

Minnesota Undergraduate Tournament 2014: We're Not Happy 'til You're Not Happy
Questions by Billy Busse, Rob Carson, Mike Cheyne, Andrew Hart, Melanie Keating, and Bernadette Spencer
Round 7: Tossups

1. A polymerization reaction between phenol and one of these compounds is used to synthesize Bakelite. Ozonolysis of an alkene followed by reductive workup can only produce these compounds if at least one of the four substituents is a hydrogen. The liver metabolizes ethanol by converting it to one of these compounds via alcohol dehydrogenase. The harsh conditions of the Jones oxidation will undesirably react with these compounds, necessitating the use of reagents such as (*) PCC to generate these compounds by oxidation of primary alcohols. The presence of one of these compounds generates a “silver mirror” in the Tollens test. For 10 points, name these terminal carbonyl compounds with general formula R-CHO that have similar chemistry to ketones.

ANSWER: aldehydes [prompt on “carbonyl” until mention]

2. This figure ordered persecution of National and Local Spiritual Assemblies of a religion he denounced as a front for the Tudeh Party. This man argued for the elevation of the *maraji* in his book *Velayat e-Faqih*, and he called for a boycott of Norwuz, which led to the 15 Khordad Demonstrations. This man was often conflated with the 12th Imam and established International Quds Day in 1981. This leader developed “Guardianship by Jurist” as an alternative to the liberalizing reforms of the (*) White Revolution while he was exiled in Najaf. This man came to power shortly after Muhammad Reza Shah fled Tehran. For 10 points, name this head of the 1979 Iranian Revolution, the “Supreme Leader” of Iran who issued a death fatwa against Salman Rushdie.

ANSWER: Ayatollah Khomeini [or Ruhollah Khomeini; or Imam Khomeini; prompt on “Ayatollah”]

3. The speaker of a poem by this man advises the reader to “drop thy still dews of quietness / till all our strivings cease” and asks the “still, small voice of calm” to “speak through the earthquake, wind, and fire”. His hymn “Dear Lord and Father of Mankind” was adapted from a poem containing the line “Behold the drink of the gods!” He wrote a poem in rhyming couplets which describes the lowering of forty objects displaying “silver stars” and “crimson bars” and relates a scene in (*) Frederick town. One of his poems describes a family reading the almanac on a gray December day, while another tells of a woman who tells some Confederates “Shoot, if you must, this old gray head / but spare your country's flag”. For 10 points, name this Fireside poet who wrote “The Brewing of Soma”, “Snow-Bound”, and “Barbara Frietchie”.

ANSWER: John Greenleaf Whittier

4. In a painting by this artist inspired by a James Thomson poem, a fishing platform is visible in the foreground while men and cupids throng around the title water feature. This painter of *The Fountain of Indolence* depicted two indistinct pink swirls next to some crosshatches that the Tate theorizes make up a fishing net in another work. Another painting by this artist captures the last moments of a ghostly (*) vessel that had fought in the Battle of Trafalgar as she is “tugged to her last berth.” This painter of *Sunrise with Sea Monsters* showed manacled limbs emerging from the water as the *Zong* prepares for a typhoon in one painting, and depicted an obscured black train hurtling across the Maidenhead bridge in another. For 10 points, name this English artist of *The Fighting Temeraire*, *The Slave Ship*, and *Rain, Steam and Speed*.

ANSWER: Joseph Mallord William Turner

5. A leader of this political party observed that the United States was “the world’s last hope—Britain’s fast anchored isle.” Joseph Dennie wrote in favor of it in the literary journal *Port Folio*. During a war, members of this party were called “blue-lights” for supposedly making signals to the enemy. It was the target of the *Philadelphia Aurora* newspaper, and criticized by the (*) Kentucky and Virginia Resolutions. Members of this party formed the Essex Junto, and it was tarnished by its New England leaders’ support for the Hartford Convention. This party supported usage of the Alien and Sedition Acts against its opponents and an early leader of it was shot by Aaron Burr. For 10 points, name this early American political party led by Alexander Hamilton.

