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 10: Tossups

1. **Josephine Baker starred in a 1934 revival of this composer's opera *La créole*. A frequent choice for Karl Kraus's one-man performances was a satire by this composer whose spoiled title character makes Fritz a general on a whim. A treacherous coloratura aria from one of this composer's operas is sung by Olympia, who sometimes starts slowing down and needs to be rewound. That opera also contains a duet, sung by (*)** Giulietta and the breeches role Nicklausse, called "Belle nuit, ô nuit d'amour". A "Galop Infernal" ends an operetta by this man whose title character is forced to rescue his wife by Public Opinion. This German-born composer of *The Grand Duchess of Gérolstein* included a barcarolle in an opera about the writer of "The Sandman". For 10 points, name this composer of *The Tales of Hoffmann* whose *Orpheus in the Underworld* provides the most famous tune for the can-can.
ANSWER: Jacques **Offenbach** <Kothari>

2. **When considering Mach numbers greater than 0.3, one might treat a fluid as an isen•tropic flow, in which case pressure over this quantity to the gamma is constant. This quantity multiplies velocity squared in the expression for dynamic pressure, which is divided by the shear stress to derive the Reynolds number—during which it's removed by changing this quantity over dynamic viscosity to one over kinematic viscosity. For an incompressible fluid, this quantity is (*)** constant, and it can be defined as "P over R T" for an ideal gas. A relative ratio of this quantity defines a substance's specific gravity, which can be determined using Archimedes's principle. For 10 points, what quantity, symbolized rho, can be defined as mass over volume?
ANSWER: **density** <Garg>

3. **A group that participated in this event worshiped a goose and goat imbued with the Holy Spirit. An army in this event was nearly wiped out at the Battle of Civetot, in which Walter Sans Avoir died. The beginning of this event kicked off Count Emicho's Rhineland massacres of Jews in Worms (VURMZ) and Mainz (MYNZ). Many of the participants in this event left after the Battle of Ascalon. After its completion, both (*)** Godfrey of Bouillon **(boo-YON)** and Raymond of Toulouse were offered a kingship; both men's troops had previously massacred numerous Muslims and Jews at places like the Temple Mount. This event began after a speech at the Council of Clermont, during which crowds chanted "God wills it" in response to Pope Urban II. For 10 points, name this inaugural Christian expedition to retake the Holy Lands.
ANSWER: **First Crusade** [prompt on **People's Crusade**; prompt on **German Crusade** of 1096] <Cheyne>

4. **Tacitus's *Germania* makes the dubious claim that a form of this deity represented by a Liburnian ship was worshipped by the Suebi. Garlands of roses provided during a festival dedicated to this deity restore the human form of Lucius, the protagonist of Apuleius's *The Golden Ass*, which also describes a procession named for this deity's "Navigium" and is the only source for information on her Roman mystery cult. This deity once used a gold ring to bribe Anti into ferrying her to a council on an island and was temporarily protected by seven (*)** scorpions during her pregnancy. This goddess pulled a chest from a tree in Byblos after a long search undertaken in the form of a kite alongside her sister Nephthys. She retrieved the scattered parts of her husband's body after his dismemberment by Seth. For 10 points, name this mother of Horus and wife of Osiris.
ANSWER: **Isis** [accept **Aset** or **Iset**] <Carson>

5. **After this character moves into a condo in Florida, he suffers his first heart attack after a rented Sunfish sailboat capsizes and his granddaughter, Judy, is feared drowned. In a 2000 novella, this man is "remembered" by his illegitimate daughter Annabelle. During the gas crisis of the 1970s, this man becomes wealthy when his wife's family's Toyota dealership becomes wildly profitable. In this character's first appearance, he decides to (*)** abandon his wife and infant daughter for a life on the road, but gets lost and instead opts to have dinner with Marty Tothero, his former coach. Janice, the wife of this MagiPeeler salesman, accidentally drowns their daughter Rebecca June in a bathtub. For 10 points, name this former high school basketball star who appears in a series of novels titled for him "at rest", "rich", "redux", and "run", all of which are by John Updike.
ANSWER: **Rabbit** **Angstrom** [or **Harry** Angstrom; accept any underlined name] <Hart>

