**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 12: Tossups**

1. **In a book by Aihwa Ong, globetrotting Hong Kong elites exemplify a “flexible” type of this concept dominated by economic concerns. T.H. Marshall argued that this concept emerged in the civil sphere before expanding into the political and social in an essay on this concept “and Social Class”. *Afroyim v. Rusk* describes two conditions under which this status may be revoked, and *United States v. Wong Kim Ark* interpreted the first sentence of the (\*)** Fourteenth Amendment, which deals with this concept. This status, which may be obtained under the doctrine of *jure matrimonii*, is obtained under the doctrines of *jus soli* or *jus sanguinis* when it is conferred at birth. The acquisition of this status after birth is called naturalization. For 10 points, name this concept that denotes legal membership of a country or political community.

ANSWER: **citizen**ship [accept equivalents such as “being a **citizen**”] <Kothari>

2. **In this modern-day state, Dr. John Pyle's forces were trapped and wiped out in “Pyle's Hacking Match”. After a battle in this state, Charles James Fox noted that “another such victory would ruin the British Army”. In this state, the colonial militia won the Battle of Alamance against an insurgency led by future Whiskey Rebellion participant Herman Husband. It is not New York, but this state experienced protests when Governor William Tryon built a lavish mansion, kicking off the anti-taxation (\*)** Regulator movement. During the Revolutionary War, this state was where the Battles of King's Mountain and Guilford Courthouse took place. For 10 points, Roanoke Island is on the Outer Banks of what state, the home of Tobacco Road?  
ANSWER: **North Carolina** [prompt on **Carolina**] <Cheyne>

3. **After reading a paper by Willem de Sitter, a man with this surname devised a relativistic correction to a vector traveling on a curvilinear trajectory. A semiclassical model that is a precursor to density functional theory was devised Enrico Fermi and that scientist with this surname, who also devised a namesake relativistic form of precession. With Helmholtz, a scientist with this *first name* devised a theory of trichromatic color vision. That scientist with this *first name* names a partial differential equation with (\*)** Laplace that describes the pressure differential between two media due to surface tension. An experiment conducted by that scientist with this *first name* displayed dark fringes as a result of an interference pattern on a screen. For 10 points, what is the *first name* of the scientist with the surname Young who conducted the double slit experiment?

ANSWER: **Thomas** [or **Thomas** Young; or Llewellyn Hilleth **Thomas**] <Hart>

4. **In 2011, Bob Menendez co-wrote a letter claiming that this action could result in senior citizens having to repay a 250-dollar check they received in 2010. In 2012, the CBO estimated that this action would increase the budget deficit by 109 million dollars over a ten-year period. In 2013, attempts of this action included the Upton Bill and a Tom Price bill that was part of “Stop Government Abuse Week” and focused on the IRS. Chris Murphy released a statement on (\*)** Groundhog Day in 2016 about this effort that unfavorably compared those seeking it to Bill Murray because they were “either willfully ignorant or intentionally wasting everyone's time”. In October 2013, attempts to do this action caused a two-week federal government shutdown. For 10 points, name this action attempted over 60 times, mainly by House Republicans, to get rid of a so-called “job-killing” health care law.

ANSWER: **repeal**ing **Obamacare** [accept equivalents such as **defunding**, **dismantling**, etc. or Patient Protection and **Affordable Care Act** or PP**ACA**] <Gehring>

5. **The website of the official foundation for literature in this language describes a woman who “becomes covered with red betel juice [that] unknown assailants spit at her in a classic bathroom scene” in its description of *The Hidden Force*, a novel in this language by Louis Couperus (LOO-ee “Cooper”-us). A Latin pen name meaning “I have suffered much” was used by a writer in this language to denounce colonial practices in the coffee trade in the novel *Max Havelaar*. Multatuli (mult-ah-TOOL-ee) was the pseudonym of Eduard Dekker, a writer in this language that is used by perennial Nobel Prize candidate (\*)** Cees Nooteboom **(SAY-us NOTE-uh-boom)**. A speaker of this language named Miep Gies **(MEEP GEEZ)** preserved a manuscript in this language that describes a budding romance with Peter Van Daan and is addressed to “Kitty”. For 10 points, what language was used by Anne Frank in the *Diary of a Young Girl* to describe living in a secret annex in Amsterdam?