ANSWER: Federalist Party

6. One professor at this university wrote of the detrimental effects of colonial girdling and deforestation to the American ecosystem in *Changes in the Land: Indians, Colonists, and the Ecology of New England*. Frederick Jackson Turner wrote his paper on “The Significance of the Frontier in American History” while a professor at this university. Another professor at this university, who wrote the book *Game Management*, championed the idea of a “land ethic” in his book *A (*) Sand County Almanac*, which describes nearby Sauk County. Professors at this university have included Aldo Leopold and environmental historian Bill Cronon, who was the subject of a Freedom of Information Act request during the campaign to recall Governor Scott Walker. For 10 points, name this Midwestern state university in the city of Madison.
ANSWER: University of Wisconsin-Madison

7. A man claiming descent from this empire’s rulers won the Battle of Sangarara. It utilized way stations called “tambos,” and it legendarily had its origins at caves named Maras and Suteo Tocco. This empire utilized such generals as Quizquiz, and one of its rulers filled the “Ransom Room” with gold before being garroted by his captors. After a ruler of this empire threw a (*) holy book to the ground, he was captured at the lopsided Battle of Cajamarca. It did not have a written language, but instead used knotted strings known as “Quipu” to record information. Near the end of its existence, this empire was consumed by a civil war between brothers Huascar and Atahualpa. With a capital at Cusco, it was conquered by Francisco Pizarro. For 10 points, name this ancient empire located in Peru.
ANSWER: Incan Empire

8. In the second movement of the fifth of these works by this composer, chords in B minor transition into a D major theme introduced by a solo horn. That one of these works quotes in all four movements a motto theme taken from Glinka’s *A Life for the Tsar*. A setting of the folk song “I’m sowing some flowers, my little one” appears in the finale of the first of them, which contains a movement called “Land of Gloom, Land of Mists”, while the third takes its nickname from the final movement’s (*) polonaise-like rhythms. The final completed one contains a first-movement bassoon solo marked with six p’s and a 5/4 second movement often described as a “limping waltz”. For 10 points, name these orchestral works with such nicknames as “Polish”, “Winter Daydreams”, and “Pathetique”, written by the Russian composer of *Swan Lake*.
ANSWER: symphonies by Pyotr Ilyich Tchaikovsky [accept word forms; prompt on partial answer]

9. The “black widow” one of these structures is slowly destroying its binary companion. When one of these objects loses energy, then quickly regains energy as it is spun up by accretion of gas from a neighboring object, a “recycled” type of these objects is formed. One source of evidence for the existence of gravitational waves is the 1913+16 or Hulse-Taylor binary one of these objects. (*) “Glitches” in them cause changes in the frequency of their emitted radiation, anomalies in which can be used to detect exoplanets. The Vela Nebula and Crab Nebula contain one of these stars in the center which emits X-rays. Jocelyn Bell Burnell discovered these stars by observing a radio source which blinked on and off at a constant frequency. For 10 points, name these rotating neutron stars which emit radiation from their magnetic poles.
ANSWER: pulsars [prompt on neutron stars, prompt on “binary systems” before mention]

10. William Prynne’s *Histriomastix* claimed that a performance of this play literally drove some audience members insane. In one scene, its protagonist steals the Pope’s dishes and throws fireworks at some friars, while in another scene, the words “Homo, fuge!” appear on the protagonist’s arm. This play’s main character dismisses the doctrine of divinity as “que sera, sera”, before ordering his servant (*) Wagner to bring him the magicians Valdes and Cornelius, who encourage his study of necromancy. Its protagonist poses the request “Make me immortal with a kiss” to Helen of Troy, who is said to have “the face that launched a thousand ships”. For 10 points, name this Christopher Marlowe play whose protagonist gains Mephistophilis as a servant by making a deal with the Devil.
ANSWER: Doctor Faustus [or *The Tragical History of Doctor Faustus*]

11. During this conflict, an invading force imprisoned the deposed Isaac Dukas Comnenus in chains of silver. A participant brutally executed women and children in the Massacre at Ayyadieh. Before he could be crowned king during this conflict, Conrad of Monferrat was assassinated. After it, a ruler was captured by Leopold V while returning home. During it, the elderly Holy Roman Emperor (*) drowned wearing armor in the Saleph River, and another ruler's brother, John, would scheme in his absence. This conflict ended when an English ruler signed the Treaty of Jaffa with Saladin, guaranteeing Christians entrance into Jerusalem. For 10 points, name this 1189 to 1192 crusade originally led by Philip II of France, Frederick Barbarossa, and Richard I of England.