6. **This war featured a failed attempt to bomb the Vanceboro international bridge. A hero of this war was known as "Hell's Handmaiden" and was named Billy Bishop. During it, the Jesuit son of a country's minister of justice was arrested in the Guelph Raid in an attempt to enforce the Military Service Act. While on a different continent from the main fighting during it, a Norwegian vessel collided with the SS *Mont-Blanc*, killing thousands in Halifax, Nova Scotia. Opposition to (*)** conscription during this war was led by Wilfrid Laurier and Henri Bourassa. During this war, the conscription crisis pitted Prime Minister Robert Borden against anti-draft Quebecois nationalists. For 10 points, Canadian troops prominently served in what war's battles at Vimy Ridge, Passchendaele, and the Somme?
ANSWER: **World War I** [or **First World** War; prompt on the **Great** War] <Cheyne>

7. **This man texted Dowell Loggains urging Loggains's boss to "hurry up" so they could "wreck" things together. In a video posted to Yeti, this man wears a Christmas sweater, holds a Four Loko, and dabs. That video was posted shortly after the appearance of a clip showing him singing along to the Future song "March Madness" belied this man's claim that (*)** "videos can be old". He was benched for part of a game during his sophomore year after a scandal involving signing autographs for money. In October 2015, this man was pulled over by a police officer after fighting in a car with his girlfriend. This man was the first freshman to win the Heisman Trophy during a campaign at Texas A&M. For 10 points, name this troubled former Cleveland Browns quarterback, a guy known as "Johnny Football".
ANSWER: Johnny **Manziel** [or Jonathan **Manziel**; accept **Johnny Football** until "Johnny"; prompt on "**Football**"] <Cheyne>

8. **The HIC (H-I-C) gene down•regulates the development of these structures in carbon-rich environments. Regulation of these structures in response to water potential can be iso•hydric or an•iso•hydric. The Ball-Berry-Leuning model couples carbon assimilation rates to the conductance of these structures, which can be measured with por•o•meters. Export of protons causes cells surrounding these structures to take up potassium ions from subsidiary cells. These structures are inactive during the day in (*)** CAM plants. Root-released abscisic acid decreases the turgor of the guard cells surrounding these structures, causing them to close. Through these structures, which are primarily on the leaf underside, water is lost to transpiration and carbon dioxide is taken in. For 10 points, name these pores that control gas exchange through leaf surfaces.
ANSWER: **stomata** [accept **guard cell**s until "conductance"] <Kothari>

9. **The narrator of this novel describes the "freak accident" that killed his "very photogenic mother" with the parenthetical "(picnic, lightning)". This novel's narrator considers drowning his wife while swimming at Hourglass Lake before she is killed on a rainy day by a car that swerved to avoid hitting a dog. This novel's narrator traces his pathology to a thwarted sexual encounter with a girl he calls (*)** Annabel Leigh. The foreword to this novel, which is attributed to John Ray Jr., claims that the 17-year-old "Mrs. Richard F. Schiller" died during a stillbirth on Christmas Day. As the two central characters of this novel stay at numerous roadside inns, they are trailed by an Aztec-red convertible driven by a playwright named Clare Quilty. For 10 points, name this novel in which the title "nymphet" is lusted after by Humbert Humbert, written by Vladimir Nabokov.
ANSWER: *Lolita* <Hart>

10. **Description acceptable. Isaac Leeser and Isaac Wise debated this theory after discoveries in Newark, Ohio. Antonio de Montezinos alleged that proof of it led Menasseh ben Israel to proclaim that the Messiah would soon arrive. The "limited geography model" is an interpretation of this theory that is meant to explain the scant archeological evidence for it. Proponents of it in the 1840s believed the ruins of Quirigua in Guatemala were actually ruins of Zarahemla, a city founded by descendants of Zedekiah. The (*)** Church of Latter-Day Saints affirms this theory in its Articles of Faith, and origin story of the Nephites and Lamanites is a version of it. The discovery of phylacteries in Pittsfield, Massachusetts was promoted as evidence for this theory in the early 19th century. For 10 points, name this belief that people encountered by Europeans in the New World are distant relatives of the Jewish people.
ANSWER: **American Indians** are descendents of the Lost Tribes of **Israel** [or **Native Americans** are descendents of the Lost Tribes of **Israel**; or obvious equivalents; prompt on partial answers; prompt on answers like "the <u>historicity</u> of the <u>Book of Mormon</u>"; accept answers involving the **Nephite**s and the **Native Americans** being equivalent or the **Nephite**s going to North **America**] <Bailey>

