

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 7: Tossups

1. In one scene, this character declares “myself could...out-frown false fortune's frown” after asserting that “We are not the first who, with best meaning, have incurr'd the worst”. An unnamed knight is told to go to Dover and is given a ring that will identify him to this character in one scene, while in another this character laments “Unhappy that I am, I cannot heave my heart into my mouth” after twice repeating the word “nothing”, prompting another character to rage (*) “nothing will come of nothing; speak again!” This character's last onstage appearance begins with another character saying “Howl, howl, howl, howl!” and demanding a looking-glass to try to detect this character's breath. In the final act, this character leads an army alongside her husband, the King of France, but is captured and hanged on the orders of Edmund. For 10 points, name this sister of Regan and Goneril, the youngest daughter of King Lear.
ANSWER: Cordelia <Carson>

2. Alexander's sub-base theorem gives the conditions of a subbase that imply that a space has this property. Continuous functions that map from convex sets with this property to the sets themselves always have a fixed point. Any Cartesian product of spaces with this property will possess this property according to a theorem named for a Russian mathematician. A space has this property when the intersection of all (*) closed sets is nonempty, if and only if the intersection of any finite subset of those sets is nonempty. In Euclidean space, sequences in this kind of space will have convergent subsequences, and metric spaces with this property are closed and bounded. Tychonoff's theorem concerns topological spaces that possess, for 10 points, what property of a space that has a finite subcover for every open cover?
ANSWER: compactness <Bailey>

3. While attacking a walled-off city, this man is said to have pulled off the door of the fort and used it as a shield. *The Path of Eloquence* is a collection of writings and sayings by this man. Many flags depict the two-pointed sword that belonged to him called Zulfiqar. Some sources say that this man was the only one to have been born in the Ka'bah, and he was put in charge of destroying the pagan idols of that place. The (*) Kharijites initially supported this man, but abandoned him after he allowed a committee to approve his claim to leadership. Remarks made at Ghadir Khumm about this last of the four Rashidun have been interpreted by some groups as implying that he should only inherit the leadership of his family, while others have seen it as evidence this man was meant to be a political leader. For 10 points, name this son-in-law of Muhammad whom Shi'ites believe was Muhammad's rightful successor.
ANSWER: Ali ibn Abi Talib <Bailey>

4. During the 1968 Saint-Jean-Baptiste Day parade, supporters of this cause threw rocks and bottles at a politician who won a major election the next day. In the aftermath of one setback for this cause, the schizophrenic André Dallaire broke into 24 Sussex Drive with a knife. The Clarity Act was passed in response to this movement. After blaming the failure of this cause on “money and ethnic votes”, Jacques Parizeau resigned his post. The (*) kidnapping of Pierre Laporte and James Cross by partisans of a group supporting this cause, the FLQ, caused the October Crisis. The first referendum in favor of this cause was proposed by René Lévesque in 1980, and the second was narrowly rejected in 1995. For 10 points, name this cause in favor of the separation of a French-speaking Canadian province.
ANSWER: Québec independence [accept near-synonyms of independence, like “sovereignty”, “separation”, etc.] <Kothari>

5. The Dutch musician Marco Blaauw uses an unusual forked variety of this instrument. A solo instrument of this type that is first introduced in the concluding chorale is the only non-string instrument in Honegger's *Symphony No. 2*. This instrument often responds to themes introduced by the piano in Shostakovich's *Piano Concerto No. 1*, in which it has a prominent part. This instrument plays a phrase beginning with a B-flat and ending with either a B or a C seven times, evoking six responses from a quartet of woodwinds, in (*) Ives's *The Unanswered Question*. Joseph Haydn and Johann Nepomuk Hummel wrote concerti for this instrument for Anton Weidinger. Though it was originally written for organ, Jeremiah Clarke's *Prince of Denmark's March* is often referred to as a "voluntary" for this instrument. For 10 points, name this highest-register brass instrument, a close relative of the flugelhorn and the cornet.

ANSWER: trumpet <Carson>

6. According to Pausanias, one of this woman's daughters was the first woman to marry twice, wedding both Perieres of Messina and Oebalus of Laconia. Some sources claim that she was originally betrothed to Agenor, the twin brother of Belus, while others claim that her fiancé was Belus's son Phineus. Ovid claims that corals first appeared as part of a story involving this woman, who met her eventual husband in a manner similar to the later story of Hesione and Heracles. This woman's mother asserted that she was far more beautiful than the (*) Nereids, prompting Poseidon to send Cetus to ravage Ethiopia. She was saved from a would-be sacrifice by a hero who had recently acquired Medusa's head. For 10 points, name this daughter of Cepheus and Cassiopeia who was chained naked to a rock in the sea until her rescue by Perseus.