ANSWER: Third Crusade [prompt on Kings' Crusade, don't need "crusade" after it's read]

12. One composer from this country wrote an opera that features a character named Little Bat, ends with its title character facing down a mob with a shotgun, and is based on the story of Susannah and the Elders. A man from this country composed an opera in which a military chorus sings "The Eight Points of Attention" before the title character sings "News has a kind of mystery." Another composer from this country wrote an opera that begins "On the (*) Kuru Field of Justice" and includes sections inspired by Tolstoy, Tagore, and Martin Luther King. One composer from this country wrote an opera that inspired his composition *The Chairman Dances*, while another concluded his *Portrait Trilogy* with the opera *Einstein on the Beach*. For 10 points, name this home country of Philip Glass and *Nixon in China* composer John Adams.

ANSWER: United States or America [accept either underlined part; accept USA or U.S. or other clear equivalents; accept "this one" if the question is in fact being played in the United States]

13. Ulcers dot the top of this structure when an organism is affected with SCUD. Dysecdysis refers to an inability to properly maintain this body part. Various species, such as the Indian Star and the Red-eared slider, can have this body part deformed in a process called pyramiding. This entity is the primary defense mechanism of species in suborders (*) *Pleurodira* and *Chelidae*. Layers of keratin that are called marginal, pleurals, and vertebrals comprise the scutes that make up this body part. The ventral portion of this structure, the plastron, is joined by a bridge to its top portion, which is known as a carapace. For 10 points, name this hard, defensive structure that forms the outside part of a turtle.

ANSWER: turtle shells or tortoise shells or terrapin shells [accept carapace before mention]

14. During the Gigantomachy, this deity killed the giant Clytius. After Galinthias was punished for tricking Hera into allowing Alcmene to give birth by being transformed into a weasel, this deity took pity on her and made the weasel her sacred animal. The major cult site of this only child of Perses and Asteria was at Lagina, and she was often depicted holding a pair of torches, which she used to help (*) Demeter search for Persephone. This deity's companions include Mormo, Empousa, and Lamia, and she was also often accompanied by a black dog. The most famous priestess of this goddess was the sorceress Medea. For 10 points, name this three-headed Greek goddess of crossroads and witchcraft.

ANSWER: Hecate

15. Bethyl Markham's *West With the Night* and Elspeth Huxley's *The Flame Trees of Thika* were based on experiences in this country, which was satirized as the "Free Republic of Abruria" under the autocratic rule of The Ruler in the 2006 novel *The Wizard of the Crow*. Munira is convicted of arson in one novel by an author from this country, who wrote another novel in which Kihika kills District Officer Robson. An author who set A (*) *Grain of Wheat* and *Petals of Blood* in this country was imprisoned by its longtime ruler Daniel arap Moi. Karen Blixen's love affair with Denys Finch Hatton on a coffee plantation in this country inspired her to write *Out of Africa* under the pen name Isak Dinesen. For 10 points, name this home country of Ngugi wa Thiong'o, who now writes exclusively in its Gikuyu language.

ANSWER: Republic of Kenya [or Jamhuri ya Kenya]

16. The youngest man to hold this world leadership position was frequently depicted in political cartoons with children's mittens attached to his suit, a reference to losing his luggage on a trip to Israel. A later man to hold this post was criticized for sending a letter of condolence to Rajiv Gandhi after the Air India Flight 182 bombing. In 1985, a man in this post met Ronald Reagan at the Shamrock Summit. That man negotiated the failed (*) Meech Lake Accord. An earlier man to hold this post responded to the kidnapping of Pierre Laporte by invoking the War Measures Act to crack down on the FLQ during the October Crisis. For 10 points, name this world leadership position held during the 1980's by Brian Mulroney and Pierre Trudeau.

