

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 3: Tossups

1. In one chapter of this novel, the protagonist dodges a biscuit tray thrown by “The Citizen”, whom he tells that Jesus was a Jew. The penultimate chapter of this novel, which begins with a man making cocoa for a guest who refuses an offer of a place to stay for the night, is presented in the form of a catechism of 309 questions and answers. The 18th and final chapter of this novel, which includes reminiscences of a childhood on Gibraltar and feeding a suitor seedcake out of her mouth, concludes with a woman remembering accepting a (*) marriage proposal with the line “yes I said yes I will Yes”. The protagonist of this novel meets a young author named Stephen and accepts the fact that Blazes Boylan is having an affair with his wife Molly. For 10 points, name this novel set on June 16, 1904, about Leopold Bloom’s wanderings through Dublin, written by James Joyce.

ANSWER: Ulysses <Hart>

2. Large proton coupling constants can help to distinguish between isomers caused by these interactions. In NMR, these bonds create anisotropic effects because they shield perpendicular to themselves and de-shield in the parallel direction. One of the most notable IR peaks occurs near 1700 inverse centimeters due to the stretching of one of these bonds. Compounds with alternating versions of these bonds are commonly studied in UV-vis spectroscopy because more of these bonds shift the absorption maxima to lower frequencies. They cannot appear near the (*) bridgehead of a bridged ring system according to Bredt’s rule, and they do not appear in saturated compounds. For 10 points, name this type of bond that consists of a sigma bond and a pi bond and is found in conjugated compounds, such as carbonyls and alkenes.

ANSWER: double bonds [or carbon-carbon double bonds; or carbon-oxygen double bonds] <Garg>

3. The losing candidate in this election kept bringing up the winner’s ties to corrupt adviser Bobby Baker. In the Republican primaries prior to this election, a candidate was hurt when his wife, Happy, gave birth, reminding voters of a previous affair. The Republican convention for this election featured crowds booing Nelson Rockefeller when he urged a moderate course. During it, the losing candidate was endorsed in the speech “A (*) Time For Choosing”, delivered by former Hollywood actor Ronald Reagan. Infamously, the winning candidate in this election aired a commercial showing a girl picking daisies before abruptly cutting to a nuclear explosion. For 10 points, name this presidential election in which Barry Goldwater was thrashed by incumbent president Lyndon Johnson.

ANSWER: Election of 1964 <Cheyne>

4. In the first movement coda of a symphony by this composer, the brass twice play a Neapolitan E-flat major chord over a D pedal point. The most popular completion of that unfinished symphony is by Samale and Mazzuca, though the composer suggested using his *Te Deum* as a finale. A symphony by this composer begins with a horn playing B-flat, E-flat, B-flat, then C-flat, E-flat, B-flat over tremolo strings. That symphony’s scherzo has enigmatic markings like “Jagdsthema” and “Volksfest”. Deryck Cooke gave this man’s name to the (*) problem of sifting through the many versions of his symphonies. A cymbal clash and a quartet of Wagner tubas figure in this composer’s seventh symphony. Many of his symphonies have motifs of two quarter-notes followed by a quarter-note triplet, this man’s namesake rhythm. For 10 points, name this Austrian acolyte of Wagner who wrote the “Lyric” and “Romantic” symphonies.

ANSWER: Anton Bruckner <Kothari>

5. In the first set from Ovid's *Double Heroides*, this character sees the words "I love" written in wine above her name. At a banquet, this character served wine mixed with a drug of forgetfulness called *nepenthe*, which she received from Polydamna. This woman's husband promised the hand of their daughter Hermione to Neoptolemus, even though she was already betrothed to Orestes. When she was twelve, this woman was left with Aethra after (*) Theseus kidnapped her. At the suggestion of Odysseus, this woman's putative father Tyndareus had her suitors draw straws for her hand and vow to protect the victor. Aphrodite offered this woman in exchange for the golden apple of discord. For 10 points, name this wife of Menelaus, a legendary beauty whose elopement with Paris sparked the Trojan War.
ANSWER: Helen of Troy [or Helen of Sparta] <Kothari>

6. This city was where the author of the book *The Myth of the Twentieth Century* was killed. Labor leader Robert Ley killed himself in this city by hanging himself with a towel. It was the site of the so-called "Cathedral of Light", which contained 152 anti-aircraft searchlights aimed skyward. A newspaper whose name translates as "The Attacker" was published in this city by Julius Streicher, who was later killed here. A man avoided being (*) executed here by using a smuggled potassium cyanide capsule. The film *Triumph of the Will* by Leni Riefenstahl is set in this city, which also named laws forbidding marriages between Jews and Germans. For 10 points, what German city was the site of annual Nazi rallies in the early 1930s and was where post-World War II war crimes trials took place?
ANSWER: Nuremberg [or Nürnberg] <Cheyne>