ANSWER: **Dutch** [or **Nederlands**; accept **Flemish** or **Vlaams**] <Hart>

6. **An analog protocol that accomplishes this process uses a reference control signal that varies between zero and ten volts. Because TRIAC (TRY-ak) devices used for this process “chop” an alternating-current sine wave, cutting power 120 times per second, TRIAC devices cause most LED fixtures to flicker instead of perform this process. By following a Planckian locus during this process, it is possible for LED fixtures undergoing this process to mimic the color temperature changes that occur when (\*)** incandescents undergo this process. Eldo•LED drivers are well known for enabling this process down to one percent of output. A type of potentio•meter called a rheostat, in which a “whisker” slides along a coil of wire to alter resistance, can be used to accomplish this process in incandescent bulbs. For 10 points, name this process of lowering the light level produced by a fixture, often accomplished using a switch with a sliding knob.

ANSWER: **dim**ming [accept word forms such as **dimmer**s; accept **reducing light** output or **changing light** output before “light”] <Voight>

7. **This war was not fought in Hungary, but it featured two separate failed attempts to capture Fort Budapest. At the beginning of this war, water cannons cleared passages to allow troop crossings as part of Operation Badr. Both the United States and the Soviet Union supported UN Security Council Resolution 338 calling for an end to it. A fighter pilot tortured to death during this war was named Avraham Lanir. Initial losses in it, including attacks on the (\*)** Bar Lev Line, hurt the military reputation of an eye-patch-sporting hero named Moshe Dayan. This war began with Egyptian forces entering the Sinai Peninsula, which had been lost six years earlier in the Six-Day War. For 10 points, what 1973 conflict between Arab states and Israel began on a Jewish holy day?  
ANSWER: **Yom Kippur** War [or **Ramadan** War; or **October** War; accept **1973 Arab-Israeli** War until “1973”] <Cheyne>

8. **A real-life immigrant to the U.S. from this continent named Valentino is the subject of Dave Eggers's book *What is the What*. An unnamed female graduate student journeys to this continent, and has a relationship with the controversial anthropologist Nelson Denoon in an experimental matriarchal society, in the Norman Rush novel *Mating*. Tunner accompanies Kit and Port Moresby's travels through this continent in *The Sheltering Sky*, which was written by Paul (\*)** Bowles, who spent most of his life on this continent. The Prices, a family of missionaries from Georgia, travel to this continent and attempt to baptize people in a crocodile-infested river in Barbara Kingsolver's *The Poisonwood Bible*. For 10 points, name this continent that provides the setting of Ernest Hemingway's stories “The Short Happy Life of Francis Macomber” and “The Snows of Kilimanjaro”.

ANSWER: **Africa** <Hart>

9. **The two sections of one book by this composer each contain a ballet and a theatrical *genere rappresentativo*; those two sections are described as being “of War” and “of Love”. That book's preface describes this composer's attempt to create an agitated *genere concitato* which used techniques like large leaps, trills, and tremolos. This composer of the aria “Possente spirto” used an except from Tasso's *Jerusalem Delivered* in a piece with one of the first known uses of (\*)** pizzicato. The song “Addio Roma” appears in an opera by this composer in which Nero divorces Ottavia to marry the title character. He coined the term “seconda practica” in his fifth book of madrigals to distance himself from predecessors like Palestrina. For 10 points, name this composer of the 1610 *Vespro della Beata Vergine* who also wrote *The Coronation of Poppea* and the first regularly performed opera, *L'Orfeo*.

ANSWER: Claudio Giovanni Antonio **Monteverdi** <Kothari>

10. **Daniel Lopatin imagined this man “having some kind of super-weird Bergman-esque domestic meltdown” in a Zen-like review of his album *Brazilian Nights*. This musician angered the Chinese government by tweeting pictures of his visit to the site of the 2014 Hong Kong protests. Pat Metheny went on a rant accusing this man of “musical necrophilia” for overdubbing Louis Armstrong's “What a Wonderful World”. Many Chinese businesses play his song “Going Home” on loop as they close. This composer of the theme to *Dying Young* wrote many instrumentals for the soundtrack to *The* (\*)** *Bodyguard*. This musician's composition “Songbird” appeared on the album *Duotones*, which was followed by the Diamond-selling album *Breathless*. This man holds a Guinness World Record for longest held note on his instrument. For 10 points, name this Muzak-churning soprano saxophonist known for his long, absurdly curly hair.

ANSWER: **Kenny G** [or Kenneth Bruce **Gorelick**] <Kothari>

11. **A man whose goal was to marry this woman is mocked and dragged around the battlefield after being slain by Idomeneus. A chest owned by this woman containing a picture of Dionysus drove Eurypylus mad when he opened it. She gave birth to a pair of twins named Teledamus and Pelops, alongside whom she was later murdered. As children, this woman and her twin brother were sleeping in a temple in Thymbra when a pair of snakes slithered in and (\*)** licked out their ears. Coroebus and Othryoneus both took part in the Trojan War in order to marry this woman, who was the twin sister of Helenus. This woman was raped in a temple of Athena by Ajax the Lesser and was later awarded to Agamemnon as a war prize. For 10 points, name this woman whose predictions of the fall of Troy were ignored because, due to a curse laid by Apollo, no one ever believed her.