ANSWER: Prime Minister of Canada [or Canadian PM, accept Leader of Canadian Opposition until second sentence]

17. One work by this philosopher contrasts direct and indirect communication and claims that "subjectivity is truth". Another book by him asks the reader if guilt is an epidemic like smallpox and examines the "dizziness of freedom". This man used the story of a princess to contrast a man trapped by aesthetics with one who believes in the face of absurdity. This author of *The Concept of (*) Anxiety* outlined the aesthetic, ethical, and religious stages of life in *Three Stages on Life's Way*. This author of *Concluding Unscientific Postscript* contrasted Knights of Faith like Jesus and Abraham with the Knight of Infinite Resignation. For 10 points, name this Danish philosopher who wrote *Either/Or* and *Fear and Trembling*.

ANSWER: Soren Aabye Kierkegaard [or Johannes de Silentio; or Victor Eremita; or William Afham; or Frater Taciturnus; or Constantin Constantius; or Vigilius Haufniensis; or Nicolaus Notabene; or A.B.C.D. E.F. Godthaab; or A.B.C.D.E.F. Rosenblad; or Inter et Inter; or Procul; or Captain Scipio; or Judge William; or A.F.; or Hilarius Bookbinder; or Johannes Climacus; or H.H.; or Anti-Climacus; prompt on "A"; prompt on "B"]

18. In the second novel about this character, his daughter Gurri is kidnapped by "the brown He". Whittaker Chambers translated, and John Galsworthy wrote the foreword to, a novel about this character in which a halter fails to prevent the death of Gobo. He's not Nemo, but he was voiced by Alexander Gould in a 2006 "midquel". This character's father teaches him to walk in circles in order to make a (*) blood trail useless. In his most famous appearance, this creation of Felix Salten defeats Ronno in a duel and is warned about becoming "twitterpated". While fleeing a wildfire in that film, this character chases off the dogs that had cornered his love interest Fantine. The ominous "Man" is responsible for the offscreen death of the mother of, for 10 points, which friend of Flower and Thumper, a young deer?

ANSWER: Bambi

19. The outgoing intensity of Rayleigh scattering of light off a molecule is proportional to this power of the molecule's polarizability. For each component of a system's Hamiltonian proportional to a degree of freedom raised to this power, there exists one-half times Boltzmann's constant times temperature amount of energy in the system according to the equipartition theorem. This is the total number of quarks and antiquarks in a (*) meson, and it's also the number of up quarks in a proton. In classical mechanics, the kinetic energy of a particle is equal to one half times the mass times the velocity raised to this power. The law of thermodynamics of this number states entropy always increases in a closed system. For 10 points, Newton's law of *what number* states F equals M A.

ANSWER: 2 [or second, etc.]

20. This novel ends with a trio of chapters in which a self-sacrificing rainmaker, a hermit, and a fratricidal Indian Prince named Dasa represent reincarnations of its protagonist. Its introduction describes a time characterized by the popularity of articles about things like "The Favorite Dishes of the Composer Rossini", called "the Age of the Feuilleton". This novel's protagonist befriends Father Jacobus at Mariafels and accedes to a position last held by (*) Thomas van der Trave. Its protagonist, who drowns in a mountain lake while tutoring the son of his friend Plino Designori, is recruited by the Music Master to attend the school of Waldzell in the futuristic country of Castalia. For 10 points, name this Hermann Hesse novel in which Joseph Knecht gains the title of Magister Ludi by mastering the title activity.

ANSWER: *The* Glass Bead Game [or *Das* Glasperlenspiel; accept Magister Ludi until it is read]

TB. In one of this man's poems, the speaker claims that "No nightingale did ever chant / more welcome notes to weary bands" and pleads "Will no one tell me what she sings?" while watching the distant title character cut and bind grain. He wrote that "We will grieve not, rather find / strength in what remains behind" in a poem which opens by describing a time when "earth, and every common sight / to me did seem / apparelled in celestial light" and is about some (*) "Recollections of Early Childhood". This author of "The Solitary Reaper" wrote a poem about some items which "flash upon that inward eye / which is the bliss of solitude", ten thousand of which he spied "dancing in the breeze" as he "wandered lonely as a cloud". For 10 points, name this author of "Ode: Intimations of Immortality" and a poem sometimes called "Daffodils".

ANSWER: William Wordsworth

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Round 7: Bonuses

1. This poem describes a “mind engaged in rapt contemplation” of the thought of an “ineffable effable effanineffable / deep and inscrutable singular” entity. For 10 points each:

[10] Identify this poem whose title activity is deemed “a difficult matter” and not “just one of your holiday games”, and which describes three types of appellation.