ANSWER: Andromeda <Carson>

7. The aPKC (A-P-K-C) and Crumbs complexes help to maintain a key property of these cells. A glyco•protein called EpCAM (EPP-cam) found in tissues derived from these cells is used to detect carci•nomas, which come from these cells. Loss of E-cad•herin can cause these cells to detach from the lamina lucida, lose their polarity, and become mesen•chymal stem cells in a process that may cause tumor metastasis. This tissue is separated from connective tissue by a (*) basement membrane. Like cardiac muscle, these cells maintain adhesion using structures like desmo•somes and tight junctions. These cells can be columnar, cuboidal, or squamous, and in the epidermis, many of them produce keratin. For 10 points, name this kind of cell that lines the surfaces of organs and blood vessels, including the outside of the skin.

ANSWER: epi•thelium [accept epi•thelial cells or other word forms; accept endo•thelium or meso•thelium] <Kothari>

8. During this year, Clarence Hatry was arrested just as he was preparing to pull off the multimillion-dollar United Steel Companies merger. The "Babson Break", referencing a prediction by Roger Babson, happened in this year. The song "Happy Days Are Here Again" was first performed in this year, and a photograph showing a sad-faced, bowler-hat-wearing man next to a sign reading (*) "\$100 will buy this car" is believed to be from this year. It was when seven men connected with Bugs Moran's gang were killed in the St. Valentine's Day massacre. In September of this year, Irving Fisher predicted a "permanently high plateau" for the market, which was contradicted on October's Black Tuesday. For 10 points, name this year in which the U.S. stock market crashed, kicking off the Great Depression.

ANSWER: 1929 <Cheyne>

9. A portrait of this man shows its subject framed by a curtain and an oleander plant, and wearing a small round hat that perhaps jestingly represents a halo. This man's wife wears a yellow hat and sits between two trees to the right of this man, who wears a loose blue jacket and sits on a stool while working *en plein air*, in a John Singer Sargent portrait that depicts this man "painting by the edge of a wood". This man, who was also shown with his wife painting "in his studio boat", was painted tending flowers to the left of his wife and child "in his garden at (*) Argentuil". This man, who painted himself wearing a beret, was the subject of many portraits by Edouard Manet. A painting of the port in Le Havre by this man inspired critic Louis Leroy to coin the term "Impressionism". For 10 points, name this French artist of *Impression: Sunrise*, who also painted a series of *Haystacks*.

ANSWER: Claude Monet [or Oscar-Claude Monet] <Hart>

10. In one story by this author, the title character is left by a gypsy woman and falls into despair after a horse he purchases turns out not to be the lost stallion Malek Adel. In a second story by this author, the narrator listens to the recollections of an old peasant named Foggy at a spring called Raspberry Water. A third story by this author discusses a narrator who, while trying to sleep in a dark room at a landowner's house after a party, speaks with a roommate who realizes that he is completely superfluous. This author's stories "The End of Chertopkhanov" (cher-TAHP-kuh-nahv) and (*) "Hamlet of the Shchigrovsky (shrih-chih-GRAHV-skee) District" appeared in his collection *A Sportsman's Sketches*. In a novel by this author that introduces the Kirsanov family, an infected scalpel wound kills the nihilist Bazarov. For 10 points, name this Russian author of *Fathers and Sons*.

ANSWER: Ivan Turgenev [or Ivan Sergeyevich Turgenev] <Hart>

11. Michael Mann argued that these events are entirely modern, because democracy is modern and these events are part of the "dark side of democracy". An article by Chip Gagnon claimed that these events are rational responses by elites who face domestic challengers. Raphael Lemkin campaigned for adoption of a legal definition of these events, and Lemkin was one of the first in the U.S. to argue that one of these events had occurred in (*) Ukraine. Participants in one of these events were aided by refugee camps established in Goma. Samantha Power won the Pulitzer Prize for a book that attacked U.S. leaders for foreign policy decisions surrounding these events. The U.N. was criticized for its half-hearted attempts stop these events in Rwanda and Bosnia. For 10 points, give this term for the mass extermination of a religious or ethnic group.