ANSWER: **Cassandra** [or **Alexandra**] <Carson>

12. **A difference in the rate of this phenomenon between metal atoms causes the Kirkendall effect. For liquids, the relationship of temperature and this phenomenon's namesake coefficient can be found using the Stokes-Einstein equation. This process is anomalous if the mean-squared displacement of particles has a nonlinear relationship to time. Uranium can be enriched using a gaseous form of this phenomenon. A (\*)** random walk model can be used to describe the movement of a single atom in the lattice form of this process. An equation describing this phenomenon can be derived from Fick's first law, which states that flux is directly proportional to the concentration gradient across a membrane. For 10 points, name this process in which molecules move from areas of high concentration to areas of low concentration.

ANSWER: **diffusion** <Garg>

13. **A popular song titled after this place, which first appeared in the film *Gold Diggers of 1935*, describes the “hip-hooray and ballyhoo” of this place and was sung by Jerry Orbach in a 1980 production. A character on a ship, who is looking for evidence to clear up allegations that he threw the English Derby, sings a song titled after this place that contains the line “remember me to Herald Square”. The singer mentions “working for a nice man / like a Ziegfeld or a Weismann” in a song titled for a “baby” of this place from the Stephen Sondheim musical *Follies*. The George M. Cohan musical *Little Johnny Jones* contains a song titled (\*)** “give my regards” to this place, which names a “lullaby” sung in *42nd Street*. A Woody Allen film is titled for “bullets over”, for 10 points, what theater district located along a namesake road in New York City?

ANSWER: **Broadway** [accept “Lullaby of **Broadway**” or “Give My Regards to **Broadway**” or “**Broadway** Baby” or *Bullets over* ***Broadway***] <Hart>

14. **This island was where three members of the cabaret band The Miami Showband were killed in 1975. It is not Australia, but this island was home to a leader who was challenged to a duel by American ambassador Andrew Stevenson and who set up numerous “Monster Meetings” to protest the government. A disparaging term for people on this island who changed their religion was (\*)** “souper”. Numerous people left it on so-called “coffin ships”. An uprising on this island featured rebels headquartered in the General Post Office in April 1916. The so-called “Liberator” of this island set up the Repeal Association to reverse the Act of Union. The Easter Rising took place on this island, whose political parties have included Sinn Fein **(“shin” FAYN)**. For 10 points, what island suffered a devastating 1840s potato famine?  
ANSWER: **Ireland** [or **Eire**] <Cheyne>

15. **Scholars consider the first truly “American” work of this type to be Thomas Godfrey's *The Prince of Parthia*, which was first published in 1765, although a Robert Hunter work of this type, *Androboros*, was published 50 years earlier. Works of this type entitled *Andre* and *The Italian Father* were written by William Dunlap, the “father” of this genre in the U.S. In the Revolutionary War era, comedic works in this form lampooning the colonial government entitled *The Group* and *The Blockheads* were written by Mercy Otis Warren. The “Yankee” character Jonathan appeared in a 1787 work of this type entitled *The* (\*)** *Contrast* by Royall Tyler. Anna Cora Mowatt's *Fashion* and Dion Boucicault's *The Octoroon* were among the most popular works in this form in 19th century America. David Belasco also wrote many popular works of, for 10 points, what type, which were often produced at New York's Park Theatre?

ANSWER: **play**s [or **drama**s or **dramatic** works; accept **tragedy** or **tragedies** before “Italian”; do not accept or prompt on other more specific answers such as “comedies”] <Hart>

16. **Under a molecular clock, the “snowball effect” dictates that the number of incompatibilities scales with at least this power of time since divergence. For haploid species, this constant times the effective population size gives the expected time to coalescence. In the Dobzhansky-Muller model, this is the minimum number of different loci needed for hybrid incompatibility. The coefficient of relationship through a given path is equal to one over this constant to the power of the number of (\*)** generations of separation. Crossing organisms that are themselves the results of crosses between genetically distinct individuals yields a hybrid generation denoted by “F” and this number; for a Mendelian trait, that generation has a three-to-one pheno•type ratio. For a mono•hybrid cross, this is the number of rows or the number of columns in a Punnett square. For 10 points, give the number of distinct sex chromosomes in humans.