7. Many materials that exhibit this phenomenon can be characterized by just the coefficients d-three-one, d-three-three, and d-one-five, but one also needs d-two-five and d-three-two when using the orthotropic polymer poly•vinyl•i•dene fluoride. This phenomenon is displayed by many wurtzite and zinblende semiconductors, such as zinc oxide, cadmium sulfide, and gallium arsenide, because they lack a center of inversion. Strain gauges based on this phenomenon measure voltage, not resistance; are commonly based on the (*) ceramic lead zirconate titanate; and are used as the transducers in many microphones. Pierre Curie and his brother discovered this phenomenon and used it to build instruments that could measure radioactivity. Rochelle salts and quartz exhibit, for 10 points, what phenomenon in which the elastic strain and electric field are coupling in a crystal, resulting in the acquiring of a charge when stressed?
ANSWER: piezoelectric effect [or piezoelectricity; or word forms] <Garg>

8. This man wrote of purchasing a gravesite in Abeokuta, Jamaica, among a community of settlers who originated from his hometown in his 2006 memoir, *You Must Set Forth at Dawn*. In 1997, Kingston was the site of the world premiere of a play by this man in which young boys bilk wealthy tourists at a shopping mall; that play is *The Beautification of Area Boy*. This man added a comedic dimension to a scene from ancient Greek drama in which Tiresias speaks with Kadmos in his 1973 translation *The Bacchae of Euripides*. In this man's first major play, a travel (*) photographer's images of a beautiful girl sparks a rivalry for her affections between a modern young man and an older, more powerful one. In another of his plays, colonialist Simon Pilkings interrupts the Yoruban suicide ritual of Elesin. For 10 points, name this Nigerian playwright of *The Lion and the Jewel* and *Death and the King's Horseman*.
ANSWER: Wole Soyinka [or Akinwande Oluwole Babatunde Soyinka] <Hart>

9. Out of the 19 people with this condition who received intensive behavioral training under O. Ivar Lovaas, nine were able to function normally in a classroom. In an experiment, about 80% of people with this condition claimed that a doll believed her ball to be in the box rather than the basket where she left it. Leo Kanner retracted a theory surrounding this condition in a foreword of a book by Bernard Rimland, which claimed its origins were biological. The "Sally-Anne test" was conducted on children with this condition by Simon Baron-Cohen. Rimland attacked the work of (*) Bruno Bettelheim, who compared people with this condition to concentration camp prisoners in his book *The Empty Fortress* and promoted Kanner's theory that it was caused by emotionally distant "refrigerator mothers". For 10 points, name this neurodevelopmental "spectrum disorder" that includes Asperger's syndrome.
ANSWER: autism spectrum disorder <Bailey>

10. This country contains is the eastern terminus of a railway whose financing comprised China's largest-ever foreign aid project. A tourist-oriented school of painting that depicted busy scenes of wild fauna created with bicycle paint on masonite developed in Oyster Bay, an affluent neighborhood of this country's largest city. A group of extremely inbred lions live in this country's Ngorongoro Crater. The "Four Year War" between the Kahama and Kasakela, two groups of (*) chimpanzees, took place in this country's Gombe Stream National Park, where research was conducted by Jane Goodall. Hundreds of thousands of zebra and wildebeests annually migrate through its Serengeti National Park. For 10 points, name this East African country, whose capital was moved to Dodoma in 1974, but whose largest city remains Dar es Salaam.

ANSWER: Tanzania [or United Republic of Tanzania; or Jamhuri ya Muungano wa Tanzania] <Carson>

11. The Catalan Atlas of Abraham Cresques shows a fleur-de-lys-topped scepter being held by a ruler of this empire. An Andalusian architect named Al-Sahili used banco, or mudbrick, to build the Djinguereber Mosque for a ruler of this empire. According to an epic about the founder of this empire, the only object that could be used to defeat an enemy ruler was the spur of a white rooster. The founder of this empire won the Battle of Kirina against (*) Sumanguru of the Sosso Empire and was served by Balla Fasseke, a griot. Al-Umari claimed that a ruler of this empire was responsible for the low value of the mithqal twelve years after that ruler had passed through Cairo on a lavish hajj and flooded the gold market. For 10 points, name this West African empire that was founded by Sundiata and ruled by many mansas, including Musa.