ANSWER: genocides [or ethnic cleansing] <Bailey>

12. A book titled for participants in one of these events by Jules Verne was published alongside his novel *The Begum's Fortune*, and describes the same one of these events as a novel narrated by Roger Byam that was written by James Norman Hall and Charles Nordhoff. One of these events is carried out by Stephen Maryk after Thomas Keefer suggests invoking Section 184 in a novel narrated by Willie Keith. In that 1951 novel titled for one of these events, the pejorative nickname (*) "Yellowstain" is applied to a man who confiscates and subsequently loses a cache of liquor, and is later targeted by one of these events. Philip Francis Queeg loses power in one of these events in a novel titled for one on the *Caine* that was written by Herman Wouk. For 10 points, name this type of insurrection perpetrated by Fletcher Christian against William Bligh aboard the HMS *Bounty*.

ANSWER: mutiny [or mutinies; accept *The Caine* Mutiny or Mutiny on the Bounty] <Hart>

13. This baseball team fired a manager during spring training after discovering he had lied about his Vietnam War experiences. The first player born in 1995 to play in MLB was from this team. This team won the highest-scoring game in World Series history, a 15-14 slugfest. This team's manager protested the umpires' ruling that a ball thrown by their catcher that hit Shin-Soo Choo's bat was live, prompting this team's fans to (*) throw garbage onto the field. That occurred in a game in which an outfielder from this team ostentatiously flipped his bat after homering off Sam Dyson. That occurred in game 5 of the 2015 ALDS, in which this team defeated the Texas Rangers. Its team's star hitter, "Joey Bats", is outfielder Jose Bautista. For 10 points, name this Major League Baseball team that plays in Canada.

ANSWER: Toronto Blue Jays [or Blue Jays; or Jays] <Cheyne>

14. During this city's plague, a bagpiper named Augustin supposedly survived being thrown into a mass grave. An attack on this city was halted during the Siege of Guns (GOONS). A campaign that culminated in attacking this city was a response to Ferdinand I's attack on John Zapolya. Legendarily, the bagel was fashioned in the form of a stirrup to honor fighting here, while the (*) croissant was also supposedly invented in this city to resemble the crescent flag of an enemy. During a battle around this city, one of the largest cavalry charges in history featured Winged Hussars under the command of the Polish king John III Sobieski. This city was unsuccessfully besieged in 1529 by Suleiman the Magnificent and again by the Turks in 1683. For 10 points, the Ottomans were twice stopped outside what Austrian city?

ANSWER: Vienna [or Wien] <Cheyne>

15. To study the behavior of these phenomena, Lev Landau introduced a mean field approach that uses the first few terms of a Taylor expansion. These phenomena often involve a spontaneously broken symmetry, which can be described by an order parameter. The occurrence of many of these phenomena is accompanied by a sharp peak in heat capacity that looks like a lambda. The lowest-order derivative for which the Gibbs thermodynamic potential is (*) discontinuous is used to classify these phenomena in the Ehrenfest classification. Systems undergo these phenomena in order to minimize the Gibbs free energy when a state variable, such as temperature, changes. When these phenomena are discontinuous, they have an associated non-zero latent heat. For 10 points, name these transitions in which matter transforms from one state to another, such as melting or evaporation.

ANSWER: phase changes [or phase transitions; prompt on partial answers until "transitions" is read, then accept just phase] <Garg>

16. *The Economist* claims a ruler of this kingdom loved Italian greyhounds so much he coined the phrase "a dog is a man's best friend". During the Diplomatic Revolution of 1756, this kingdom ended up reversing alliances and linking with Britain. This kingdom's infantry used the Dreyse (DRY-suh) needle gun as a weapon. The disputed first king of this place was the "Mercenary King", the father of the "Soldier King". Its greatest ruler was an enlightened despot who (*) composed numerous flute sonatas, inspired Bach's Musical Offering, and engineered the first partition of Poland. This kingdom was the primary power in a confederation that beat down the French under Napoleon III in 1871. For 10 points, name this kingdom ruled by Frederick the Great that was unified with other German states by Otto von Bismarck.

ANSWER: Kingdom of Prussia [do not accept or prompt on "Germany"] <Cheyne>

17. This philosopher's quest to reconcile J.G. Herder's expressivism with radical freedom was described in a massive 1975 study by Charles Taylor. This philosopher contrasted the "abstract universal" of science with the more social "concrete universal" in the final "Concept" section of one work. This philosopher contended that we attain self-consciousness through mutual recognition in another work that culminated with a chapter on (*) "Absolute Knowledge". That work by this author was interpreted as a bildungsroman by Jean Hyppolite, and was the subject of a seminar led by Alexandre Kojève (koh-zhave). This author of *Science of Logic* used the term sublation, or *aufhebung* (auf-HAY-bung), to describe the interaction of thesis and antithesis in a dialectic often attributed to him. For 10 points, name this German absolute idealist who wrote *The Phenomenology of Spirit*.