ANSWER: **two** [or **second**] <Kothari>

17. **One poem in this collection consists of a discussion with an eight-year-old whose “eyes were fair, and very fair”, who describes her siblings, noting that two of them dwell in Conway, two of them have gone to sea, and two of them “in the church-yard lie”. The claim that “all good poetry is the spontaneous overflow of powerful feelings” comes from the preface to this collection, which was written by a poet who included “We Are (\*)** Seven” in it. A long poem in this collection is told to a “Wedding-Guest”, and its concluding poem, which is addressed to the poet's sister Dorothy, opens by stating that “five years have past” since the poet last visited a building on the banks of the River Wye. For 10 points, name this collection that concludes with “Rime of the Ancient Mariner” and “Tintern Abbey”, written by its two contributors, Samuel Taylor Coleridge and William Wordsworth.

ANSWER: ***Lyrical Ballads*** <Hart>

18. **This issue was addressed by a monarch shortly after a squelched revolt at the Battle of Langensalza. Legendarily, in the midst of a debate over this issue, a man sent a letter saying “come down, come down, and be damned throughout the ages”. Matilda of Tuscany shared communion with men who were squabbling over this controversy. This issue was settled at the (\*)** Concordat of Worms **(WURMZ)**, which stated a man could grant power “by the lance” but not “by ring and staff”. In an earlier battle over it, a man stood in the snow barefoot during the “Walk to Canossa”. In a dispute over this issue, Emperor Henry IV was excommunicated by Gregory VII. For 10 points, name this medieval conflict in which the Holy Roman emperor and the pope disagreed about who should name local church officials.  
ANSWER: lay **investiture** <Cheyne>

19. **A soldier executed for rape and murder in this country became the folk saint “John the Soldier” after there were reports of blood seeping from his grave and miracles occurring nearby. In 2012, a woman in this country was arrested for performing human sacrifice in the cult of Holy Death. That cult is popular among criminals in this country, as is the cult of the Robin Hood-esque (\*)** Jesús Malverde. A man in this country had four visions and was told by the fourth to collect non-native roses in his cloth as proof, and when he later opened the cloth, an image of the Virgin Mary had appeared. The Catholic Church in this country has condemned the growing popularity of syncretic “narco-saints”. For 10 points, name this country where Juan Diego saw Our Lady of Guadalupe.

ANSWER: **Mexico** <Bailey>

20. **In one painting set in this city, an inscription above a brick archway beckons those who “wish to repair to patience and meekness” with the proverb that “we must first descend if we wish to be raised”. That painting in this city, in which a broom lays in front of a bucket in front of a woman in blue holding the hand of a little girl in yellow, is titled for the “courtyard of a house” in this city, which is the setting of another painter's *The Little Street*. The painter of *The Goldfinch*, Carel (\*)** Fabritius, was a member of a school of genre painters based in this city. Two women wearing shawls are separated from two herring boats and the Neuwe Kirk [NOO-wuh “Kirk”] by the Schie [“ski”] canal in a painting of this city's skyline by the artist of *The Astronomer* and *Girl With a Pearl Earring*. For 10 points, name this hometown of Jan Vermeer, who painted a “view of” this Dutch city.

ANSWER: **Delft** [accept *The Courtyard of a House in* ***Delft*** or **Delft** School or *View of* ***Delft***] <Hart>

Tiebreaker. **This character says “it is not that I am so clever, but that the others are so stupid” in a dialogue with her brother's guardian Pothinus. She barely escapes a shipwreck and smuggles herself into a man's lighthouse headquarters in a play in which she has a nurse named Ftatateeta (f'tah-tuh-TEE-tuh). John Fletcher and Philip Massinger's play *The False One* and John Dryden's play *All For Love* were inspired by a play in which the “winds were (\*)** lovesick” for the perfumed purple sails of this woman's barge. She emerges out of a rolled-up carpet in one play, while in another, she describes being “green in judgment” during her “salad days”. Enobarbus says that “age cannot wither” this character, “nor custom stale / her infinite variety”. George Bernard Shaw wrote about “Caesar and”, for 10 points, what woman who commits suicide by asp in a Shakespeare play about her love for Mark Antony?

ANSWER: **Cleopatra** VII Philopator [accept *Caesar and* ***Cleopatra*** or *Antony and* ***Cleopatra***] <Hart>

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**Packet 12: Bonuses**

1. Answer the following about classical music pieces that share a key with Linkin Park's “Crawling”, for 10 points each.

[10] This 62-bar piece opens with the descending chords A-G sharp-C sharp played fortissimo. It originally appeared as the second piece in its composer's *Morceaux de fantaisie*, and it gained the popular nickname “The Bells of Moscow”.