ANSWER: Malian Empire <Gehring>

12. ADRP (A-D-R-P) and PRDM16 (P-R-D-M-16) contribute to the development of cells that make up this tissue. The resident macro•phages of this tissue may release pro-inflammatory cyto•kines like IL-6 and TNF-alpha. Multi•potent stem cells can be obtained from this tissue's PLA population or stromal vascular fraction. The amount of this tissue in the body can be measured using bio•electrical impedance analysis. The mitochondria of one type of this tissue have an uncoupling protein that uses oxidative phos•phoryl•ation to produce (*) heat. Leptin is mostly made in the white kind of this tissue, while thermo•genin is found in the brown kind, which is used in non-shivering thermo•genesis. Cardiovascular health is put at risk by abdominal accumulations of this tissue, which is removed in liposuction. For 10 points, name this connective tissue that stores lipids.

ANSWER: adipose tissue [or body fat; accept brown adipose tissue, brown fat, white adipose tissue, or white fat] <Kothari>

13. A man with this title falls through a lattice and is confined to his bed, with a hundred of his soldiers consumed by fire afterwards. Another man who assumes this title is said to drive his chariot furiously before he murders Jehoram and Ahaziah. Yet another man to hold this title desired a small vineyard and killed Naboth in order to take it, an action later avenged by (*) Jehu. A more famous holder of this title was asked hard questions by the Queen of Sheba and was the son of Uriah the Hittite's widow. That holder of this title, who correctly determined the true mother of a child by threatening to cut the child in half, asked the Lord for great wisdom and built the First Temple in Jerusalem while holding it. For 10 points, name this Old Testament royal title held by Solomon.

ANSWER: king of Israel [or king of Israel and Judah; or king of the northern kingdom; or king of Samaria; prompt on "kings"; do not accept "king of Judah"] <Cheyne>

14. The death of a poet who wrote in this language inspired another author to write “his lips forever sealed” at the end of the poem *Death of a Poet*. A 1963 rhyming English translation by Walter Arndt of a work originally in this language inspired another translator to write *Notes on Prosody* to explain rhythmic differences between this language and English. One of this language's Romantic poets wrote that “no yardstick was created” for the home country of its speakers in a poem that begins “who would grasp [that country] in the mind?” (*) Vikram Seth's verse novel *The Golden Gate* was inspired by the verse structure of a work written in this language in which an invitation to a name day celebration leads the title character to shoot Lensky in a duel. For 10 points, name this language whose three great Romantic poets are Fyodor Tyutchev, Mikhail Lermontov, and Alexander Pushkin.

ANSWER: Russian [or russskiy yazyk] <Hart>

15. This state is the setting of Jeremy Karoff's 2014 short documentary *Cavedigger*, which profiles Ra Paulette, who excavates elaborate sandstone caves in this state. The Utah installation sculpture *Spiral Jetty* is contrasted with an installation in this state in Geoff Dyer's *New Yorker* essay “Poles Apart”. That installation in this state, which was designed by Walter de Maria, consists of a one-mile-by-one-kilometer grid of 400 stainless steel poles and is called *Lightning Field*. Painter Bert Geer Phillips founded an “art (*) colony” in this state that was frequently the home of art patron Mabel Dodge Luhan and author D.H. Lawrence. While living at Ghost Ranch in this state, the wife of Alfred Stieglitz painted many animal skulls and desert scenes. Taos is found in, for 10 points, what southwestern state where Georgia O'Keeffe lived?

ANSWER: New Mexico <Hart>

16. While on a car ride, this character sees the “portentous menacing road of a new decade” stretching before him, and considers “a thinning list of single men to know, a thinning briefcase of enthusiasm, thinning hair”, upon realizing that it is his 30th birthday. After this man's friend dies, he attempts to visit his friend's mentor at the Swastika Holding Company. This man recalls that, during Christmas break from his prep school, he would take the train home from the east coast to Minnesota, prompting him to realize that he and his companions were “all (*) Westerners”. This character, who moves to New York to sell bonds and dates a dishonest champion golfer named Jordan Baker, says that his friend “believed in the green light, the orgastic future that year by year recedes before us”. For 10 points, name this narrator of F. Scott Fitzgerald's *The Great Gatsby*.