11. **A politician from this state wrote the book *The Arrogance of Power* attacking the Vietnam War and was the longest-serving chair of the Senate Foreign Relations Committee. Hundreds of African American sharecroppers were killed in this state after a meeting at a church in September 1919. In this state, Melba Pattillo had acid thrown into her eyes and Minnijean Brown was punished for dropping chili on two boys. The namesake of an (*)** international exchange program, Senator J. William Fulbright, was from this state. The 101st Airborne Division was sent into this state to counter the actions of Governor Orval Faubus. For 10 points, name this state that featured a civil rights crisis in 1957 when nine black students tried to integrate Central High School in Little Rock.
ANSWER: **Arkansas** <Cheyne>

12. **In 2002, the Modern Library translation of this book by Gregory Hays was briefly a bestseller. A chain of assertions in the fourth section of this book proposes that mind, reason, and thus law are common to all men, suggesting that people should live as fellow-citizens in a "cosmic city", which uniquely for this book's author consists of just men rather than men and gods. A recurring dilemma in this text regarding the nature of the world presents the alternatives of "providence or atoms", and it contains repeated admonitions to "erase your impressions". This book's first section, a list of lessons and qualities learned from various people, describes Rusticus giving its author the influential (*)** *Discourses* of Epictetus. Much of this text was written in Sirmium, where its author was stationed on campaign. For 10 points, name this twelve-volume book of Stoic philosophy, written by Marcus Aurelius.
ANSWER: **Meditations** [or **Ta eis heauton**; or **To Himself**; or The **Emperor's Handbook**; or The **Golden Book** *of Marcus Aurelius*] <Carson>

13. **A woman in one of this man's stories loses her virginity with a stranger in a bar in order to make it appear that the factory owner Loewenthal had raped her. In that story by this man, a desire to avenge the death of her father motivates the title woman, Emma Zunz. In another of his stories, a character quotes an encyclopedia that "mirrors and copulation are abominable because they increase the number of men". Certain editions of *The Anglo-American Cyclopedia* supposedly have an entry on a fictional (*)** country created by this author. In another story by this author, Carlos Argentino Daneri claims that his poem *The Earth* was inspired by the title object, which provides "the only place on earth where are all places are seen from every angle". For 10 points, name this author of "Tlön, Uqbar, Orbis Tertius" and "The Aleph", a blind Argentine short story master.
ANSWER: Jorge Luis **Borges** [or Jorge Francisco Isidoro Luis **Borges**] <Bailey>

14. **This composer aimed to write music "as white and pure as Antiquity" for a "symphonic drama" for voice and piano that set texts from three Platonic dialogues. This Rosicrucian wrote the music for a one-act Jean Cocteau ballet that led Guillaume Apollinaire to coin the term "surrealism". In a piece by this composer of *Socrate* (soh-CRAHT) and *Parade* (pah-RAHD), a theme played alternately by itself or overlain with a series of unresolved tritones is accompanied by a cryptic message about being (*)** repeated 840 times. He depicted three invertebrates in one set of pieces and parodied Muzio Clementi in his *Sonatine bureaucratique*. Another of his pieces begins with alternating G and D major seventh chords, and is the first in a set of three slow, 3/4 time piano pieces that evoke ancient Greek dance. For 10 points, name this composer of *Desiccated Embryos* and the *Gymnopédies.*
ANSWER: Erik Alfred Leslie **Satie** <Kothari>

15. **This substance's aspect ratios and effusion rates were studied by George P. L. Walker to determine its emplacement mechanisms. The "ponding" of this material can create cross-cutting patterns known as "hackly jointing". A kipuka is completely surrounded by this material, a rare form of which contains sodium and carbonates and is formed at Ol Doinyo Lengai in Tanzania. The debris on top of this material adopts mostly polygonal shapes in an intermediate or "andesitic" form of this material that is known as its (*)** "block" variety. Structures known as "coulees" are formed when "domes" of this substance spread out slightly. This substance, which forms into characteristically pillow-shaped structures underwater, comes in high- and low-viscosity examples called aa **(ah-ah)** and pahoehoe **(puh-HOY-hoy)**. For 10 points, name this molten rock that flows on Earth's surface, unlike magma.
ANSWER: **lava**s [accept **lava** flows or block **lava** or **lava** domes or rhyolitic **lava**s or intermediate **lava**s or andesitic **lava**s; accept **magma**s before "ponding"; do not accept or prompt on "magma" after "ponding"] <Hart>