ANSWER: “The **Naming of Cats**”

[10] “The Naming of Cats” is one of the poems in *Old Possum's Book of Practical Cats*, a collection by this author of “Gerontion” and “The Waste Land”.

ANSWER: Thomas Stearns **Eliot**

[10] The speaker claims that “there are no eyes here / in this valley of dying stars” in this Eliot poem, which describes figures dancing around a prickly pear and ends “This is the way the world ends / not with a bang but a whimper”.

ANSWER: “The **Hollow Men**”

2. Name some things related to mental states that are “about something”, or intentionality, for 10 points each.

[10] While many philosophers believe in mental states that are not directed towards a specific subject, this French dude believed all consciousness to be intentional, a belief outlined in his book *Being and Nothingness*.

ANSWER: Jean-Paul **Sartre**

[10] This American philosopher argued for the practicality of the “intentional stance” to predict behaviors in a book of the same name. This eliminative materialist also claimed that natural selection sufficiently explains the evolution of life in *Darwin's Dangerous Idea*.

ANSWER: Daniel **Dennett**

[10] This is last name of two married eliminative materialists who believe intentionality to be “folk psychology” that will ultimately be replaced with more accurate scientific language. Patricia wrote *Neurophilosophy* and Paul is the author of *Matter and Consciousness*.

ANSWER: Paul **Churchland** and/or Patricia **Churchland**

3. The value of this scientist's namesake energy decreases when adding a p-type dopant and increases when adding an n-type dopant. For 10 points each:

[10] Name this scientist who names a laboratory in Batavia, Illinois containing the Tevatron, the 2nd largest particle accelerator in the world after the LHC.

ANSWER: Enrico **Fermi**

[10] The Fermi level for one of these materials lies in between the valence and conduction bands. Silicon is a common element used in these materials, which have intermediate conductivity between insulators and conductors.

ANSWER: **semiconductors**

[10] In a p-n junction, electrons near the surface of the junction on the N-type side will migrate to the P-type side and combine with the holes there, creating this region which has a low density of charge carriers, inhibiting current flow.

ANSWER: **depletion** region [or **space charge** region; accept “layer” or “zone” or synonyms in place of “region”]

4. This man was arrested after saying that he refused the pope “as Christ's enemy.” For 10 points each:

[10] Name this archbishop, the author of the Book of Common Prayer. A key leader in the English Reformation, he was executed by the Catholic Mary I during her persecutions of heretics.

ANSWER: Thomas **Cranmer**

[10] Mary I was married to this other monarch, who would later command the Duke of Medina Sidonia to mount an unsuccessful invasion.

ANSWER: **Philip II** [or **Philip I of Portugal**; or **Felipe II**]

[10] That invasion of the Spanish Armada failed to unseat this successor of Mary, a female Tudor monarch known as the “Virgin Queen.”

ANSWER: **Elizabeth I** [or **Good Queen Bess**]

5. Answer the following about the author of *Portrait of Myself*, Margaret Bourke-White, for 10 points each.

[10] In 1946, Bourke-White photographed this activist and nationalist leader at his spinning wheel.

ANSWER: Mohandas **Gandhi** [or **Mahatma** Gandhi]

[10] Bourke-White co-authored the book *You Have Seen Their Faces* about people suffering during this period in American history. Dorothea Lange's photograph *Migrant Mother* shows a woman who fled the Dust Bowl during this period.

ANSWER: **Great Depression** [prompt on "the 1930s"]

[10] An ironic Bourke-White photograph depicts a line of black flood victims standing in front of one of these objects. The photograph is sometimes captioned "There's no way like the American way."

ANSWER: a **billboard** [prompt on **poster**]

6. This prophet and son of Elkanah and Hannah was promised to a priest at Shiloh before he was born. For 10 points each:

[10] Name this last Judge of the Israelites, who anointed Saul the first King of Israel.

ANSWER: **Samuel** [or **Shmuel**; or **Shamoel**]

[10] Samuel was dedicated to this other Judge, the High Priest who found Hannah praying for a child outside the temple. This man fell and died from a broken neck after hearing that the Philistines stole the Ark of the Covenant.