ANSWER: Nick Carraway [accept either underlined name] <Hart>

17. Supporters of this movement were fond of the ballad “Nero the Second”. Legendarily, the Christmas hymn “Adeste Fideles” is a coded song for its followers, who also sang the folk tune “Hey, Johnnie Cope, Are Ye Waking Yet?” A man supported by this movement was forced to flee disguised as Flora MacDonald's Irish maid. This movement lost a battle traditionally said to feature the “last Highland charge”. Its followers won the Battle of (*) Prestonpans but were later decisively defeated by the Duke of Cumberland at the Battle of Culloden. This movement led to rebellions in 1715 and 1745, with the latter led by the “Young Pretender”, Bonnie Prince Charlie. For 10 points, name this movement that unsuccessfully sought to restore James II and his heirs to the English throne.

ANSWER: Jacobites [accept word forms; do not accept “Scottish Independence”] <Cheyne>

18. When these entities respond drastically to a small change in the input, they possess the desirable “avalanche effect” property. The theoretical “perfect” type of these entities are injective, and “monotone” ones that preserve the lexicographic order of the input are desirable. The “double” form of a technique that makes use of these entities is often used as an alternative to linear probing, quadratic probing, and separate chaining. (*) Checksums are often the output of the “cryptographic” type of these entities, which output an alphanumeric string and are practically impossible to invert. It is often necessary to resolve “collisions” when using these entities, which ostensibly offer “big O of one” lookup. For 10 points, name these mathematical functions that map data into namesake tables for quick lookups.

ANSWER: hash functions [accept hash table or hashes or hashing] <Jose>

19. In one role, this man's character becomes embroiled in a conflict over "O Gato do Diabo" involving a Christopher Walken-portrayed mining baron, sparked when he is sent to Brazil to retrieve Seann William Scott's character. This actor blows up Moses Jakande's helicopter and helps defeat both Owen and Deckard Shaw in his role as Diplomatic Security Service agent Luke Hobbs. In another role, he helps his daughter and estranged wife, played by Alexandra Daddario and Carla Gugino, survive a series of (*) earthquakes that ravage San Francisco. This star of *The Rundown*, who appeared the fifth through seventh *Fast and Furious* movies and played an LAFD helicopter pilot in *San Andreas*, had his first starring role in 2002's *The Scorpion King*. In an earlier career, he was fond of dropping the "People's Elbow". For 10 points, name this actor who often asked if you could smell what he was cooking as a WWE champion.
ANSWER: Dwayne "The Rock" Johnson [accept either underlined portion; accept Dwayne Douglas Johnson or Rocky Maivia] <Carson>

20. One artist's paintings of this object were inspired by that artist's namesake, a soldier named William who died at Fort Moultrie. One of these objects was painted over, and a fork and spoon hung from the canvas, in the 1961 painting *In Memory of My Feelings*. After a painting of one of these objects went missing, a copy was painted by the copycat artist Sturtevant for inclusion in the 1955 combine *Short Circuit*. An artist had a dream about painting one of these objects that resulted in a work in which one was constructed using a plywood backing, newspaper collage, and pigment affixed with (*) beeswax. That artist also used the encaustic technique to paint a "white" version of this object, and a painting in which three canvases depicting them were stacked on top of each other. For 10 points, name this frequent subject of paintings by Jasper Johns, a noted patriotic symbol.
ANSWER: American flags [accept Star Spangled Banner or Stars and Stripes or Old Glory or any answer mentioning flags or banners and U.S. or U.S.A. or United States or America; prompt on "flags" or banners" or equivalents] <Hart>

Tiebreaker. A president of this country ordered the amputation of Pierre Mulele's limbs while Mulele was still alive; that leader of this country, who ordered the evening news to begin with a picture of him descending from the heavens, covered up health problems by saying his penis had swollen to twice its size. This country's most infamous leader wore a tunic called an abacost and rewarded members of the Ngbandi tribe in his "kleptocracy". In an attempt to rid this country of colonial influence, its (*) name was changed in 1971 to refer to a native word for a "river that swallows all rivers"; that action occurred during an "authenticity" campaign in which cities like "Leopoldville" had their names changed as well. For 10 points, what African country was ruled for years by Mobutu Sese Seko and was formerly known as Zaire?
ANSWER: Democratic Republic of the Congo [or DRC; or DROC; or Congo-Kinshasa; or RDC; or First Congolese Republic; accept Zaire until mentioned; accept Congo-Leopoldville until mentioned; prompt on Congo; do not accept "Republic of the Congo", "West Congo", or "Congo-Brazzaville"] <Cheyne>

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Packet 3: Bonuses

1. Joan Tower responded to this work some forty years later with a series of five pieces dedicated to Marin Alsop, and its composer reused its theme in the finale of his Third Symphony. For 10 points each:

[10] Name this 1942 work written at the behest of Eugene Goossens for the brass and percussion of the Cincinnati Symphony Orchestra. It begins with a gong crash and two beats on the timpani and bass drum, which repeats twice before the brass enter with “F-B flat-F”.