ANSWER: Sergei Rachmaninoff's ***Prelude*** *in* ***C-sharp minor*** [or **Rachmaninoff**'s **Op**us 3, **No. 2**]

[10] This composer's 1883 piano concerto is also in the key of C-sharp minor. Folk melodies from Asturias inspired his *Capriccio Espagnol*, and he used chants from the *Obikhod* as the basis for parts of his *Russian Easter Festival Overture*.

ANSWER: Nikolai **Rimsky-Korsakov** [or Nikolai Andreyevich **Rimsky-Korsakov**]

[10] Perhaps the most famous piece in C-sharp minor is this Beethoven composition, whose first edition is labeled “Sonata quasi una fantasia”. It gained its most enduring nickname when Ludwig Rellstab compared it to a nighttime scene on Lake Lucerne.

ANSWER: the ***Moonlight*** *Sonata* [or Beethoven's ***Piano Sonata No. 14*** *in C-sharp minor*; or ***Mondschein****sonate*] <Carson>

2. Hasdai Crescas's *Or Adonai* critiques the 25 propositions this philosopher laid out in the introduction to the second part of his most famous work. For 10 points each:

[10] Name this Jewish philosopher who compiled Jewish law in his *Mishneh Torah* and argued that God can only be described by what he is not in his *Guide for the Perplexed*.

ANSWER: Moses **Maimonides** [or Moshe ben **Maimon**; or the **Rambam**]

[10] Maimonides's 25 propositions were based on the work of this Greek philosopher who wrote *De Anima* and *Metaphysics*. Aquinas referred to him as “The Philosopher”, and Averroes defended the use of his philosophy in *The Incoherence of the Incoherence*.

ANSWER: **Aristotle** [or **Aristoteles**]

[10] This 20th-century political philosopher examined the ways Plato and Aristotle were interpreted by Maimonides and al-Farabi, whom he took as exemplars of esoteric writing, in *Persecution and the Art of Writing*.

ANSWER: Leo **Strauss** <Kothari>

3. This conflict featured an entire island's population being massacred at Psara. For 10 points each:  
[10] Name this 1820s European conflict that also featured a massacre at Chios. The poet Lord Byron died during this conflict.  
ANSWER: **Greek** war for **independence**  
[10] This 1827 battle in the Greek war for independence featured three European powers destroying the Ottoman navy and saving the Greek Republic from collapse, which led to a push for the Ottomans to recognize Greece.  
ANSWER: Battle of **Navarino**  
[10] This European power was considered the strongest ally of Greek independence, although it had a tense relationship with other European countries. It lost the Crimean War to a British-led coalition.  
ANSWER: **Russia**n Empire <Cheyne>

4. Some anatomists consider this muscle and the soleus muscle to be part of a larger muscle called the triceps surae. For 10 points each:

[10] Identify this muscle whose two heads attach to the lateral and medial condyles of the femur. Its name comes from the stomach-like bulge it makes in the calf.

ANSWER: **gastroc•nemius** **(gass-trahk-NEE-mee-uss)** [accept close pronunciations like "gas-tro-nee-mius"]

[10] The gastroc•nemius attaches to the heel bone, or calcaneus **(kal-KAY-nee-uss)**, through this tendon with a mythologically inspired name.

ANSWER: **Achilles** tendon [prompt on “**calcaneal** tendon” or “**heel cord**”]

[10] Most dogs, cats, and rabbits and 10 to 30 percent of humans have one or more of these small sesa•moid bones embedded in the lateral head of the gastroc•nemius. Displacement of this bone can be a useful indicator of synovial effusions in the knee.

ANSWER: **fabella** [or **flabella**] <Carson>

5. The work of Marcus Terentius Varro served as an inspiration for this long poem, whose final book contains an *epyllion* about Aristaeus and considers the life and habits of bees as a model for human society. For 10 points each:

[10] Identify this didactic four-book poem about agriculture, dedicated to Maecenas **(mai-kay-nas)**. 51 lines of this poem were reused in its author's *Aeneid*.

ANSWER: the ***Georgics*** [or ***Georgica***]

[10] The *Georgics* and the *Aeneid* were written by this Roman poet.

ANSWER: **Virgil** [or Publius **Vergilius** Maro]

[10] This other poet in Maecenas's circle included the line “Semper in absentes felicior aestus amantes”, or “absence makes the heart grow fonder”, in an entry in the second of his four books of elegies, many of which were dedicated to an older woman he called “Cynthia”.