16. **This thinker sought to isolate an active quantity "Q" that is retained only by memory-bearing impermeable neurons in his *Project for a Scientific Psychology*. He theorized a sort of vivid but false memory called the "screen memory" in a letter to Wilhelm Fliess, later expanded in a book in which he recalls saying "Botticelli" and "Boltraffio" rather than "Signorelli", a type of parapraxis. In another work, this author of *The Psychopathology of Everyday Life* analyzes a sequence in which a woman has whitish (*)** patches inside her mouth after she is given an injection by Otto. This man worked with Josef Breuer and Jean-Marie Charcot on the causes of hysteria, treating patients like Anna O. For 10 points, name this founder of psychoanalysis who argued that dreams are wish-fulfillments in *The Interpretation of Dreams*.
ANSWER: Sigmund **Freud** [or Sigismund Schlomo **Freud**] <Kothari>

17. **One poet with this surname used Matthew 7:14, "straight is the gate, and narrow is the way", as the epigraph for a poem that begins "believe not those who say / the upward path is smooth" entitled "The Narrow Way". Another poet with this surname wrote "I die but when the grave shall press / the heart so long endeared to thee" at the beginning of the poem "Lines". That poet with this surname wrote a poem styled as the suicide letter of Fernando De Samara to a queen named Augusta Almeda. The Angria poems written by two authors with this surname inspired by the later (*)** Gondal poems written by two other authors with this surname. Three authors with this surname collaborated on the collection *Poems by Currer, Ellis, and Acton Bell*. For 10 points, give this surname of the authors of *Agnes Grey*, *Jane Eyre*, and *Wuthering Heights*, whose first names were Anne, Charlotte, and Emily.
ANSWER: **Brontë** [accept the **Brontës**; accept **Bell** or **Bells** before "Bell"] <Hart>

18. **This empire took direct control of a colony after martial law was used to put down the Morant Bay rebellion. Several of its soldiers were killed in the massacre of the Shangani Patrol during the Matabele War. During Baisakhi celebrations, troops of this empire fired upon an unarmed crowd at Jallianwala Bagh. Its 1902 alliance with Japan ended years of so-called (*)** "splendid isolation", and its communication system was known as the "All Red Line". This empire won a diplomatic victory by forcing a rival to withdraw during the Fashoda Incident. This empire clashed with Russia in the "Great Game". The man who proposed the "Cape to Cairo" railway and who was the namesake of Rhodesia was a citizen of this empire. For 10 points, the sun never set upon what empire that ruled colonial India?
ANSWER: **British** Empire [or **English**; or **United Kingdom**] <Cheyne>

19. **The full-color exterior of a painting with this title depicts a man being tied to a tree while robbers rifle through his belongings in the background, while a hooded man with a large hole in his trouser knee fends off a dog with a stick in the central foreground. A doctor checks a patient's teeth below a diagram that shows vermin invading a heart in a painting of this title, which also shows the falling rebel angels turning into insects and a corpulent friar overseeing a trio of nuns filling a sack. In the central (*)** panel of a painting with this title, a couple playing a lute and singing sit next to a sky-blue demon atop the title object, which is surrounded by a throng of sinners as a crowd of demons drag it to hell. A later painting of this title depicts the River Stour near Willy Lott's cottage. For 10 points, give the name shared by a Hieronymous Bosch triptych and a John Constable painting of an ox-drawn farm cart.
ANSWER: *The **Hay Wain*** [or *The **Haywain*** Triptych] <Carson>

20. **A Kataura plot can predict the properties of these materials in relation to band gap energies. Applying a low voltage to these materials can cause their super•hydro•phobic surfaces to become super•hydro•philic. These materials can be de•fluorinated in a mixture of iso•propyl alcohol and hydra•zine, and fluorinated versions of them are at least somewhat soluble and reactive. A form of these materials follows either the Russian doll model or the (*)** parchment model. If these materials have an m value equal to zero, a zigzag structure is formed; these materials are chiral when m does not equal n. These materials come in single- and multi-walled types, and they consist of rolled up graphene molecules. For 10 points, name these fullerenes that are carbon allotropes with a cylindrical structure.
ANSWER: carbon **nanotubes** [or **CNT**s; prompt on "**fullerenes**"] <Garg>

Tiebreaker. **A member of this family has an epitaph that says, "If you would praise the worthiest, then your path stops here". Another member of this family legendarily used four mule loads of silver to bribe voters in a 1492 election, helping defeat a rival backed by Charles VIII and Genoa. A member of this family was rumored to have held the Banquet of (*)** Chestnuts, a debauched supper held in Rome; that member's brutal slaying of his own captains at Senigallia was analyzed by Machiavelli in *The Prince*. A member of this family named Rodrigo became Pope Alexander VI. A female member of this family was frequently accused of poisoning rivals. For 10 points, name this Italian family whose members included the infamous Cesare and Lucrezia.
ANSWER: **Borgia** <Cheyne>