ANSWER: **Fanfare for the Common Man**

[10] *Fanfare for the Common Man* was written by this American composer who incorporated the Shaker tune “Simple Gifts” into his *Appalachian Spring*.

ANSWER: Aaron **Copland**

[10] This French composer wrote a brass fanfare to precede his ballet *La Péri*. He also wrote *Variations, Interlude, and Finale on a Theme by Rameau* and an orchestral scherzo inspired by a Goethe poem.

ANSWER: Paul Abraham **Dukas** <Kothari>

2. The chronologically-first use of the word “poop” in Shakespeare appears during an exchange of insults in which this character calls Bardolph the “Knight of the Burning Lamp”. For 10 points each:

[10] Name this character who often hangs out in the Boar’s Head Tavern in Eastcheap with his followers, including Pistol and Nym. In a comedy with a then-contemporary setting, he attempts to simultaneously woo both Mistress Page and Mistress Quickly.

ANSWER: Sir John **Falstaff** [prompt on “John”]

[10] Falstaff’s offstage death is announced near the beginning of this play, whose title monarch delivers a speech beginning “Once more unto the breach, dear friends” at Harfleur and gives the St. Crispin’s Day speech before the Battle of Agincourt.

ANSWER: **Henry V** [accept *The Chronicle History of Henry the Fifth* or *The Life of Henry the Fifth*]

[10] In *The Merry Wives of Windsor*, Falstaff is tricked into dressing as this character and waiting by an oak tree in Windsor forest, whereupon he is mobbed by children dressed as fairies. This antlered ghost legendarily leads one of Britain’s many “wild hunts”.

ANSWER: **Herne** the Hunter <Carson>

3. A man executed in this modern-day country gave as his last words the phrase “such is life”. For 10 points each:

[10] Name this modern-day country that was once home to notorious “bushrangers” such as Ned Kelly, who dressed in a homemade metal suit of armor to fight against police.

ANSWER: Commonwealth of **Australia**

[10] The Australian state of New South Wales was once governed by William Bligh, who is better known for commanding what British ship that was the subject of an infamous mutiny in 1789?

ANSWER: HMS **Bounty**

[10] Bligh was succeeded as governor by this Scottish-born administrator, who did much to modernize New South Wales and the entire continent. He introduced an official Australian currency, was the first to officially use the name “Australia”, and now names a university in Sydney.

ANSWER: Lachlan **Macquarie** <Cheyne>

4. The reticulo•endo•thelial system, also known as a “mono•nuclear system”, consists primarily of these cells and their undifferentiated precursors, which are called mono•cytes. For 10 points each:

[10] Name these white blood cells that engulf targeted matter.

ANSWER: macro•phages [or phago•cytes]

[10] Specialized macrophages known as Kupffer cells are found in this human organ, where they may play a role in some forms of alcohol-based damage called cirrhosis.

ANSWER: liver

[10] A sign of athero•sclerosis is the presence of these fat-laden macrophages, which are formed when the body sends macrophages to engulf fatty deposits on blood vessel walls.

ANSWER: foam cells <Hart>

5. A popular video clip featuring this phrase was taken from a video of its speaker delivering various “motivational words of wisdom” while standing in front of a white screen. For 10 points each:

[10] Give this memetic two-word phrase, first delivered by its speaker in the intro to the music video for “How Many Times” after pulling up in a black car, asking a woman “who’s your inspiration?”, replying to her answer with “that’s the smartest thing you’ve ever said in your life”, and demanding a kiss.

ANSWER: another one

[10] “Another one”, like “you smart, you loyal” and “congratulations...you played yourself”, is an internet-beloved phrase associated with this hip-hop artist, whose highest-charting songs include “I’m On One” and “All I Do Is Win”.

ANSWER: DJ Khaled [or Khaled Mohammed Khaled]

[10] Khaled served as the DJ for Terror Squad, whose namesake record label was founded by this Latino rapper, whose 1995 album *Jealous One’s Envy* featured the first appearance of Big Pun. You probably know him better for his hit 2004 duet with Remy Ma, “Lean Back”.

ANSWER: Fat Joe [or Joseph Antonio Cartagena] <Carson>

6. Answer the following about the *Querelle des Bouffons* (**kwer-EL day boo-FOH**), a battle of musical philosophies in 18th century France, for 10 points each:

[10] It was sparked by a troupe of Italian comic actors putting on a performance of this opera buffa by Giovanni Battista Pergolesi, originally written as an intermezzo to his opera seria *Il prigionero superbo*. Its title character, Serpina, eventually marries Uberto.