ANSWER: Sextus **Propertius** <Carson>

6. By marrying *New Yorker* editor Katharine Sergeant Angell, this man became the stepfather of *New Yorker* sports essayist Roger Angell. For 10 points each:

[10] Name this author of a 1970 novel whose title creature orders a dozen watercress sandwiches and sleeps in the bathtub while staying at the Ritz-Carlton in Boston and also befriends Sam Beaver.

ANSWER: E.B. **White** [or Elwyn Brooks **White**; the novel is *The Trumpet of the Swan*.]

[10] “White wrote the standard writing guide *The Elements of Style* by revising an original volume by this Cornell English professor. The volume is commonly known as this man's last name “and White”.

ANSWER: William **Strunk** Jr. [accept ***Strunk*** *and White*]

[10] White collected satirical essays on love and relationships into the volume *Is Sex Necessary?*, which was a collaboration with this frequent *New Yorker* contributor who wrote “The Catbird Seat” and “A Couple of Hamburgers”.

ANSWER: James **Thurber** [or James Grover **Thurber**] <Hart>

7. Answer the following about John W. Norton, for 10 points each.

[10] Norton was a pioneering artist in these types of paintings. His trip to Mexico, which introduced him to the works of this type by Diego Rivera and José Clemente Orozco, was an important development in these paintings in the U.S.

ANSWER: **mural**s [accept **muralist**s]

[10] Norton's flattened, two-dimensional style was also influenced by this artist, who showed the Mannen Bridge and several hats and papers being blown away by a strong wind in a series of works executed in the 1800s.

ANSWER: Katsushika **Hokusai**

[10] As a member of the Rough Riders, Norton honored Theodore Roosevelt by presenting him with a small copy of this statue, which the artist based on an illustration of a western scene he had done in 1892 for *Harper's Weekly*.

ANSWER: *The* ***Bronco Buster*** [or *The* ***Broncho Buster***] [by Frederic Remington] <Hart>

8. Integrating Xa21 **(X-A-21)** into the genome of this staple crop gives broad resistance to the pathogen *Xantho•monas oryzae* **(ZANTH-uh-MOH-nas oh-RYE-zee)**. For 10 points each:

[10] Name this grass, a “golden” variety of which is being engineered for enhanced beta-carotene production. It is grown in paddies that are a major source of atmospheric methane.

ANSWER: **rice** [or ***O****ryza* ***sativa***]

[10] The International Rice Research Institute is also trying to engineer rice to undergo C4 photosynthesis, which would require this kind of anatomy in which RuBisCO is concentrated in bundle sheath cells surrounded by meso•phyll.

ANSWER: **Kranz** anatomy

[10] A common goal of crop engineering is tolerance to these compounds, which include glyphosate, also known as Roundup, and atra•zine.

ANSWER: **herbicide**s [prompt on “**pesticide**s”] <Kothari>

9. This ruler is one of the possible inspirations for the biblical hunter Nimrod. For 10 points each:  
[10] Name this founder of the ancient Akkadian empire. Known as the “Great”, he started as the cup-bearer of the king of Kish and formed the empire by conquering numerous Sumerian city-states.  
ANSWER: **Sargon** the Great [or **Sargon** I; do not accept “Sargon I of Assyria”]  
[10] Some ancient accounts state Sargon built this city, which became the center of Hammurabi's empire. It later had famous “hanging gardens”.  
ANSWER: **Babylon**  
[10] Babylon was sacked by this king, who conquered much of the Middle East for the neo-Assyrian empire. He conquered the Medes, Persians, and Babylonians and began a destruction of the northern kingdom of Israel that was finalized by his son, Shalmaneser V. Only his royal name, not his number, is needed.  
ANSWER: **Tiglath-Pileser** III <Cheyne>

10. In this show's episode “Buridan's Ass”, fish falling from the sky cause a bodyguard driving Dmitri, the son of “supermarket king” Stavros Milos, to die in a car accident. For 10 points each:

[10] Name this show whose first season began with the insurance salesman Lester Nygaard meeting a criminal who later murders a former high school bully in a hospital waiting room in Bemidji, Minnesota.

ANSWER: ***Fargo***

[10] The wife-murdering, quirky Lester Nygaard was played by this actor, who is perhaps better known for playing John Watson on *Sherlock*.

ANSWER: Martin **Freeman**

[10] This drifter played by Billy Bob Thornton blackmails Stavros Milos and kills Numbers and Wrench. He amusingly expresses his disgust for Turkish delight before setting up Chumph's death by cop.