ANSWER: **Eli** [or **A'ali**]

[10] After Saul's disappointing performance as king, Samuel sought the next monarch from the family of this man, the grandson of Ruth and Boaz. Samuel rejected this man's seven oldest sons in favor of David.

ANSWER: **Jesse** [or **Eshai**; or **Yishai**; or **Yishay**; or **Yassa**]

7. Identify the following things from the San Francisco literary world, for 10 points each:

[10] Shigeyoshi Murao and Lawrence Ferlinghetti of San Francisco's City Lights Bookstore were arrested in 1957 for selling and publishing *Howl and Other Poems*, a collection by this Beat poet who wrote "Kaddish".

ANSWER: Allen **Ginsberg** [or Irwin Allen **Ginsberg**]

[10] Casper Gutman and Joel Cairo attempt to pay this San Francisco-based private detective to retrieve the Maltese Falcon in the Dashiell Hammett novel of that name.

ANSWER: **Sam Spade** [accept either underlined portion]

[10] Dave is forced to take care of his brother Toph in San Francisco, where they relocate after the cancer-related deaths of their parents, in this 2000 memoir by noted smarm purveyor Dave Eggers.

ANSWER: A ***Heartbreaking Work of Staggering Genius***

8. The "directional" form of this phenomenon favors individuals with phenotypes at one extreme of a range, while its "stabilizing" form favors individuals with phenotypes in the middle of the range. For 10 points each:

[10] Name this phenomenon whose "sexual" form causes individuals that are better at attracting mates to become more likely to pass their genes down to the next generation. Its "natural" form was put forth by Darwin as the primary mechanism driving evolution.

ANSWER: **selection**

[10] In this type of selection, individuals whose phenotypes are at the extremes of a range are favored, leading in the long run to creation of two major distinct phenotypes.

ANSWER: **disruptive** selection

[10] This quantity can be computed as the ratio of the response to selection and the selection differential.

Symbolized H-squared, this quantity represents the fraction of the change in phenotype that is caused by a change in genetics.

ANSWER: **heritability**

9. This god can often be found meditating in his home at the summit of Mount Kailash. For 10 points each:

[10] Identify this god who swallowed the Halahala poison generated by the churning of the ocean. This husband of Parvati and father of Ganesh is the “destroyer” of the Hindu Trimurti.

ANSWER: **Shiva** [accept **Shiv** or **Siva** or **Mahadeva** or, god knows, like nine hundred other things]

[10] Shiva is often depicted as Nataraja, who performs the “cosmic” type of this action atop Apasmara, the dwarf of ignorance. Another type of this activity was supposedly created by the goddess Laka in order to entertain Pele.

ANSWER: **dance** [accept word forms; anti-prompt on “hula”]

[10] Shiva was often identified with this earlier Vedic deity of wind and the hunt, who fathered a large number of fierce iron-toothed storm deities called the Maruts with one of his consorts, the goddess Prisni.

ANSWER: **Rudra**

10. This man used a fortress at Poenari Castle. For 10 points each:

[10] Name this Prince of Wallachia still considered a folk hero in Romania. He is best known today for reportedly brutally executing his enemies, such as the Ottomans, by penetrating them with stakes.

ANSWER: **Vlad the Impaler** [or **Vlad Tepes**; or **Vlad III**; or **Vlad Dracula**]

[10] Vlad hilariously killed Ottoman envoys working for this ruler by nailing their turbans to their heads. This ruler is best known for conquering Constantinople.

ANSWER: **Mehmed II** [or **Mehmed the Conqueror**]

[10] Vlad’s younger brother known as the “handsome” had this name. In a shocking twist, that man with this name would convert to Islam and help the Ottomans fight Vlad.

ANSWER: **Radu** [title or epithet does not matter]

11. This character once employed such minions as Trogg, Zombie, and Bird. For 10 points each:

[10] Name this man, who in the comics gets super strength from being exposed to the drug Venom. He was the main antagonist in the Knightfall storyline, and in a film appearance, serves Talia as a member of the League of Shadows.

ANSWER: **Bane**

[10] In “Knightfall,” Bane broke the back of this hero, who fights villains like the Joker.

ANSWER: **Batman** [or **Bruce Wayne**, either part]

[10] Another Batman villain is Scarface, a cigar-chomping gangster who is incapable of pronouncing the letter “B.” Scarface has this notable character trait, which is why he is always accompanied by Arnold Wesker.

