Chicago Open 2013: No Subtext, Just Tacos.
Finals 1

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1. **In one battle between these two countries, the victorious side soaked a water mill in tar, set it on fire, and shoved it down the river to wreck the other side's pontoon bridges. At another battle, one of these countries defeated the other, which had allied with the Netherlands, with the first use of an observation balloon in military history. In a battle between these two countries, Jacques Macdonald lost 2/3 of his soldiers to artillery fire while advancing on the enemy center in a hollow square, and Johann** (*) von Klenau was pushed back by what he called an "Infernal Column." These two countries clashed at the Battle of Fleurus; over a decade later, one of these two countries won a surprise victory at Aspern-Essling, only to be crushed soon afterward at Wagram. That one sent Michael von Melas on an unsuccessful surprise attack against the other in a battle that resulted in the Treaty of Luneville. For 10 points, name these two countries that fought the Battle of Marengo over Northern Italy, and whose early 19th-century battles were often showdowns between Napoleon and Archduke Charles.
ANSWER: **France** and **Austria** [or the **French** and **Austrian** Empires; or **France** and the **Hapsburg Empire**]

2. **One song on this album was based on a motive that a Tower Records employee identified as being from Brahms' Piano Concerto no. 2 after the songwriter walked in and hummed it. Another song in this album features two lines of Swahili, "Tika N'Gai wa yo Simba N'Gai wa yo," and has a title that is a combination of two languages' words for "now." A song on this album is addressed to a woman who "fell in love in East (*)** L.A. to the sounds of a guitar" and "reminds" the singer "of a west side story." This album's many guest stars include Lauryn Hill and Cee-Lo Green on "Do You Like the Way," Eric Clapton on "The Calling," and The Product G+B on "Maria Maria." This album won nine Grammy awards, including three for a song addressed to a "Spanish Harlem Mona Lisa." For 10 points, name this album by Santana, which features his collaboration with Rob Thomas, "Smooth."
ANSWER: *Supernatural*

3. **One famous result named for him states that if G is the cyclic Galois group of a finite extension K over F with generator beta, and u is an element in K with a relative norm of 1, then there exists v such that u is equal to beta of v, divided by v. That theorem, actually discovered by Ernst Kummer, was the 90th in a volume that he was to co-author with Minkowski, though Minkowski ended up not contributing. One way to prove another of his theorems hinges on proving Zariski's lemma; that theorem uses two bijective maps which are inverses of each other to show a correspondence between affine varieties(*)** and radical ideals in a polynomial ring and is a foundational result of algebraic geometry. Another of his theorems states that if R is a Noetherian ring, then the polynomial ring over R is also Noetherian. These results are respectively his Theorem 90, his Nullstellensatz, and his basis theorem. For 10 points, name this former University of Göttingen professor who at the 1900 International Congress of Mathematicians presented a list of 23 important unsolved problems.
ANSWER: David **Hilbert**

4. **In one story, this man fought his enemy to a draw nine times, then went to a mountain for three days to learn the art of war from the bird-bodied Dark Lady. One of his enemies was a bull-shaped monster with a bronze head and iron eyebrows who was the first to create metal weapons. This man made a drum from the skin of a one-legged lightning monster called Kui, and he used his companions Responding Dragon and Drought Fury to defeat the war god** (*) Chiyou. When Nuwa isn't counted, he's generally the last of the Three Sovereigns after Fuxi and Shen Nong. this man invented writing and the pottery wheel, and was married to Leizu, who discovered the way to breed silkworms. For 10 points, name this culture hero considered the founder of Chinese civilization, a ruler of China named for a certain color.
ANSWER: the **Yellow Emperor** [or **Huangdi**]