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Packet 10: Bonuses

1. Answer the following about people referred to as the "Last of the Romans", for 10 points each.
[10] The term is sometimes applied to Aetius, a general who defeated these people and their leader Attila at the Battle of the Catalaunian Fields.
ANSWER: **Hun**s
[10] The term is also sometimes used to refer to Emperor Valens, who was killed in this catastrophic 378 battle against the Goths under Fritigern that was fought in modern-day Turkey.
ANSWER: Battle of **Adrianople**
[10] This half-Vandal Roman general is also sometimes called the "last of the Romans". The regent for Emperor Honorius, he successfully fought Alaric for years; many historians believe this man's execution may have led to the 410 sack of Rome.
ANSWER: Flavius **Stilicho** [or **Stilico**] <Cheyne>

2. John Maynard Smith described protein evolution as acting on one of these entities over the space of possible protein sequences. For 10 points each:
[10] Name this multi-dimensional representation of how the pheno•type or geno•type of an organism relates to its success in survival and reproduction. It was introduced by Sewall Wright.
ANSWER: **fitness landscape**s [or **adaptive landscape**s]
[10] Ruggedness in fitness landscapes is generated by this phenomenon, in which the fitness effects of multiple loci are non-additive. A classic example is coat color in Labrador retrievers.
ANSWER: **epistasis** [accept **epistatic**]
[10] Epistasis may have played a role in the evolution of this kind of reproduction despite its "two-fold cost". This form of reproduction is accompanied by the production of gametes and widespread genetic recombination.
ANSWER: **sex**ual reproduction <Kothari>

3. State some facts about the endangered Kirtland's warbler, for 10 points each:
[10] During the breeding season, the Kirtland's warbler nests primarily on the northern part of the Lower Peninsula of this American state.
ANSWER: **Michigan**
[10] The Kirtland's warbler requires stands of this early-successional tree, whose forward-pointing cones open in response to fire. This tree hybridizes with lodgepole pine.
ANSWER: **jack pine** [or *P*inus **banksiana**]
[10] The wintering grounds of the Kirtland's warbler are largely in this Caribbean country found in the same archipelago as the Turks and Caicos Islands. Its islands include North Andros, Bimini, and New Providence.
ANSWER: Commonwealth of the **Bahamas** <Kothari>

4. Near the beginning of this play's third act, one of the central characters rings the doorbell and presents himself with a handful of snapdragons, which he calls "flowers for the dead" in Spanish. For 10 points each:
[10] Name this play whose third act, "The Exorcism", includes a game of "bringing up baby" and the revelation that an imaginary son has been killed by a driver who swerved to avoid a porcupine.
ANSWER: *Who's Afraid of Virginia Woolf?*
[10] This American playwright of *The Zoo Story* and *A Delicate Balance* wrote *Who's Afraid of Virginia Woolf?*.
ANSWER: Edward **Albee** [or Edward Franklin **Albee** III]
[10] An Albee play whose title includes the question "who is Sylvia?" concerns a Pritzker Prize-winning architect who falls in love with one of these animals.
ANSWER: **goat**s [accept *The **Goat**, or Who is Sylvia?*] <Hart>

5. Perhaps inspired by John Dunstable, this composer was the most prolific user of the *fauxbordon*, in which an unwritten middle voice was sung parallel to the pre-existing plainchant. For 10 points each:
[10] Name this Burgundian composer of the 15th century, whose *Nuper Rosarum Flores* was written for the consecration of Florence Cathedral.
ANSWER: Guillame **Du Fay**
[10] *Nuper Rosarum Flores* is an isorhythmic example of this kind of polyphonic choral composition. These works were usually sacred and often set antiphons.
ANSWER: **motet**s
[10] Du Fay may have written the first polyphonic work of this type, though Ockeghem's was the earliest-written to survive. Franz Sussmayr completed Mozart's unfinished setting of the propers of this mass for the dead.
ANSWER: **requiem** mass <Kothari>

6. The New Fourth Army incident occurred during a theoretical suspension of this conflict. For 10 points each:
[10] Name this war that lasted, off and on, from 1927 to 1950. It ended with the Kuomintang forced to set up a new government after being forced out of the mainland.
ANSWER: **Chinese Civil War** [or **Chinese Communist Revolution**]
[10] This man founded the Red Army during the Chinese Civil War. The first chairman of the Communist Party of China, he set up a cult of personality during his years controlling communist China.
ANSWER: **Mao** Zedong
[10] During the Chinese Civil War, Mao led Communist forces on the Long March, traversing 6,000 miles in 370 days to escape Kuomintang forces; the march began in this southeastern Chinese province, the center of early Chinese communism. Nanchang is this province's largest city.
ANSWER: **Jiangxi** [or **Kongsi**] <Cheyne>