ANSWER: **Lorne** **Malvo** [accept either name] <Jose>

11. Answer the following about the European colonial power we all forget: Portugal. For 10 points each:  
[10] Portugal's “Age of Exploration” was fueled by this Portuguese royal member, the third child of King John I. Known as the “Navigator”, he sponsored numerous voyages of discovery.  
ANSWER: **Henry** the Navigator [or **Henrique**]  
[10] This 1494 treaty divided the newly discovered lands outside of Europe between Portugal and Spain, The line of demarcation was halfway between the Cape Verde Islands and the Caribbean islands of Cuba and Hispaniola.   
ANSWER: Treaty of **Tordesillas**  
[10] Henry convinced Portugal to conquer this city on the north coast of Africa in 1415. By taking this city from the Marinids, Portugal began to establish an overseas empire.  
ANSWER: **Ceuta** <Cheyne>

12. This law is combined with Hooke's law in the initial step of calculating the equations of motion of a simple harmonic oscillator. For 10 points each:

[10] Name this law of motion that states that the net force on an object is equal to the time derivative of momentum. It was introduced by a British physicist.

ANSWER: **Newton's second** law of motion [prompt on partial answer; prompt on “**F equals m a**”]

[10] What is the equivalent of one Newton when expressed in SI base units? It is a combination of units describing length, mass, and time.

ANSWER: the **product of** **kilograms**, **meters**, and **inverse square seconds** [accept equivalent answers such as **kilogram meter per second squared**; units can be in any order; “kg”, “m”, and “s” can replace “kilograms”, “meters”, and “seconds”; anything involving “per seconds squared” or “seconds to the negative two power” can replace “inverse square seconds”]

[10] “F equals m a” does not apply to rockets that have changing masses, so the ideal rocket equation is used instead to take into account this extra quantity. This quantity is the speed at which hot gases are released relative to the rocket.

ANSWER: effective **exhaust velocity** [or **ve** or characteristic **exhaust velocity** or **C-star**] <Garg>

13. This woman wrote and directed *Son nom de Venise dans Calcutta désert*, an experimental film that plays the sounds of her earlier film *India Song* over images of ruins. For 10 points each:

[10] Name this female French author, who discussed her childhood in Vietnam in the novels *The Sea Wall* and *The Lover* and wrote the screenplay for the film *Hiroshima mon amour*.

ANSWER: Marguerite **Duras** [or Marguerite **Donnadieu**]

[10] Duras's work was influenced by her experiences in France during this war. Anthony Doerr's novel *All the Light We Cannot See* is set in France during this war.

ANSWER: **World War II** [or **Second World** War]

[10] *Hiroshima mon amour* was partly inspired by Duras's first husband being imprisoned in one of these places called Buchenwald. Primo Levi's *If This a Man* was published in the U.S. as *Survival in Auschwitz*, which was one of these places.

ANSWER: Nazi **concentration camp**s [or **Konzentrationslager**; prompt on more general answers such as “[German] **prison**s” or “[P.O.W.] **camp**s”] <Hart>

14. The third section of J. Michael Bailey's *The Man Who Would Be Queen* was criticized by people with this identity for its use of Blanchard's typology of it. For 10 points each:

[10] Name this identity, which includes Groups 2 and 3 in a scale created by Harry Benjamin.

ANSWER: **trans**gender **women** [or **trans**sexual **women**; accept any answers denoting a person identified as **biologically male** at birth who **identifies as female**; prompt on “**trans**gender” or “**trans**sexual”]

[10] The Benjamin scale references the homosexual-heterosexual scale of this sexologist, who referred some of Benjamin's first trans patients and led reports on the sexual behavior of men and women.

ANSWER: Alfred **Kinsey** [or Alfred Charles **Kinsey**]

[10] Pre-transition trans people are often formally diagnosed as having this DSM-listed condition, in which a person feels distress over his or her assigned sex.

ANSWER: gender **dysphoria** [or **gender identity disorder** or **GID**] <Kothari>

15. This man defeated the wrestler Cercyon, Sinis the pine tree-bender, the club-wielding Periphetes, the elderly robber Sciron, Procrustes the stretcher, and the Crommyonian sow during a treacherous journey around the Saronic Gulf. For 10 points each:

[10] Name this hero, a legendary king of Athens whose son with his first wife Hippolyta became troublingly attractive to his second wife Phaedra.

ANSWER: **Theseus**

[10] Theseus was recognized as the rightful king of Athens after moving a huge rock and unearthing a sword and these items, which had been buried there by his father Aegeus. Pelias knew he would be overthrown when Jason arrived in Iolcus with only one of them.

ANSWER: **sandal**s

[10] Theseus's journey to Athens began in this city, the home of his mother Aethra. It was ruled by Aethra's father Pittheus and was the setting for Euripides's play *Hippolytus*.