5. **In a novel with this title, the narrator recalls how his grandfather lost an eye at the Battle of Wilson's Creek, having become an abolitionist after having a vision of a manacled Jesus. In that novel with this title, the disgraced Jack Boughton returns to the title town so he can live with his black common-law wife. A novel with this title is framed as an extended letter written by 76-year-old Iowa preacher dying of angina pectoris, John Ames. This place appears in the title of an African-American spiritual that promises, "Some times I feel discouraged and think my work's in vain, but then the Holy Spirit (*)** revives my soul again." This is the title of a novel that won the 2005 Pulitzer by Marilynne Robinson. It is also the name of a country where people join the Aunts so as not to be sent to the Colonies, where the Mayday Resistance movement operates, and where the Commander is married to Serena Joy. For 10 points, give this name of the fictional Republic where the *Handmaid's Tale* is set, also a Biblical location known for its balm.
ANSWER: **Gilead** [or the Republic of **Gilead**; or "There is a Balm in **Gilead**"]

6. **The text of Antoine Busnois's motet *In hydraulis* contains an admiring address to this composer, who returned the favor in his *Ut heremita solus*. The music theorist Johannes Tinctoris dedicated his treatise on the modes to Busnois and this composer. He wrote a piece without clefs that could be sung in any of the four authentic modes, the *Missa cuiusvis toni*, and Tinctoris praised this composer's bass voice as the finest he had heard. He is not Palestrina, but he used the text *Sicut cervus* as the tract in his (*)** Requiem, the earliest polyphonic setting of Requiem Mass. He is not Bach, but he wrote a piece composed of canons whose interval of imitation expands from the unison to the octave. That piece is also known for its extensive use of mensuration canons, in which different voices sing the same melody at different speeds. This composer was the dedicatee of another composer's lament *Nymphes des bois*, also known as the "Deploration on the Death of" this composer. For 10 points, name this composer of the Franco-Flemish school and possible teacher of Josquin des Prez.
ANSWER: Johannes **Ockeghem** [or Jean de **Ockeghem**]

7. **As a teenager, this monarch was part of the "Bird Feathers," a gang of notorious seducers. This monarch ruled when John Wilkinson brought the first coffee beans to his empire aboard the *HMS Blonde,* and employed William Richards as a translator and diplomat. Out of admiration for Saint Patrick, this king declared that his own "official birthday" was Saint Patrick's Day. His reign included the departure of a sandalwood-trading royal governor named Boki. For five months, this man was threatened with forced annexation by British gunboats in the** (*) Paulet affair. This king was prevented from marrying his sister by missionaries, and signed his kingdom's first written constitution in 1840. This man's elder brother ended the ancient *kapu* system of bans and taboos before this man became king at age ten, under the regency of his aunt Kaahumanu. For 10 points, name this man whose 29-year reign was the longest of any Hawaiian monarch.
ANSWER: **Kamehameha III** [or Kalani **Kauikeaouli** Kaleiopapa Kuakamanolani Mahinalani Kalaninuiwaiakua Keaweawe`ulaokalan]

8. **A reaction formulated by this organic chemist involves the reaction of an allylic alcohol with an orthoamide which subsequently undergoes Claisen rearrangement to form a gamma,delta-unsaturated amide, which is generally referred to as his variant of the Claisen reaction. Another reaction named for him involves the reaction of a thioester with an alpha-halocarbonyl and subsequent rearrangement to form a 1,3-dicarbonyl compound - that is his 'sulfide contraction'. An alpha,beta-epoxyketone is reacted with an aryl sulfonylhydrazine and resulting** fragmentation results in an alkyne and ketone in a reaction named for him and Tanabe. The salt named for him is widely used in Mannich-type reactions and is the iminium product of the condensation of formaldehyde and dimethylamine. FTP, name this famous chemist who is often credited for developing, with Robert Woodward, a successful synthesis of vitamin B12 in the early 1960s.
ANSWER: Albert **Eschenmoser**