ANSWER: Georg Wilhelm Friedrich Hegel <Kothari>

18. A treatise on this subject, which contains descriptions of the *Sforzinda* dedicated to Francesco Sforza and is preserved in an illuminated manuscript called the *Codex Magliabechiano* (MAH-lee-uh-bek-ee-AH-no), was written by the Florentine theorist Filarete. The distinction between reasoning, or *rationacio*, and practice, or *fabrica*, is made in another treatise on this subject that preserves the story of Archimedes's discovery of the displacement method of testing the purity of gold. A set of (*)

"parametric" rules for this subject were set forth in a 1570 treatise that became popular in England after a trip taken by the Earl of Arundel and Inigo Jones, and was admired by Thomas Jefferson. Leon Battista Alberti and Vitruvius wrote treatises on, for 10 points, what discipline, the subject of "four books" by Andrea Palladio that contain the tenets by which Palladio designed the Villa Rotunda?

ANSWER: architecture [or architectura; prompt on "design" or "building" or "buildings" or equivalents] <Hart>

19. This character is the subject of a pair of speeches given by a weaver of myrtle chaplets and by Micca. He brings a dancing girl in to distract a Scythian guard after schemes in which he poses as Menelaus, Echo, and Perseus all fail. This character mentions an iron mace, a shrine to Persuasion, and the *Argo* while speaking lines into a scale. He also delivers a song that includes the parodical refrain "Hah! What a blow! Won't you come to our rescue?" after another character mocks his work by (*) interrupting him with the phrase "lost his bottle of oil". He is forced to rescue Mnesilochus after apologizing for his own ill treatment of women in *Thesmophoriazusae* (THEZ-mo-FOR-ee-uh-ZOO-sigh), and is the original target of Dionysus's mission in *The Frogs*, though he is left in Hades after he loses a contest to Aeschylus. For 10 points, name this Aristophanes ("air"-ih-STOFF-an-eez) character who in real life was the tragedian behind *Bacchae* and *Medea*.

ANSWER: Euripides <Carson>

20. A team at Georgia Tech created a highly selective organic analogue to this substance whose components are di•methyl•form•amide and thionyl chloride. This substance, which is preferred over chromic acid to clean NMR tubes, takes part in a reaction that yields a molecule of an acid, a molecule of water, a hydronium ion, and a molecule of NO. This substance, which is often made with sal ammoniac, is used in a precursor step to create the input for electrolysis in the Wohlwill process. Chloro•platinic acid is created by immersing a (*) platinum sponge in this substance. George de Hevesy hid Max von Laue and James Franck's Nobel Prize medallions by taking advantage of a property of this yellow-orange fuming liquid. For 10 points, name this one-to-three mixture of nitric acid and hydrochloric acid that can dissolve gold and has a two-word Latin name.

ANSWER: aqua regia <Hart>

Tiebreaker. Tuning an AM radio receiver changes a local oscillator such that the oscillator creates these things to match up with a fixed IF, a process called hetero•dying. A potentially pseudoscientific application of these things uses entrainment to deliver psychedelic experiences and is their "binaural" type. These phenomena will emphasize the first harmonic as long as an instrument's overtones are integer multiples of the fundamental; that emphasis is the missing fundamental effect created by these things and is the way that brass players generate (*) multi•phonics. Doppler radars measure these things, whose frequency is the absolute value of the difference between two superimposed frequencies. For 10 points, name these pulses that occur when two different frequencies interfere, causing alternating soft and loud sounds.

ANSWER: acoustic beats [or beating] <Garg>

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Packet 7: Bonuses

1. Welcome to the annual Mike Cheyne Memorial 10-5 Bonus. This year's theme is Minnesota's own Athelstan Spilhaus, who despite being a terrible father created the National Sea Grant program and perfected the bathythermograph. Identify the following things about him on a 10-5 basis.

[10] Spilhaus planned an experimental city near Swatara, Minnesota with the help of this fellow futurist, who partnered with Shoji Sadao to design the Montreal Biosphère.

[5] This man designed a map projection, a house, a car, and a personal "Chronofile", all of which he described with the term "Dymaxion". He also patented the geodesic dome.

ANSWER: R. Buckminster **Fuller** [or Richard Buckminster **Fuller**; or Bucky **Fuller**]

[10] In a *Futurama* episode titled in part for this place, Fry accidentally becomes his own grandfather after the untimely death of his original grandfather Enos.