7. This novel centers on the machinations of a mysterious wealthy man named Maurice Conchis, its title sorceror-figure. For 10 points each:
[10] Name this novel in which Nicholas Urfe, a young British man teaching English on the Greek island of Phraxos, is inaugurated into the "godgame", a series of psychological melodramas involving a pair of beautiful identical twins.
ANSWER: The **_Magus_**
[10] *The Magus* was a bestselling novel by this post-World War II British author, who also wrote *The Collector* and *The French Lieutenant's Woman*.
ANSWER: John **Fowles** [or John Robert **Fowles**]
[10] In *The Magus*, Urfe teaches at a boys' school named after this British poet, whose long narrative poems include *Don Juan* **(JOO-un)** and *Childe Harold's Pilgrimage*.
ANSWER: Lord **Byron** [or George **Gordon** Byron; or George Gordon **Noel**] <Hart>

8. Wikipedia claims that after this man's death, his head "shrivelled to resemble that of a duckling", which is even funnier than the fact that this man's herald was named Copreus, or "dung man". For 10 points each:
[10] Name this king of Tiryns, whose cowardly nature led him to hide in a buried bronze wine jar rather than face such frightening sights as the Erymanthian Boar, Cerberus, or a man wearing the skin of the Nemean Lion.
ANSWER: **Eurystheus**
[10] Eurystheus assigned twelve labors to this greatest of all the Greek heroes, whose wives included Megara, Deianeira, and Hebe.
ANSWER: **Heracles** [or **Hercules**; accept **Alcaeus** or **Alcides**]
[10] After Eurystheus's father Sthelenus exiled Heracles's mortal father Amphitryon from Tiryns, Amphitryon led a raid on King Pterelaus of Taphos, whose immortality was destroyed when his daughter Comaetho did this to him. Scylla did this to her father Nisos in order to win the affection of his foe Minos.
ANSWER: **cut** or **pluck**ed his golden (or purple) **hair** [accept anything that indicates the **removal** of one or more strands of **hair**] <Carson>

9. This statue was displayed independently under the names *The Dream* and *The Sphinx*. For 10 points each:
[10] Name this sculpture of a nude man reaching his hands back behind his head while lying on his back atop a woman lying on her stomach to symbolize the attempted escape of passion that its title suggests.
ANSWER: *Fugit Amor* [or *Fleeing Love* or *Fugitive Love*]
[10] This French sculptor intended to include his *Fugit Amor* among the works that made up his *The Gates of Hell*, which was also to include his *The Thinker*.
ANSWER: Auguste **Rodin** [or François Auguste René **Rodin**]
[10] A copy of *Fugit Amor* is held in this Parisian art museum, which houses the world's largest collection of Impressionist and post-Impressionist works. It is located in and named after a former train station.
ANSWER: Musée d'**Orsay** <Hart>

10. This quantity appears as a factor on the right-hand side of the one-dimensional magnetic wave equation, where it is multiplied by the second partial derivative of the magnetic field with respect to time. For 10 points each:
[10] Name this quantity that is equal to the permeability of free space multiplied by the permittivity of free space.
ANSWER: **1 over c squared** [accept equivalents such as **c to the power of minus 2**; accept "speed of light" in place of "c"]
[10] The wave equation is consistent with Maxwell's equations when this quantity divided by magnetic field equals the speed of light. Objects with charge produce this field.
ANSWER: **electric** field [or **E**-field]
[10] This quantity is equal to "one over mu-naught" times "the electric field crossed with the magnetic field". It is usually symbolized S and gives the rate of energy transported per area by an electromagnetic wave.
ANSWER: **Poynting vector** <Garg>

11. A man hanging onto the lower edge of a triangle floats next to this object in a painting in which it appears between a cat with a human face and a man with two Janus-style faces, one of which is blue. For 10 points each:
[10] Identify this object, which was depicted from a variety of perspectives, often showing it painted red, in a series of paintings from the 1910s by the Orphist Robert Delaunay.
ANSWER: the **Eiffel Tower** [or la **Tour Eiffel**]
[10] The aforementioned depiction of the Eiffel Tower next to a parachutist appears in *Paris Through the Window*, a painting by this Russian Jewish artist who created a new ceiling for the auditorium of the Paris Opera. The Eiffel Tower is also visible through a window in his *Self-Portrait with Seven Fingers*.
ANSWER: Marc **Chagall** [or Marc Zakharovich **Chagall**; or Moishe **Shagal**]
[10] Chagall may be best known for this 1911 painting, in which a row of houses, some of which are upside-down, a man with a scythe, and an upside-down female violinist appear between the huge faces of a green man and a sheep or goat.
ANSWER: *I and the Village* <Carson>