9. **One poem about this event describes an apparition of Apollo, who looked as "when, dread Python's writhing coils o'ercome, / he slew him when the peaceful lyre was dumb." Another poem about this event describes how "the sun looks down on a shameful mosquito-net" and attacks a man who "deigns to serve the withered eunuchs." A poem set in the aftermath in this event compares a man hunting a "deadly monster" to a "sparrow-hawk" who follows a dove or a "swift hunter" pursuing a hare; that poem, concerning this event, claims, "now is the time to beat the earth with unfettered feet" and "now is the time for (*)** drinking." The ninth of Horace's *Epodes* is about this event, as is the 37th poem in his first book of *Odes*. This event is depicted as the culmination of a series of other scenes, including the Gauls taking the citadel, Catiline hanging from a rock, and

Cato dealing out laws, in the centerpiece of Aeneas' shield in the Aeneid. For 10 points, name this event that Enobarbus describes in Act III of *Antony and Cleopatra*, a battle where Antony was defeated by Octavian's navy.
ANSWER: The Battle of **Actium**

10. **This book notes that the tax Joseph Gallieni levied on the people of Madagascar after conquering it was called the "moralizing tax." Henry Farrell criticized this book's author for incorrectly citing Michael Hudson's book *Super Imperialism* in Chapter XII, which covers "1971 to the beginning of something yet to be determined." The beginning of this book recounts how a liberal woman at a garden party was shocked by the author's description of the (*)** Jubilee practiced by Hebrew kings. This book attacks the myth that monetary exchange arose as a substitute for barter, instead arguing that systems of credit existed in agrarian societies. The author of this book also coined the slogan "We are the 99%" used by Occupy Wall Street. For 10 points, name this 2011 book by anarchist David Graeber, which challenges moralizing narratives about paying back what one owes.
ANSWER: ***Debt***: *The First 5000 Years*

11. **A leading member of this political movement discussed the "parallel polis" in an essay. dedicated to a spokesperson for this group named Patocka who died of a stroke after eleven hours of interrogation. Members of this group formed a separate organization dedicated to monitoring abuses by police called the Committee for the Defense of the Unjustly Prosecuted, or VONS. A spokesman for this group wrote an essay about a grocer who hangs a sign bearing the slogan "Workers of the world, unite!" and became, like many other leaders of this movement, a leader of the (*)** Civic Forum**.** The arrest of an underground band called the Plastic People of the Universe spurred the formation of this group, which was advocated in the essay "The Power of the Powerless,"and whose activism helped catalyze the Velvet Revolution. For 10 points, name this opposition movement from Communist Czechoslovakia, which takes its name from a manifesto criticizing the Czechoslovakian government.
ANSWER: **Charter 77** [prompt on the **Civic Forum** before it is read, since there's overlap]

12. **In the Southern Hemisphere, the presence of usnic acid causes these organisms to assume a different colour. The k-spot test can be used to differentiate stictic acid derivatives called depsidones produced by the *Parmotrema* and *Menegazzia* genuses of these organisms. These organisms can reproduce by small, branchy outgrowths called isidia or through tiny granules known as soredia. Jones et. al showed that the *Enchondrus* snail was able to fertilize the soil in the Negev Desert because it (*)** fed on these organisms, which provided nitrogen. An additional layer of lower cortex is present in the free-standing form of these organisms, while another form uses rhizinae for attachment. Their main body, called the thallus, comes in crustose, fruticose and foliose forms and, due to their sensitivity to sulfur dioxide, these organisms are used as an indicator for air pollution. Examples include "old man's beard" and reindeer moss. Composed of a mycobiont and phycobiont, for 10 points, name these organisms, a symbiotic relationship between an algae and a fungus.
ANSWER: **lichen**s

13. **This artist was inspired by the painting *Pierrot Content* to depict his son as a commedia-dell-arte character hemmed in by his other family members in a painting done "after Watteau." In the painting that won this artist fame, bespectacled photographer Harry Diamond shrinks from a potted plant in an enclosed space. This artist painted his first wife holding her hand over her left breast as her right breast pops out of a loose yellow bathrobe in his *Girl with a White Dog*. This artist's *Large Interior, W11* and *Interior at Paddington* are some of his many paintings of grimy-looking (*)** flats. He painted the naked, obese Sue Tilley resting on a broken-down couch in *Benefits Supervisor Sleeping*, and generally made a habit of painting ugly naked people. For 10 points, name this British painter who died in 2011, the grandson of an Austrian psychoanalyst.
ANSWER: Lucian **Freud**