[5] Spilhaus's experiments with weather balloons as part of Project Mogul probably led to the UFO rumors surrounding this New Mexico site.

ANSWER: **Roswell**, New Mexico [accept "**Roswell** That Ends Well"]

[10] Spilhaus was appointed by John F. Kennedy to direct the United States exhibit at this event, a visit to which was depicted in the MST3K-featured short *Century 21 Calling*.

[5] Kennedy bowed out of appearing at this event, for which the Space Needle was constructed, due to the ongoing Cuban Missile Crisis.

ANSWER: the 1962 **World's Fair** [or the **Seattle World's Fair**; prompt on **Century 21 Exposition** or partial answers] <Carson/Kothari>

2. This cause was the chief goal of Thomas Clarkson and succeeded with a law passed in 1807. For 10 points each:

[10] Name this cause, which in England was more famously advocated by William Wilberforce and by John Newton, who had once held the specific occupation this cause opposed.

ANSWER: **abolishing** the **slave trade** [accept synonyms for "abolishing", but prompt on **abolition** alone; do not accept "ending slavery"]

[10] Newton is perhaps more famous as a writer of hymns, including this song that notes the title concept "saved a wretch like me".

ANSWER: "**Amazing Grace**"

[10] This famous English pottery magnate created an anti-slavery medallion that depicted a slave and read "Am I Not a Man and a Brother?" This man's namesake pottery company created such products as "Queen's Ware" and jasperware.

ANSWER: Josiah **Wedgwood** <Cheyne>

3. This man wrote that "Joy's wisdom is attired / Splended for others' eyes if not for thee" in "Melancholia", and he included a set of "Metrical Elucidations" at the end of his "Poor Poll". For 10 points each:

[10] Name this British Poet Laureate from 1913 to 1930, who wrote "Man's Reason is in such deep insolvency to sense" in *The Testament of Beauty*.

ANSWER: Robert Seymour **Bridges**

[10] "Poor Poll" was in a verse form that Bridges named after this writer. Bridges wrote a book-length study of the prosody this poet used in such works as *Paradise Lost* and *Paradise Regained*.

ANSWER: John **Milton**

[10] Bridges helped establish the posthumous fame of this Jesuit priest-poet, who wrote that "God's Grandeur" "will flame out, like shining from shook foil". In another poem, he declared "Glory be to God for dappled things".

ANSWER: Gerard Manley **Hopkins** <Kothari>

4. Ballet can be painful! Name some reasons why, for 10 points each:

[10] All the five classical ballet positions require this lateral rotation of the leg, which in first position ideally measures 180 degrees.

ANSWER: **turnout**

[10] Vaslav Nijinsky was one of few male ballet dancers of his time who could dance using this technique, which requires supporting all one's weight on the tips of one toes. When performing this technique, dancers often use a shoe reinforced with a box and a shank.

ANSWER: en **pointe**

[10] Dancers in training may become worn out from repeated plié-ing and elevé-ing at this handrail used in ballet classes, though if you're like Shan Kothari, you're more likely to walk into it.

ANSWER: **barre** <Kothari>

5. Answer the following about stoichiometry and balancing chemical reactions, for 10 points each.

[10] This reactant corresponds to the smallest number obtained by dividing the number of moles of each reactant by its stoichiometric coefficient. A reaction is complete when this type of reactant, which is contrasted with an "excess reactant", is fully consumed.

ANSWER: **limiting** reactant or reagent

[10] When balancing redox reactions, an intermediate step may be to balance two of these reactions separately by adding water and protons. The final step in balancing these reactions is making sure that they both have the same number of electrons.

ANSWER: **half-reactions** [or **half-equations**]

[10] This chemistry paradigm emphasizes simple high-yield reactions that occur in benign solvents, among other desirable properties. This paradigm is exemplified by the Huisgen (**HOYS-gin**) cycloaddition, and it was introduced by K. Barry Sharpless.

ANSWER: **click** chemistry [or **click** reactions] <Garg>

6. A river ran black with ink from the books of this city's library during a siege. For 10 points each:

[10] Name this city where Al-Musta'sim was rolled up in a carpet by the Mongols and trampled to death during its 1258 conquest. Its fabled House of Wisdom, a center for intellectual study, was also destroyed.

ANSWER: **Baghdad**

[10] The sack of Baghdad ended the most successful period of the Abbasid caliphate, which was descended from an uncle of this man, the founder of Islam.

ANSWER: **Muhammad**

[10] The House of Wisdom in Baghdad was founded by this Abbasid ruler, whose surname translates as "the just". He legendarily sent a clock to Charlemagne that amazed the Frankish court.