12. Differences in coordinates caused by changes in these systems cause a namesake "shift". For 10 points each:
[10] Give this term for a set of reference points that determine a coordinate system on Earth or other planets. A common worldwide one is WGS 84, against which nominal sea level is specified.
ANSWER: geodetic **datum** [or **geodetic system**; accept **datum** shift]
[10] A datum typically specifies one of these figures. Earth is often described as an oblate one of these three-dimensional geometric figures, which are more idealized than geoids.
ANSWER: **ellipsoid** [accept **spheroid**]
[10] The concept of a datum is often confused with this distinct concept, which describes ways of transferring spherical coordinates onto a two-dimensional surface. Examples of them include the Gall-Peters and Mercator types.
ANSWER: map **projection** <Kothari>

13. Hundreds of members of this group were arrested on October 13, 1307, which may have contributed to the idea that Friday the 13th is unlucky. For 10 points each:
[10] Name this group whose leader Jacques de Molay was burned at the stake on the orders of Philip IV of France and Pope Clement V, who regarded this group as a bunch of heretics; both Clement and Philip died less than a year later.
ANSWER: **Knights Templar** [or **Templars**; or **Order of Solomon's Temple**; or **Poor Fellow-Soldiers of Christ** and of the Temple of Solomon]
[10] Clement V is also known as the pope who moved the papacy from Rome to this French city.
ANSWER: **Avignon**
[10] Philip IV was one of the last French kings to try to establish an alliance with these people to fight Muslims; that long-proposed semi-hypothetical alliance was supported by folks like Bohemond VI but fell through after these people offered no help to Europeans during the siege of Ruad.
ANSWER: **Mongols** [or **Mongol** Empire; do not accept or prompt on "Chinese"] <Cheyne>

14. Answer the following about the novel *The Namesake*, for 10 points each.
[10] It was written by this Indian-American author, whose short story collections include *Unaccustomed Earth* and *Interpreter of Maladies*.
ANSWER: Jhumpa **Lahiri** [or Nilanjana Sudeshna **Lahiri**]
[10] Its protagonist is nicknamed after this Russian author of the play *The Inspector General*, the story "The Overcoat", and the novel *Dead Souls*.
ANSWER: Nikolai **Gogol** [or Nikolai Vasilievich **Gogol**]
[10] Gogol's name causes much confusion because of the distinction between the "bhaalo naam" and "daak naam", or "good name" and "pet name", in this Indian ethnic group, to which Lahiri belongs. Michael Madhusudan Dutt was a 19th-century writer in this group's language.
ANSWER: **Bengali** [or **Bangla**; do not accept or prompt on "Bangladeshi" or equivalents] <Hart>

15. This man is one of the foremost proponents of using sparklines and small multiples to avoid what he terms "chartjunk". For 10 points each:
[10] Name this Yale political scientist and statistician who wrote *Beautiful Evidence*, *Visual Explanations*, and *The Visual Display of Quantitative Information*.
ANSWER: Edward **Tufte** [or Edward Rolf **Tufte**]
[10] Tufte wrote a popular essay lambasting the "cognitive style" of this member of the Microsoft Office suite. The U.S. Army is making efforts to curb use of this presentation software.
ANSWER: Microsoft **PowerPoint**
[10] According to Tufte, PowerPoint caused misunderstandings between NASA engineers and managers prior to this 2003 disaster, during which a piece of foam insulation damaged the left wing of an orbiter.
ANSWER: disintegration of Space Shuttle ***Columbia*** [or equivalents implying that ***Columbia*** failed or its crew died; don't accept "explosion of *Columbia*" since it didn't explode] <Kothari>

16. A 1956 paper by this man showed that the precarious "knife-edge" result of the Harrod-Domar growth model relied on the assumption of no substitution between capital and labor. For 10 points each:
[10] Name this economist, whose own growth model allowed for substitution and became the basis of the neoclassical growth model.
ANSWER: Robert **Solow** [or Robert Merton **Solow**]
[10] Solow treated as exogenous the rate of this activity. This quantity, which is often defined as "deferred consumption", is identical to investment in a closed economy with no government spending or taxes.
ANSWER: **saving** [or **savings**]
[10] Solow's original model made this assumption about the elasticity of labor supply. With this assumption, labor supply does not change in response to changes in the real wage.
ANSWER: perfectly **inelastic** [or elasticity of **zero**] <Bailey>