14. **The first scene of this play occurs against the backdrop of a staircase wall covered in a tapestry depicting *The Triumph of Love* designed by Francois Boucher. At the climax of this play, a woman is caught after the snake-shaped diamond brooch she stole is clasped around her arm and can only be released by a secret spring. One character in this play tells his butler Phipps that "what is unfashionable is what other people wear" in an episode concluding with the line, "To love (*)** oneself is the beginning of a lifelong romance." The crux of this play is that a rising MP must decide whether to speak in favor of a doomed South American Canal

project, or risk his youthful insider trading being revealed by Mrs. Cheveley. The hero of this play, who gets engaged to Mabel in its final act, is the dandy Lord Goring. For 10 points, name this Oscar Wilde play in which Lady Chiltern must accept that Robert Chiltern is not the title character.
ANSWER: An _Ideal Husband_

15. **For a linearly reductive group, this man's namesake operator gives a notion of averaging and is studied in invariant theory. Much research has been devoted to developing a relationship between the mean velocity's strain rate to a quantity named after this man that is equal to the density times the time average of the fluctuation components. His time averaged equations are the origin of the most important closure problem in fluid dynamics. This man's namesake stress model is the next order improvement over the eddy (*)** viscosity linearization. His namesake stress is derived from decomposing turbulent flow into a background and a fluctuation flow and represents the momentum transferred by turbulent flow. Relative roughness, friction factor, and this man's namesake number are related on Moody diagrams. The ratio of inertial to viscous forces is a dimensionless number that characterizes the onset of turbulence that is named after, for 10 points, what scientist?
ANSWER: Osborne **Reynolds**

16. **This work uses the image of a puppet pulled by two hard iron strings and a flexible golden string to describe the soul. It splits desirable outcomes into the "human goods," such as health or wealth, and "divine goods." This text corresponds to Stephanus numbers 624a through 969d. A key passage of this book compares the free doctor's healing of free men to the slave doctor's healing of slaves, and its final section argues that a "Nocturnal Council" ought to have immense powers before sunrise in a city with exactly 5,040 (*)** households in it, called Magnesia. Megillus appears with Clinias at a crossroads on Crete in this work, where they talk with a man identified only as the "Athenian Stranger". For 10 points, name this pessimistic, twelve-book, Socrates-free dialogue about ordering society, written years after the _Republic_ on similar subject matter by an older Plato.
ANSWER: Plato's _Laws_ [or _Nómoi_]

17. **The funeral of Muhammad Ali Jouhar in this city was used as pretext to organize a major 1931 pan-Islamic conference. During a violent outburst in this city, one of its leaders climbed out on a balcony and shouted, "THIS IS YOUR KING!" while wildly waving a picture of the non-native Faisal. The Palin Commission followed that incident, which occurred during this city's annual Nabi Musa Festival. George Antonius and Musa Alami were among the leaders of this city called before the Peel Commission. Its powerful families included the Khalidi, Nashashibi, and Husayni clans; the best-known scion of the latter, Haj Amin, later became a notorious radio propagandist for Hitler. The 1923 essay "The Iron Wall" rejects the idea of inclusive representation in a prospective government based in this city, and was written by (*)** Vladimir Jabotinsky, whose paramilitary Betar were later folded into Irgun. Folke Bernadotte was murdered in 1948 in this city by the Stern Gang while trying to mediate a 1948 independence war. For 10 points, name this former capital of Mandate Palestine and current capital of Israel.
ANSWER: **Jerusalem** [or al-**Quds**; or **Yerushalayim**]