ANSWER: he’s a ventriloquist’s **dummy** [or a **puppet**, etc.; prompt on things like “he can’t talk on his own”; but DON’T accept “mute”]

12. This work includes such characters as Erminia, the princess of Antioch, and the Muslim-allied warrior-maiden Clorinda, both of whom convert to Christianity for love of the knight Tancred. For 10 points each:

[10] Name this epic which also details Armida’s abduction of Rinaldo, a fictionalization of the First Crusade by Torquato Tasso.

ANSWER: **Jerusalem Delivered** [or **La Gerusalemme Liberata**]

[10] The story of Rinaldo and Armida mirrors the story of Alcida and Ruggerio in a Ludovico Ariosto epic poem titled for this character “furioso”, which is a continuation of an unfinished Matteo Boiardo poem about him “innamorato”.

ANSWER: **Orlando** [prompt on “Roland”]

[10] *Orlando Furioso* and *Orlando Innamorato* were both written in stanzas using this rhyme scheme, pioneered by Giovanni Boccaccio, in which the lines follow an a-b-a-b-a-b-c-c pattern.

ANSWER: **ottava rima**

13. This ruler built a sculpture of “four lions” at Sarnath. For 10 points each:

[10] Name this ruler who became anguished after seeing the violence of the Kalinga War, which prompted him to convert to a pacifistic religion.

ANSWER: **Ashoka** Maurya [or **Ashoka** the Great]

[10] Ashoka converted to this religion based on the teachings of Siddharta Gautama.

ANSWER: **Buddhism**

[10] Ashoka was the son of this Mauryan ruler, himself the son of Chandragupta Maurya. His name refers to a bluish spot on his forehead caused by a drop of poison. As ruler, he conquered all of India except Kalinga.

ANSWER: **Bindusara** Maurya [or **Amitrochates**; or **Allitrochades**]

14. This man and Matthias Ringmann are credited with the first usage of the word “America” to refer to the continent of the New World. For 10 points each:

[10] Name this German cartographer whose 1507 map, *Universalis Cosmographia*, is the oldest surviving map to use the name America.

ANSWER: Martin **Waldseemüller**

[10] In 1569, this type of map projection was created by the namesake Flemish cartographer. A standard map projection, it is noted for distorting the size and shape of large objects, thus making Greenland look huge.

ANSWER: **Mercator** projection

[10] This thinker developed the Dymaxion map, which is projected onto an icosahedron and can then be unfolded and flattened to two dimensions. He also proposed a Dymaxion car and received a patent for a geodesic dome.

ANSWER: Buckminster **Fuller** [or Richard Buckminster “Bucky” **Fuller**]

15. The variance of this distribution equals one minus its parameter divided by the square of its parameter, and its mean equals one over its parameter. For 10 points each:

[10] Name this distribution, which gives the probability that in a series of k Bernoulli trials, the *first* success will be the k th trial.

ANSWER: **geometric** distribution

[10] For an infinite geometric series with first term a and common ratio r , what is the sum of the infinite series, assuming r is greater than -1 but smaller than 1 ?

ANSWER: **a divided by 1 minus r** [or **a over 1 minus r**]

[10] A geometric series will only have this property if the absolute value of the common ratio is less than one. A simple definition of this property is that the limit of the series as the number of terms approaches infinity approaches a finite sum.

ANSWER: **convergence** [accept word forms]

16. Carlos Chavez’s *Upingos* and Benjamin Britten’s *Six Metamorphoses After Ovid* were written for this instrument, which features prominently in the “Menuet” and “Rigaudon” sections of Ravel’s *Le Tombeau de Couperin*. For 10 points each:

[10] Identify this woodwind instrument played by Léon Goossens, for which Mozart wrote a concerto in C major.

ANSWER: **oboe**

[10] A sonata in unusual two-movement form for oboe was written in 1938 by this German composer, whose other works include a collection of fugues called *Ludus Tonalis* and the *Symphonic Metamorphosis of Themes by Weber*.

ANSWER: Paul **Hindemith**

[10] A cadenza-like passage for solo oboe appears during the recapitulation in the first movement of this Beethoven symphony, which opens with a famous “short-short-short-long” motif representing “Fate knocking at the door”.

