which André Breton wrote two manifestos. The use of dream-like imagery by writers from this movement helped inspire its painters, including Salvador Dalí.
ANSWER: **surrealism** [accept word forms] <Kothari>

14. The first ring iso•morphism theorem states that the kernel of a homo•morphism from ring R to ring S will be one of these objects. For 10 points each:
[10] Name these subrings that are closed under left multiplication and right multiplication.
ANSWER: **ideal**s
[10] If the product of two elements in an ideal implies that at least one of the elements is also in the ideal, the ideal is of this type. The fundamental theorem of arithmetic says that all natural numbers can be uniquely factorized into numbers of this type.
ANSWER: **prime** [accept **primes** or **prime** numbers]
[10] This type of subgroup is the group analogue of the ideal. The label for this type of subgroup also names a vector perpendicular to a plane in three-dimensional space.
ANSWER: **normal** subgroup <Bailey>

15. An iconic image of this event is of a youth carrying a dying student named Hector Pieterson. For 10 points each:
[10] What June 1976 event featured high school students violently clashing with police after the students objected to being taught not in English or indigenous languages but in a language they regarded as oppressive?
ANSWER: **Soweto** uprising
[10] The Soweto uprising occurred in this country, then very much a proponent of the racial policy of apartheid.
ANSWER: Republic of **South Africa**
[10] This political party organized many of the students during the Soweto uprising. Its military wing was known as the Spear of the Nation, and it is the party of current South African president Jacob Zuma.
ANSWER: **African National Congress** [or **ANC**; or **South African Native National Congress**; or **SANNC**] <Cheyne>

16. Cyril Graham creates a fake portrait of this person in order to convince a man named Erskine of this person's identity in an 1889 short story by Oscar Wilde that was based on a theory first proposed by Thomas Tyrwhitt. For 10 points each:
[10] Give the name used to refer to this person who is described as the "only begetter" in a passage signed "T.T". Due to his name, the Earl of Southampton is a leading candidate for the true identity of this person, who may be the same person as the "Fair Youth".
ANSWER: Mr. **W.H.** [accept "The **Portrait of Mr. W. H".**]
[10] Mr. W.H. is the dedicatee of the first printed collection of these poems, the eighteenth of which begins "Shall I compare thee to a summer's day?"
ANSWER: William **Shakespeare**'s **sonnet**s
[10] Anthony Burgess's fictional biography of Shakespeare is titled for this four-word phrase taken from Sonnet 130, in which it ends the opening-line declaration beginning "My mistress's eyes are..".
ANSWER: **nothing like the sun** <Carson>

17. This man wrote the opera *A Guest of Honor* about Teddy Roosevelt and Booker T. Washington. For 10 points each:
[10] Name this man who also wrote about a young woman who confronts a group of conjurers in the opera *Treemonisha*.
ANSWER: Scott **Joplin**
[10] Joplin is best known for writing numerous compositions in this musical genre noted for its syncopated rhythm. Examples include Joplin's *The Entertainer*.
ANSWER: **ragtime**
[10] In 1939, this jazz musician released a recording of Joplin compositions. This composer of the "King Porter Stomp" claimed to have invented jazz in 1902. His real name was Ferdinand and he led a group called the Red Hot Peppers.
ANSWER: Jelly Roll **Morton** [or Ferdinand Joseph **LaMothe**] <Cheyne>

18. In 2016, this character filmed an internet short at the University of New Hampshire and gave a "trigger warning" that "in this video there will be the clear depiction of a dog pretending to be interested in what a college student is saying". For 10 points each:
[10] Name this character, voiced by Robert Smigel **(SMY-gull)**, whose signature line is "for me to poop on!"
ANSWER: **Triumph** the Insult Comic Dog
[10] Triumph debuted on the NBC late night show of this former writer for *The Simpsons*, who got a namesake show on TBS after Jay Leno took *The Tonight Show* back from him.
ANSWER: Conan **O'Brien** [or Conan Christopher **O'Brien**]
[10] Triumph was scolded by both Al Roker and Kathie Lee Gifford while appearing on this program in 2000. In 1999, this show surged in popularity when Gilbert Gottfried repeatedly yelled "YOU FOOL!" at contestants.
ANSWER: *Hollywood Squares* <Hart>

19. The Lodge Committee investigated war crimes during this conflict. For 10 points each:
[10] Name this very bloody 1899 to 1902 war which featured fighting for many years afterwards. In 1902, veterans from this war founded the Tagalog Republic shortly after the capture of rebel leader Emilio Aguinaldo.
ANSWER: **Philippine**-American War [or **Filipino**-American War; or **Philippine** rebellion; or **Filipino** rebellion; do not accept "Philippine-Spanish War"]
[10] This U.S. Army General captured Aguinaldo during the war. He later declared martial law after the 1906 San Francisco earthquake. Mark Twain wrote a sarcastic "defence" of this man's brutal wartime actions.
ANSWER: Frederick **Funston**
[10] This pro-expansion President pardoned those who participated in the Philippine conflict. He was formerly the leader of the Rough Riders during the Spanish-American War.
ANSWER: Theodore "Teddy" **Roosevelt** [or **TR**] <Cheyne>

20. Slater's rules are a semi-empirical way of calculating the screening constant, which is necessary to calculate this quantity. For 10 points each:
[10] Name this quantity that describes how much positive charge an electron "feels", taking into account other electrons in the atom.
ANSWER: **effective nuclear charge** [or **Z-eff**ective; or **Z-star**]
[10] As effective nuclear charge increases, so does this quantity, the amount of energy it takes to remove an electron from an atom.
ANSWER: first **ionization energy** [or **ionization potential**; or **IE**; or **IP**]
[10] Koopmans's theorem is an exact method of predicting ionization energy when the frozen orbital approximation is assumed, meaning that removing an electron would not change the other electrons. Koopmans's theorem also states that ionization energy is equal to the negative of the energy of this molecular orbital.
ANSWER: **HOMO** [or **highest occupied** molecular orbital] <Garg>

Extra. Camille Flammarion was the first person to suggest the name for this body, whose notable physical features include the Kraken Catena and Mazomba, its largest impact crater, which is named after a fish from Chaga mythology. For 10 points each:
[10] Name this largest moon of Neptune, the only large moon in the solar system to exhibit a retrograde orbit.
ANSWER: **Triton**
[10] These physical features, which are geysers that eject vapors or slurries of water ice, ammonia, or methane, were first observed on Triton in 1989.
ANSWER: **cryo•volcano**es [accept word forms such as **cryo•volcan**ism]
[10] In 2005, the *Cassini* probe observed significant cryovolcanic activity near the south pole of this other moon, which produces ejecta that make up most of its planet's E ring. Cassini also captured images of this moon's so-called "tiger stripes".
ANSWER: **Enceladus** <Carson>