18. **In chapter 7 of this novel, a parasite's attack on a Rubens painting and people throwing themselves at a bank's windows are explained as the activity of "the Worm." The narrator of this novel judges his two love interests on a bus after seeing one of them read _The Story of Genevieve of Brabant_ and the other read an unnamed modern novel. Its characters include a Eumaeus-like Greek guide who carries around a bilingual edition of the _Odyssey,_ named Yannes. This novel's protagonist is working on a (*)** cantata based on _Prometheus Bound._ The narrator of this novel leaves his actress wife Ruth and goes on a trip with his mistress, the astrologer Mouche, whom he leaves in turn for Rosario. In this novel, the Curator of a museum asks his friend to retrieve some ancient instruments from South America to discover the origin of music. For 10 points, name this novel about a European narrator's trip up the Orinoco, by Alejo Carpentier.
ANSWER: The _Lost Steps_

19. **In this opera, four characters tries to cheer a woman up with the quartet "Lieben, hassen, hoffen, zagen" after she sings a depressing aria about the purity of the land of death, "Es gibt ein reich." At the end of this opera, a woman re-enters and repeats the lyric "When the new god comes we surrender dumbly" from the earlier, difficult _coloratura_ aria (*)** "Grossmachtige Prinzessen!_"_ In the prologue to this opera, the Major-Domo

tells the Music-Master and the Composer that the scheduled *opera seria* and *opera buffa* will be performed at the same time, leading to a scene in which the *commedia dell'arte* character Zerbinetta encourages the title character to find a new love in Bacchus. For 10 points, name this Richard Strauss opera set after the title woman is abandoned by Theseus.

ANSWER: ***Ariadne auf Naxos***

20. **The end of this section of religious text notes that even if the whole sea were turned to ink and doubled, the words of God couldn't all be written with it. Stories in this segment include an man who brags to his equally-wealthy neighbor before losing his garden of grapes and date palms, and a dog that stretches its forelegs as several youths are turned left and right in their sleep. This segment's namesake locale is inhabited for 309 years by people sometimes equated to the Seven Sleepers of Ephesus, and it also features the building of a wall to keep out** (*) Gog and Magog by Dhul-Qarnayn, who is sometimes identified with Alexander the Great. This 110-*ayah* segment comes immediately before a *sura* describing fresh dates that drop during Jesus's birth, called "Maryam." For 10 points, name this section of the Qur'an, in which young monotheistic men seek refuge from persecution in the namesake natural locale.

ANSWER: Sura al-**Kahf** [or **Sura 18**; or "The **Cave**" Sura; prompt on "the Qur'an;" be lenient and prompt on "Juz 15" or "Juz 16" even though this sura is split across two juz and not all clues will apply to both]

Extra: **In the original form of this analytical technique, a device consisting of a glass tube with a resistive coating uses an electric field to accelerate incoming electrons into collisions with the wall, such that more electrons are ionized and hence a detectable current pulse is formed on the detector. This device is called a channeltron. In more conventional forms, hemispherical electron energy analyzers are used** to measure the kinetic energy of incoming electrons. Pioneered by Siegbahn in 1954 for which he received the Nobel prize in 1981, this analytical technique measures kinetic energies and the intensity of electrons escaping from the first 1-10 micrometers of a surface. In this method electron binding energies are calculated by subtracting the measured electron kinetic energies and known work functions from energies of photons generally obtained from synchrotron sources. FTP, name this ubiquitous technique which is based on an effect discovered by Einstein in 1905.

ANSWER: **X-ray photoelectron** spectroscopy (PROMPT ON: **photoelectron** spectroscopy, **photoemission** spectroscopy, ACCEPT: **XPS**, **electron spectroscopy for chemical analysis**, **ESCA**)