ANSWER: *La serva padrona* [or *The Servant Turned Mistress*]

[10] One of the leading active composers on the French side of the debate was this author of a famed *Treatise on Harmony* who used Racine’s *Phèdre* as the basis for his opera *Hippolyte et Aricie* (**ee-poh-LEET eh ahr-ee-SEE**). His opera-ballets include *Les Indes galantes* (**lehzh AHND gah-LAHNT**).

ANSWER: Jean-Philippe Rameau

[10] Ironically, Rameau had himself been attacked as a radical by supporters of this man, his predecessor as the leading figure of French opera. This inventor of the French overture notoriously died of gangrene after striking his foot with his long conducting staff.

ANSWER: Jean-Baptiste Lully [or Giovanni Battista Lulli] <Carson>

7. Answer the following about literary fractals, for 10 points each.

[10] In a 1996 interview, this author admitted that he used the model of the Sierpinski gasket to structure his novel *Infinite Jest*.

ANSWER: David Foster Wallace

[10] Zachary Mason used fractals to structure his debut novel, titled for the “lost books” of this literary work. Nikos Kazantzakis wrote a “modern sequel” to it.

ANSWER: *The Odyssey* [accept *The Lost Books of the Odyssey* or *The Odyssey: A Modern Sequel*]

[10] In January 2016, researchers at Poland’s Institute of Nuclear Physics announced that this novel almost exactly conforms to the characteristics of a multifractal system. Mythologist Joseph Campbell and novelist Henry Morton Robinson wrote a “skeleton’s key” to this work, from which Campbell took the term “monomyth”.

ANSWER: Finnegans Wake [by James Joyce] <Hart>

8. This series contains the famous line “Tyranny, like hell, is not easily conquered”. For 10 points each:
[10] Name this pamphlet series, the follow-up to *Common Sense*, which was written to encourage people during the American Revolution. It begins with the line “These are the times that try men's souls”.

ANSWER: *The American **Crisis***

[10] This atheist corsetmaker wrote both *Common Sense* and *The American Crisis*.

ANSWER: Thomas **Paine**

[10] Paine feuded with this Pennsylvania politician, who was known as the “Financier of the Revolution”. In 1781, he became the Superintendent of Finance for the U.S. He has the same last name as the peg-legged author of the Constitution's preamble.

ANSWER: Robert **Morris** Jr. [do not accept “Gouverneur Morris”] <Cheyne>

9. This functional group can be protonated to make the positive component of a salt, a property that is useful for extracting this functional group during liquid-liquid extractions. For 10 points each:

[10] Name this basic functional group that contains a nitrogen atom with a lone pair.

ANSWER: **amines** [do not accept “amides”]

[10] This method produces primary amines by first reacting a phthalimide anion with an alkyl halide, followed by treatment with hydrazine. The advantage of this method is that it avoids over-alkylation to secondary or tertiary amines.

ANSWER: **Gabriel** synthesis

[10] Amines can be made into good leaving groups in the Hofmann elimination, in which they are substituted with three of these groups. In that reaction, these groups are transferred from a namesake iodide.

ANSWER: **methyl** groups [accept word forms; or **CH₃** groups; accept **methyl** iodide] <Garg>

10. Mark Granovetter argued that the “weak ties” in these entities were an important and understudied part of how ideas and innovations spread. For 10 points each:

[10] Name these structures of agents and the connections between them. The “small-world” experiment was an attempt to measure them.

ANSWER: social **networks**

[10] Granovetter drew upon the ideas of this man in his study of how economic transactions are embedded in larger social structures. This man investigated the emergence and breakdown of the classical market economy in *The Great Transformation*.

ANSWER: Karl **Polanyi** [or Karl Paul **Polanyi**]

[10] This man ran an experiment in which participants were asked to send packages to strangers via people they knew on a first name basis. In another experiment of his, almost two-thirds of people were willing to submit others to fatal electric shocks if one of the scientists told them to.

ANSWER: Stanley **Milgram** <Bailey>

11. This action was encouraged by a woman named Gabrielle d'Estrees. For 10 points each:

[10] Name this 1593 action undertaken by a king of Navarre in his efforts to secure the French throne; that king noted that Paris was “well worth” doing this action.

ANSWER: **converting to Catholicism** [or **renouncing Protestantism**; or **renouncing Calvinism**; accept obvious equivalents]

[10] That king of Navarre became the fourth French ruler with this name after he defeated two other rulers with this name during the Wars of Religion.