17. The second volume of this series, *A Man in Love*, contains an extended conversation between the narrator and his friend Geir, who claims that the narrator is an "arch-Protestant" despite being an atheist. For 10 points each:
[10] Name this incredibly long series of contemporary novels that begins with the volume *A Death in the Family*, which has a 100-page sequence about the writer and his friend sneaking beers on New Year's Eve and culminates with the death of the writer's alcoholic father.
ANSWER: ***My Struggle*** [or ***Min Kamp***]
[10] Karl Ove Knausgard's *My Struggle*, and its Norwegian-language title, *Min Kamp*, are references to this author's autobiography *Mein Kampf*, in which he discusses his love for German shepherd dogs and goes on many antisemitic tirades.
ANSWER: Adolf **Hitler**
[10] Knausgard's *My Struggle* has drawn comparisons to this seven-volume novel, which uses the phrase "inverts" to describe homosexuals in its fourth volume, *Sodom and Gomorrah*.
ANSWER: ***In Search of Lost Time*** [or ***Remembrance of Things Past*** or ***À la Recherche du Temps Perdu*** (by Marcel Proust)] <Hart>

18. The fact that gold is gold-colored rather than silvery is a result of this kind of effect. For 10 points each:
[10] Name this type of chemical effect. These effects are based on the fact that the mass of a moving object changes as its velocity changes in a theory developed by Albert Einstein.
ANSWER: **relativistic** effects [accept special **relativity**]
[10] Nevil Sidgwick coined the name of this relativistic chemical effect, in which late p-block elements tend to form ions with oxidation states that are two less than those of the earlier elements in the same groups.
ANSWER: **inert pair** effect
[10] Many of the elements that experience strong relativistic effects, such as gold, lead, and mercury, occupy this row of the periodic table.
ANSWER: period **6** [or row **6**; accept **six**th row or period or other equivalents] <Hart>

19. One of the longest serving people in this group was Elijah Paine, who was in office until 1842. For 10 points each:
[10] Give the two-word colloquial name for this group of men appointed in the waning days of a certain president's administration, the most notable of which were John Marshall and William Marbury.
ANSWER: **midnight judges** [or **midnight justices**; or **midnight appointments**]
[10] This president, the second in U.S. history, appointed the midnight judges before turning the presidency over to Thomas Jefferson.
ANSWER: John **Adams** [do not accept "John Quincy Adams"]
[10] This 1810 case of the Marshall Court is cited as the first time the Supreme Court struck down a state law as unconstitutional. This case involved land speculators on Yazoo tribal lands in Georgia.
ANSWER: ***Fletcher*** v. Peck [or *Fletcher v.* ***Peck***; accept in alternate order] <Cheyne>

20. Sukuk avoid this practice by giving partial ownership in a tangible asset to bondholders who then officially collect rent, not interest. For 10 points each:
[10] Give the Arabic term for this practice, which refers to any sort of exploitative profit and is normally translated as "usury". There is debate whether the prohibition on this practice applies to charging interest on loans.
ANSWER: **riba**
[10] Riba is an example of an action that is haram, or forbidden, in Islam. This term, which describes actions or objects that *are* permissible, is most commonly used to describe food that has been prepared in accordance with Islamic dietary laws.
ANSWER: **halal**
[10] This sura of the Qu'ran states that people who benefit from riba are like those who "have been driven to madness by the touch of the Devil". This longest sura also praises God in its Throne Verse.
ANSWER: surat al-**Baqara** [or **Cow** Sura] <Bailey>

Extra. Answer the following about weird fossils, for 10 points each.
[10] Prismatic and orthinoid are two classifications of these types of dinosaur fossils, which were first found in the Gobi Desert and sometimes contain unborn embryos.
ANSWER: dinosaur **egg**s
[10] Coprolites are fossils of this type of organic material; coprolites were originally thought to be fossilized fir cones before William Buckland correctly identified that they originated as this type of material.
ANSWER: **feces** [or **dung** or **poop** or **excrement** or **solid waste** or **fecal** matter; accept any reasonable equivalent; prompt on "**waste**" or other more general answers]
[10] The oldest known fossils are these columns or mounds formed by the growth of cyanobacterial mats in the early oceans.
ANSWER: **stromatolite**s [or **stromatolith**s] <Hart>