ANSWER: *Symphony No. 5* in C minor [accept word forms and obvious equivalents like “Beethoven’s **Fifth**”]

17. This man is the subject of the book *Yankee from Olympus*. For 10 points each:

[10] Name this man who wrote in a famous dissent in *Lochner v. New York* that “the Fourteenth Amendment does not enact” the book *Social Statics*. This justice more famously wrote about “clear and present danger” in his majority opinion in *Schenck v. United States*.

ANSWER: Oliver Wendell **Holmes** Jr.

[10] *Schenck* concerned the enforcement of the Espionage Act of 1917, which was passed during this war. The United States was partially influenced to enter this war after the sinking of the *Lusitania*.

ANSWER: **World War I** [or the **Great War**]

[10] Holmes’ later moderation of his free speech views was influenced by the writings of this New York judge, who later became an extremely prolific judge on the Court of Appeals for the Second Circuit. The author of *The Spirit of Liberty*, he had more opinions quoted by the Supreme Court than any other lower-court judge.

ANSWER: Learned **Hand** [or Billings Learned **Hand**]

18. Tony Harrison used the rediscovery of one work in this genre as the basis of his play *The Trackers at Oxyrhyncus*. For 10 points each:

[10] Name this literary genre whose only fully extant example, a play depicting a comical version of a scene from the *Odyssey*, is *Cyclops*.

ANSWER: satyr plays

[10] *Cyclops* was written by this Athenian tragedian, whose other plays include *The Suppliants*, *Alcestis*, *Hippolytus*, and *Medea*.

ANSWER: Euripides

[10] Euripides wrote two plays titled for this character, which relate how she was whisked away to the island of Tauris by Artemis, thus rescuing her from Agamemnon's attempt to sacrifice her at Aulis.

ANSWER: Iphigenia

19. A red curtain dominates the top portion of this painting, which was rejected by the church of Santa Maria della Scala because the artist used a prostitute as the model for the title figure. For 10 points each:

[10] Identify this painting whose title figure lies in a red dress with her left arm splayed out to the side, while the apostles gather behind her and Mary Magdalene sits in front with her head in her hands.

ANSWER: *The Death of the Virgin*

[10] In this painting, created for the Contarelli Chapel, a beam of light originates in the upper right, above a man pointing toward a customs-house table. The title figure may be either a seated, bearded man or the youth at which he points.

ANSWER: *The Calling of Saint Matthew*

[10] This Italian pioneer of tenebrism painted such chiaroscuro-heavy paintings as *The Death of the Virgin* and *The Calling of Saint Matthew*.

ANSWER: Michelangelo Merisi o Amerighi da Caravaggio [accept either underlined portion]

20. The strength of these forces increases with the size of the molecules involved since polarizability in general increases with the volume of the electron cloud. For 10 points each:

[10] Name this type of van der Waals force that arises due to the formation of instantaneous dipoles, which induce dipoles in neighboring molecules. They are the only significant intermolecular attractive force present in noble gas atoms.

ANSWER: London dispersion forces

[10] The magnitude of a London dispersion force depends on the polarizability of the molecules involved, the distance between them, and this other quantity for the molecules. This quantity is equal to minus the energy of the HOMO according to Koopmans' theorem.

ANSWER: ionization energy [or ionization potential]

[10] The strength of London dispersion forces varies with the inverse of the distance between them raised to this power. The cycloalkane with this many carbons has a stable chair and unstable boat conformation.

ANSWER: 6

Extra. Name some fascists, for 10 points each.

[10] This Italian known as "Il Duce" led Italy from 1925 to 1943. His forces generally got smacked around during World War II and he himself was killed by partisans near Lake Como.

ANSWER: Benito Mussolini

[10] This Norwegian seized power in a Nazi-backed coup in 1940 and served as Minister-President in collaboration with the Germans. The Norse government executed him in 1945 and his name became synonymous with "traitor."

ANSWER: Vidkun Quisling

[10] This Spanish lawyer founded the Falange Espanola nationalist party. Hailed as a martyr by Francisco Franco, this man was executed by the Spanish Republican government during the Spanish Civil War.

ANSWER: Jose Antonio Primo de Rivera