ANSWER: **Henry** [or **Henri**]

[10] Henry IV narrowly escaped death during the anti-Huguenot St. Bartholomew's Day massacre, which did kill this Protestant admiral, who was attacked in his lodgings by a group led by the Duke of Guise.

ANSWER: Gaspard II de **Coligny** <Cheyne>

12. This man proved that an iso•morphism exists between any simply connected open subset of the complex plane and the unit disc. For 10 points each:

[10] Name this mathematician who conjectured that his namesake “zeta function” equals zero only at negative even integers and complex numbers with a real part of one-half.

ANSWER: Bernhard **Riemann** [or Georg Friedrich Bernhard **Riemann**; accept **Riemann** zeta function or **Riemann** mapping theorem]

[10] This lemma is used in the proof of Riemann's mapping theorem. It states that for all holomorphic functions on the unit disk with modulus less than or equal to one, and a value of zero at the origin, the derivative at zero is less than or equal to one.

ANSWER: **Schwarz** lemma

[10] The Riemann zeta function converges if the real part of its input is greater than this number. The infinite series with each term of the form “one over n to the power of p” will converge if and only if p is greater than this number.

ANSWER: **one** <Bailey>

13. This woman's novel *The Gravedigger's Daughter* was inspired by the revelation that her grandmother had concealed her Jewish heritage. For 10 points each:

[10] Name this prolific American author whose works include the 1969 novel *them* and the 2000 novel *Blonde*.

ANSWER: Joyce Carol **Oates**

[10] Oates's *Blonde* is told from the perspective of this actress. Arthur Miller's play *After the Fall* was written shortly after Miller divorced this Hollywood star, who was previously married to Joe DiMaggio.

ANSWER: Marilyn **Monroe** [or Norma Jeane **Mortenson** or Norma Jeane **Baker**]

[10] Oates was the creative writing teacher of this American novelist, who wrote an early draft of his novel *Everything is Illuminated* for Oates's class. He wrote about Oskar Schell, a child whose father died on 9/11, in his second novel, *Extremely Loud and Incredibly Close*.

ANSWER: Jonathan Safran **Foer** <Hart>

14. Answer the following about food in Japanese mythology, for 10 points each.

[10] More than a third of the Shinto shrines in Japan are dedicated to this male, female, or androgynous kami, who is often depicted carrying around a sack of rice. Pure-white foxes called *kitsune* act as this god's messengers.

ANSWER: **Inari** Okami

[10] A story in the *Nihon Shoki* relates how the kami Uke Mochi created a feast by producing various types of food from her mouth, which so offended the kami Tsukuyomi that he killed her. Tsukuyomi was the god of this domain, which was represented by the goddess Chang'e in China.

ANSWER: the **moon** [accept word forms like “**lunar** deities”]

[10] A parallel story in the *Kojiki* describes Ogetsuhime producing food from her nose, mouth, and rectum. In this case, the offended party who killed her was this storm god, the brother of Tsukuyomi and Amaterasu who slew the dragon Orochi.

ANSWER: **Susano'o**-no-Mikoto [or, of course, **His Swift Impetuous Male Augustness**] <Carson>

15. This man spent 15 years on a series of frescoes of John the Baptist in the Chiostro dello Scalzo. For 10 points each:

[10] Name this artist, whose wife Lucrezia modeled for a painting of Mary standing on a pedestal decorated by the title monsters entitled *Madonna of the Harpies*.

ANSWER: **Andrea** del **Sarto** [accept either; or Andrea **d'Agnolo**]

[10] Andrea worked mostly in this Italian city-state. Filippo Brunelleschi designed a large-domed cathedral in this city, which was ruled by the Medici family.

ANSWER: **Florence** [or **Firenze**]

[10] Andrea's fresco series on the life of John the Baptist is this kind of grey monochromatic painting. These paintings are intended to look like stone reliefs.

ANSWER: **grisaille** <Bailey>

16. The two terms of the equation describing this force are both multiplied by charge. For 10 points each:

[10] Name this force that acts on particles and is equal to “electric field plus velocity crossed with magnetic field, all multiplied by charge”.

ANSWER: **Lorentz** force law

[10] Consider a positively charged particle moving *north* on the surface of the earth with a magnetic field that points *east*. What direction is the magnetic force on the particle?

ANSWER: **down** [or equivalents of **toward the center of the earth**; do not accept or prompt on “south”]

[10] Electrons passing by a magnetic solenoid undergo a phase shift named for Berry in this effect, despite the fact that both the electric and magnetic field is zero. It arises from the magnetic vector potential.