ANSWER: **Harun** al-Rashid <Cheyne>

7. These structures are larger than groups but smaller than similarly named structures that have the prefix "super". For 10 points each:

[10] Name these structures that are composed of galaxies and constitute the entirety of the Abell catalog; for example, Abell 1656 is the Coma one and Abell S373 is the Fornax one.

ANSWER: **clusters** of galaxies [accept word forms such as **clustering** of galaxies; do not accept or prompt on "superclusters" or equivalents]

[10] The Local Group is a member of this supercluster. This supercluster's gravitational center is found in its namesake cluster, which contains the elliptical galaxies Messier 49 and Messier 87.

ANSWER: **Virgo** supercluster [or **Virgo** SC; prompt on "**Laniakea**", "**Local Supercluster**", or "**LSC**"]

[10] The gravitational center of the Local Group is somewhere between these two largest galaxies in the Local Group.

ANSWER: **Milky Way** galaxy and **Andromeda** galaxy [accept in either order] <Voight>

8. In 2007, former U.S. Poet Laureate Robert Haas published a collection titled for a phrase from construction pairing this word with “materials”. For 10 points each:

[10] Name this concept. In Khalil Gibran's *The Prophet*, an astronomer asks for a discourse on this concept, and the Prophet responds that it is “the measureless and the immeasurable”.

ANSWER: **time** [accept **Time** and **Materials**]

[10] The aviation term *Time of Useful Consciousness* titles a 2012 book that is the second volume of this man's *Americus* series. This proprietor of San Francisco's City Lights Bookstore is a 96-year-old Beat poet who wrote the collection *A Coney Island of the Mind*.

ANSWER: Lawrence **Ferlinghetti** [or Lawrence Monsanto **Ferlinghetti**]

[10] “This poet addressed a “true daughter of Old Time” in his “Sonnet—To Science”. He also wrote “The Conqueror-Worm” and “The Raven”.

ANSWER: Edgar Allan **Poe** <Hart>

9. This figure's thirteen wives include Kadru, who laid a thousand eggs that hatched into the nagas, and Vinata, who laid two eggs that hatched into Garuda and Surya's charioteer Aruna. For 10 points each:

[10] Name this legendary Hindu sage, perhaps the foremost of the Saptarishis, whose other children include the apsaras, the devas, and the asuras.

ANSWER: **Kashyapa** [or **Kasyapa**]

[10] Kashyapa's wife Aditi became the mother of both Vishnu's avatar Vamana and this Vedic god of fire, who uses his seven tongues to lap up sacrificial ghee.

ANSWER: **Agni**

[10] According to some stories, Kashyapa and Aditi were reincarnated as Dasharatha and Kausalya, the parents of this future king of Ayodhya. This man rescues his wife Sita from the demon Ravana in the epic named for him.

ANSWER: **Rama** [or **Ram**] <Carson>

10. The only two teachings that were officially proclaimed to fall under this doctrine were the Immaculate Conception and Assumption of Mary. For 10 points each:

[10] Name this doctrine under which, in certain matters, the pope is free from error.

ANSWER: papal **infallibility** [accept word forms such as **infallible**]

[10] Papal infallibility was officially defined under Pius IX (“the ninth”) at this council. Nearly 100 years later, an ecumenical council at the same location as this council proclaimed support for religious liberty in the document *Dignitatis humanae*.

ANSWER: **First Vatican** Council [or **Vatican I**; do not accept or prompt on “Vatican II” or equivalents]

[10] This liberal Catholic and editor the magazine *The Rambler* opposed the doctrine of papal infallibility. He wrote a letter to Mandell Creighton in which he argued that “power tends to corrupt, and absolute power corrupts absolutely”.

ANSWER: Lord **Acton** [or John Dalberg-**Acton**] <Bailey>

11. This character, who at one point works on a treatise on metals, travels to Brazil for two years and develops a relationship with Amparo. For 10 points each:

[10] Name this unreliable narrator who works on an occult-themed game called “The Plan” with the vanity publishers Diotallevi and Belbo.

ANSWER: **Casaubon**

[10] Casaubon is the narrator of *Foucault's Pendulum*, a novel by this Italian semiotician, who wrote about William of Baskerville's deductive skills in *The Name of the Rose*.

ANSWER: Umberto **Eco**

[10] In *Foucault's Pendulum*, Colonel Ardeni claims to have discovered evidence that the remnants of this medieval organization are trying to find the “telluric currents” to control the world.