ANSWER: **Troezen** <Carson>

16. A mayor of this city said “Don't believe any false rumors, unless you hear them from me”. For 10 points each:  
[10] Name this city, also led by a more recent mayor, Ray Nagin, who once proclaimed that this city would remain a “Chocolate City”.  
ANSWER: **New Orleans**  
[10] Nagin was mayor when this 2005 hurricane caused massive destruction and flooding in New Orleans.  
ANSWER: **Katrina**  
[10] This bald-headed New Jersey attorney was criticized for saying Katrina was “breathtaking in its surprise”. The second U.S. Secretary of Homeland Security, he avoided further criticism due to the fact that FEMA was even more incompetent.  
ANSWER: Michael **Chertoff** <Cheyne>

17. The host of the central gathering of this novel reads a section from a history of the title house that he is producing in which several generations of dwarfs arise after the birth of the ironically named Hercules. For 10 points each:

[10] Name this novel, its author's first, which is titled for a country estate owned by Mr. Wimbush. It is narrated by the young poet Denis Stone, who is enamored with Wimbush's daughter, Anne.

ANSWER: ***Crome Yellow***

[10] *Crome Yellow* was the first novel by this British writer, who later penned *Antic Hay* and *Brave New World*.

ANSWER: Aldous **Huxley** [or Aldous Leonard **Huxley**]

[10] Huxley wrote a short book about his experiences taking mescaline, *The Doors of Perception*, whose title came from this English poet's long poem *The Marriage of Heaven and Hell*.

ANSWER: William **Blake** <Hart>

18. Answer the following about iconic shots in silent film history for 10 points each.

[10] The end of a 1903 Edwin S. Porter film about this kind of robbery ends with a criminal pointing his gun at the camera and shooting. The western film, titled for a “great” kind of this robbery, is about outlaws who rob a certain transportation system.

ANSWER: **train** robbery

[10] Count Orlok has an iconic appearance in this F.W. Murnau film considered one of the greatest horror movies of all time. Most copies of this film were destroyed after a judge ruled it was an unauthorized adaptation of *Dracula*.

ANSWER: ***Nosferatu****: A Symphony of Horror* [or ***Nosferatu****: eine Symphonie des Grauens*]

[10] “This silent comedian famously clutches the hands of a large clock in a stunt he personally performed in the comedy *Safety Last!*. He frequently played a character known as “Glasses”.

ANSWER: Harold Clayton **Lloyd**, Sr. <Cheyne>

19. Scratching the side of a glass vessel can coax this process to begin without a seed. For 10 points each:

[10] Name this purification procedure that involves heating up a substance until the substance dissolves and then cooling the solvent down until the solvent precipitates out.

ANSWER: **recrystallization** [or **fractional crystallization**; prompt on “**crystallization**”]

[10] After recrystallization and vacuum filtration, the solvent can be further removed via this process. This phase change occurs in a spinning flask submerged in a warm bath in Rotovaps, and it involves a liquid changing into a gas.

ANSWER: **evaporation** [or **boiling**; or **vaporization**; or word forms]

[10] Following evaporation, this tool can help to remove solids from glassware. This tool looks like a stirring rod with a soft wedge-shaped material attached to one end.

ANSWER: **rubber policeman** [prompt on partial answer] <Garg>

20. This man tries to go to Tarshish. For 10 points each:

[10] Name this prophet who is extremely reluctant to preach to the Assyrian capital of Nineveh, despite God's instructions.

ANSWER: **Jonah**

[10] While trying to flee, Jonah is swallowed by a great fish, although William Tyndale translated the Hebrew word for the animal as this creature, which is actually a mammal, not a fish.

ANSWER: **whale**

[10] The end of Jonah's book shows him extremely angry after God destroys one of these objects after earlier providing it to Jonah as a blessing. Jonah, like an emo teen, notes he is “so angry” that he wishes he were dead.

ANSWER: a **plant** [or **ivy** or a gourd **vine** or **bush** or **tree**; accept any other kind of specific plant] <Cheyne>

Extra. Teddy Roosevelt said there was “no more despicable character” in American history than this man. For 10 points each:

[10] Name this first governor of the Louisiana Territory and veteran of the American Revolution. A potential Spanish agent, he apparently plotted with Aaron Burr to take over western territories, although he eventually ratted Burr out.

ANSWER: James **Wilkinson**

[10] Wilkinson was succeeded as territorial governor by this man, an explorer and one-time partner of William Clark.

ANSWER: Meriwether **Lewis**

[10] During the Revolution, Wilkinson was part of the Conway Cabal's attempt to replace George Washington as Continental Army commander with this man, the hero of the Battle of Saratoga.

ANSWER: Horatio Lloyd **Gates** <Cheyne>