ANSWER: **Aharonov-Bohm** effect [or Ehrenberg-Siday-**Aharonov-Bohm** effect] <Garg>

17. In this man's *On Nature*, he is instructed by a daughter of the sun in both “the way of truth” and “the way of opinion”. For 10 points each:

[10] Name this pre-Socratic philosopher. In a dialogue named for him, he uses an analogy of Forms as a sail to argue that they cannot be in multiple locations at the same time.

ANSWER: **Parmenides** of Elea

[10] Parmenides also employs this argument against the Theory of Forms. This argument named by Aristotle argues that if all large things partake in Largeness, then Largeness and all large things must partake in yet another Form, which must also be part of a larger Form, and so on and so on.

ANSWER: **Third Man** Argument

[10] *Parmenides* was written by this philosopher. This student of Socrates described his ideal city-state in *The Republic*.

ANSWER: **Plato** [or **Platon**] <Bailey>

18. The Heptanese School was a group of 18th- and 19th-century poets in this language, one of whom, Dionysios Solomos, wrote *Hymn to Liberty*, which is now a national anthem. For 10 points each:

[10] Name this language used by Nobel laureate George Seferis, who advocated the use of its vernacular “demotic” form over its more formalized “katharevousa” form.

ANSWER: modern **Greek** language [or Neo-**Hellenic** language or nea **ellinika**; accept **demotic** before “demotic”]

[10] “This Greek-language poet wrote of people who “were some kind of solution” in his poem *Waiting for the Barbarians*. He wrote of a procession of revelers leaving Alexandria in his poem “The God Abandons Antony”.

ANSWER: Constantine P. **Cavafy** [or Konstantin[os] Petrou **Kavafis** or Konstantin[os] Petrou **Kavaphes**]

[10] Cavafy wrote a 1911 poem titled for this place, which contains the lines “when you depart for [this place], / wish for the road to be long / full of adventure, full of knowledge”.

ANSWER: **Ithaca** <Hart>

19. A sniper credited with killing over 500 enemy soldiers in this war was known as “White Death”. For 10 points each:

[10] Name this conflict in which the winning side broke through the Mannerheim Line. Followed by the Continuation War, this war allowed the winning side to gain land along Lake Ladoga.

ANSWER: **Winter** War

[10] During the Winter War, the Soviet Union successfully invaded this country, which had previously declared its independence from Russia in 1917.

ANSWER: Republic of **Finland** [or **Suomi**]

[10] The Winter War occurred during this eight-month period of general inactivity that began after the fall of Poland and ran until the new German invasions in April. The sarcastic nicknames of this period were given to it by men such as Senator William Borah.

ANSWER: **Phoney** War [or **Sitzkrieg**; or **Twilight** War] <Cheyne>

20. State some facts about the odd intersection of Buddhism and Christianity, for 10 points each.

[10] The Buddha's life was the basis of a medieval romance about this legendary Indian prince, who was brought to Christianity by the hermit Barlaam despite being imprisoned by his father. A Biblical man of this name was the fourth king of Judah, who allied with Jehoram to defeat a Moabite coalition.

ANSWER: **Iosaphat** [or **Jehoshaphat**; or **Yehoshephat**; or **Yosaphat**; or **Iosaphatus**]

[10] Widespread syncretism between Buddhism and Christianity occurred in China under the Church of the East, which generally held this Christological doctrine, according to which Jesus had distinct divine and human natures.

ANSWER: **Nestorianism**

[10] A set of these texts named for Jesus dates from a mission by the Nestorian bishop Alopen. Prominent examples of these canonical scriptures in Buddhism include "Lotus", "Heart", and "Diamond" ones.

ANSWER: **sutras** [or **suttas**] <Kothari>

Extra. This character is first introduced throwing rocks at a kitten. For 10 points each:

[10] Name, or provide the nickname of, this son of Ebenezer Dorset, who appears in a short story. Bill and Sam pay Mr. Dorset \$250 to recover this character, who gets his nickname because of his hair color.

ANSWER: **Red Chief** [or **Johnny** Dorset; prompt on "Dorset"]

[10] "The Ransom of Red Chief" is a short story by this American author, noted for his twist endings to stories like "The Gift of the Magi".

ANSWER: O. **Henry** [or William Sydney **Porter**]

[10] This O. Henry character, a prolific murderer who first appeared in the short story "The Caballero's Way", tricks Lieutenant Sandridge into shooting his own girlfriend.

ANSWER: The **Cisco** Kid <Cheyne>