ANSWER: Knights **Templar** <Jose>

12. The density of states describes the number of available states for particles to occupy with respect to this quantity. For 10 points each:

[10] Name this quantity that is found by dividing kT in the Bose-Einstein and Fermi-Dirac distributions. It's commonly described as the ability of a system to do work.

ANSWER: **energy** [or **E**]

[10] This particle distribution from classical mechanics describes the speed or energy of molecules in an ideal gas as a probability density function.

ANSWER: **Maxwell-Boltzmann** distribution

[10] The Maxwell-Boltzmann distribution describes particles with this property, unlike the Bose-Einstein or Fermi-Dirac distributions. This characteristic applies to particles that are largely separated compared to their de Broglie wavelength.

ANSWER: **distinguishability** [or word forms like **distinguishable**] <Garg>

13. Answer the following about the British-born painter Leonora Carrington, for 10 points each.

[10] Carrington lived most of her life in this North American country, the birthplace of Frida Kahlo.

ANSWER: **Mexico** [or United **Mexican** States or Estados Unidos **Mexicanos**]

[10] Carrington was one of the last active members of this artistic movement, whose manifesto defined it as "pure psychic automatism".

ANSWER: **surrealism** [accept answers mentioning **surreal** or forms thereof]

[10] Carrington's version of this scene represents the central man as very old and having three heads and an eggshell-like hood. Salvador Dalí's painting of this scene shows a procession of a horse and five elephants with stilt-like legs.

ANSWER: *The **Temptation of St. Anthony*** <Hart>

14. This city was the primary site of a coup that was defused when a former mayor climbed on top of one of the tanks guarding the White House. For 10 points each:

[10] Name this non-American city that was the site of a failed coup in August of 1991.

ANSWER: **Moscow**

[10] That coup attempt occurred during the presidency of this man, the final leader of the Soviet Union. Boris Yeltsin snatched away much of his power in his final days in office. He is best known for a goofy-shaped mark on his head.

ANSWER: Mikhail **Gorbachev**

[10] In the aftermath of the breakup of the Soviet Union, many new governments were created. These two former states have had the same authoritarian leaders, Presidents Karimov and Nazarbayev, in power since 1991.

ANSWER: Republic of **Kazakhstan** AND Republic of **Uzbekistan** [need both in either order] <Cheyne>

15. This man said in an interview that he supplied "more heroin, methamphetamine, cocaine, and marijuana than anybody else in the world". For 10 points each:

[10] Name this head of the Sinaloa Cartel, who has escaped twice from prison in Mexico and was captured once again following a raid on a house in Los Mochis in January 2016.

ANSWER: El **Chapo** [or Joaquin Archivaldo **Guzman** Loera]

[10] This operation run by Mexican marines led to the capture of El Chapo. An edited 15-minute video of this operation that was captured on GoPros was released shortly after this operation ended.

ANSWER: Operation **Black Swan** [or **Cisne Negro**]

[10] In October 2015, El Chapo was interviewed for this magazine by Sean Penn and Kate del Castillo, which reportedly helped lead to his capture.

ANSWER: **Rolling Stone** <Gehring>

16. A more subjectivist school that reacted to this movement includes the director of Çatalhöyük (**chah-TAHL-hoh-yook**), Ian Hodder. For 10 points each:

[10] Name this school of archeology, also called New Archeology, that emphasized scientific methods and continuity with anthropology. Its noted proponents include Gordon Willey, Philip Phillips, and Lewis Binford.

ANSWER: **processual** school

[10] Lewis and Sally Binford disagreed with François Bordes about the functional or stylistic meaning of variation in Mousterian Levallois tools made by this recent Eurasian hominid subspecies. This species is named after a German valley.

ANSWER: **Neanderthals** [or *Homo sapiens neanderthalensis*]

[10] The processual archaeologist Colin Renfrew argues that this language originated in Anatolia rather than with the Kurgan culture, as proposed by Marija Gimbutas. Shifts away from the pattern of stop consonants in this language are the subject of Grimm's law.

ANSWER: **Proto-Indo-European** language [prompt on "PIE language"] <Kothari>

17. Answer the following about huge animals, for 10 points each.

[10] This scientist discussed how scale can affect the nature of a creature's bodily equipment needs in his influential essay "On Being the Right Size". His namesake "rule" asserts that, in hybrid species, the hetero•gametic sex is more likely to be infertile.

ANSWER: J. B. S. **Haldane** [or John Burdon Sanderson **Haldane**]

[10] A scientist with this surname described the allo•metric growth patterns of organs in various sizes of animals in his 1932 book *Problems of Relative Growth*. His grandfather of the same surname became known as "Darwin's Bulldog" for his fierce advocacy of evolution.

ANSWER: **Huxley** [accept Julian (Sorell) **Huxley** or Thomas (Henry) **Huxley**]

[10] While the sizes of land creatures are limited by the stresses their musculo•skeletal structures are forced to bear, sea creatures are aided by the buoyancy of water and can thus grow larger. For example, this cetacean is not only the largest extant animal, but also the heaviest ever to exist.

ANSWER: **blue whales** [or *Balaenoptera musculus* or *B. musculus*; prompt on "**whales**"] <Carson>

18. Name the following about women authors who commented on conflicts in the Balkans, for 10 points each.

[10] Martha Gellhorn, who covered every major war from 1930 until she declared herself "too old" to go to Bosnia in the 1990s, was briefly married to this American author. This man's own wartime experiences inspired his novels *A Farewell to Arms* and *For Whom the Bell Tolls*.

ANSWER: Ernest **Hemingway** [or Ernest Miller **Hemingway**]

[10] During the Siege of Sarajevo in the Bosnian War, this American writer directed a production of *Waiting for Godot* by candlelight in the city. Her essay "Notes on 'Camp'" appeared in her 1966 collection *Against Interpretation*.

ANSWER: Susan **Sontag** [or Susan **Rosenblatt**]

[10] This British author and titled dame acknowledged the devastation of the Nazi invasion of the Balkans with a dedication to "my friends in Yugoslavia, who are now all dead or enslaved" at the beginning of her 1941 travel account, history, and ethnography of the region entitled *Black Lamb and Grey Falcon*.

ANSWER: Dame Rebecca **West** [or Dame Cicely Isabel **Fairfield**] <Hart>

19. This work's composer complained of being compelled by Baron van Swieten to write "Frenchified trash" for a section depicting the croaking of frogs. For 10 points each:

[10] Name this secular four-part oratorio about the peasants Simon, Hanne, and Lukas, based on a James Thomson poem. It also contains a really weird ode to the virtues of toil.

ANSWER: *The Seasons* [or *Die Jahreszeiten*]

[10] "This composer of *The Seasons* had a piccolo quote the theme from his own *Surprise Symphony* in it. He wrote the music to the anthem "God Save Emperor Francis".

ANSWER: Franz Joseph Haydn

[10] Haydn also wrote this more popular three-part oratorio on a religious theme, whose opening "Representation of Chaos" avoids clear cadences. In it, the origin of light is represented by a pizzicato note followed by a fortissimo C major chord.

ANSWER: *The Creation* [or *Die Schöpfung*] <Kothari>

20. During this event, Lawrence Keitt brandished a gun and shouted "Let them be!" For 10 points each:

[10] Name this May 1856 event perpetrated by Preston Brooks in revenge for another man's offensive speech attacking Andrew Butler for Butler's support of the "harlot" slavery.

ANSWER: the caning of Charles Sumner [accept synonyms like assault instead of caning]

[10] Sumner's speech was about the violence that tore apart this newly created U.S. state over the issue of slavery. Border ruffians poured into here, which led to the nickname of "bleeding" applied to this state.

ANSWER: Kansas

[10] This Kentucky Senator tried to break up Sumner's caning. A former Attorney General, he is best known for introducing a December 1860 proposal of six constitutional amendments to prevent the Civil War from happening.

ANSWER: John Jordan Crittenden <Cheyne>

Extra. The character of Quin Savory in one novel set on this conveyance was alleged to be a defamatory representation of the author J.B. Priestley. For 10 points each:

[10] Name this train route that provides the setting of the novel *Stamboul Train*. In an Agatha Christie mystery titled for a "murder on" this train route, Hercule Poirot solves the murder of Samuel Ratchett.

ANSWER: Orient Express [accept *Murder on the Orient Express*]

[10] This author of *Stamboul Train* wrote about a famous architect named Querry arriving at a Congolese leper colony in *A Burnt-Out Case*, and about Maurice Bendrix's mistress Sarah calling off their relationship after his flat is hit during the Blitz in *The End of the Affair*.

ANSWER: Graham Greene [or Henry Graham Greene]

[10] In a novel titled for this man "and the tiger", he rides on the maiden voyage of the Orient Express. George MacDonald Fraser wrote a series of novels about this rakish, lecherous Victorian soldier, who first appeared in Thomas Hughes's *Tom Brown's School Days*

ANSWER: Sir Harry Paget Flashman [accept either underlined part; accept *Flashman and the Tiger*] <Hart>