1. They are activated by the crosslinking of IgE, which causes their FC-epsilon RI receptors to cluster and induce degranulation, for 10 points each:
[10] Name these cells that release histamine during anaphylaxis. Unlike basophils, they contain the *c-kit* receptor tyrosine kinase and they are present in tissues, not blood.
ANSWER: __mast cell__s
[10] Histamine is metabolized in the body by this copper-containing oxidoreductase, also known as histaminase, that is found in the intestinal mucosa. Deficiency of this enzyme can cause allergy-like symptoms upon exposure to certain foods.
ANSWER: __diamine oxidase__ [prompt on "amine oxidase"]
[10] Mast cells are derived from pluripotent stem cells expressing this glycoprotein on the cell surface. Besides playing a role in cell adhesion, its presence is used as a marker to identify hematopoetic progenitor cells prior to bone marrow transplantation.
ANSWER: __C__luster of __D__ifferentiation __34__

2. This author lived in a Benedictine monastery for a month before leaving for China and having an affair with a married woman, an experience that inspired a play about Rodrigue and Prouheze's love in Counter-Reformation era Spain . For 10 points each:
[10] Name this French Catholic writer of the *Five Grand Odes*, whose masterpiece was the eleven-hour-long verse drama *The Satin Slipper*.
ANSWER: Paul __Claudel__ [Camille Claudel's brother]
[10] A stanza mentioning how Time "will pardon Paul Claudel" was cut from this English-language poem containing the oft-quoted line "poetry makes nothing happen." This tripartite poem opens with the line "He disappeared in the dead of winter."
ANSWER: __"In Memory of W.B. Yeats"__
[10] Claudel wrote the libretto for Arthur Honegger's oratorio about this woman. Mark Twain considered his novel about this woman's "Personal Recollections" to be his best work, and a play about her is sometimes called Shaw's only tragedy.
ANSWER: Saint __Joan__ of Arc [or __Jeanne__ d'Arc]

3. Franz Schmidt dedicated many works to this pianist, including two concertos and a toccata in D minor, and this performer also commissioned Prokofiev's fourth piano concerto. For 10 points each:
[10] Name this Austrian pianist whose arm was amputated during the First World War, leading him to commission many pieces for the left hand alone.
ANSWER: __P__aul __Wittgenstein__
[10] Wittgenstein's best-known commission is the Piano Concerto for the Left Hand by this composer of *Gaspard de la nuit* and the ballet *Daphnis and Chloe*.
ANSWER: Maurice __Ravel__
[10] Brahms had earlier arranged this solo violin piece for piano left-hand. The final movement of J.S. Bach's second partita, it is a massive set of variations based on a repeating ground bass pattern.
ANSWER: the __Chaconne__ [or __Ciaccona__]

4. Answer these questions about the scams pulled off by the duke and the dauphin while in Huck Finn's company, for 10 points each.
[10] Huck vows to do this thing after the duke and dauphin sell Jim, fleeing Huck's company thereafter. Huck equates rescuing Jim with this action, which he chooses after he reflects on his Sunday School teachings and tears up a letter to Jim's owner, Mrs. Watson.
ANSWER: "All right, then, I'll __go to hell__" [accept word forms; accept __damnation__ or being __damned__; prompt "getting burned"]
[10] The duke and dauphin impersonate two brothers from this family to rob it of Peter's $6,000 inheritance in their longest scheme. It includes a hare-lipped girl named Joanna, who awaits the real brothers' return from Sheffield, England.
ANSWER: __Wilks__ family
[10] While he is still an accomplice to the scheme, Huck uses this object as a hiding place for the dead Peter Wilks's 6,000 dollars of gold. In another novel, the top of one is carved with a copy of designs from an indigenous prince's "twisted tattooing".

ANSWER: Peter Wilks' **coffin** [or Queequeg's **coffin**]

5. This god is usually depicted walking around on square snowshoes and carrying around his bow. For 10 points each:
[10] Name this enigmatic Norse god of winter, a son of Sif and stepson of Thor.
ANSWER: **Ull**r
[10] Ullr is similar to this other Norse winter deity who went on skis. This giantess married Njord as compensation for the death of her father Thiazzi.
ANSWER: **Skadi** [or **Skathi**]
[10] According to the *Skaldskaparmal*, the Aesir had to atone for Thiazzi's death by accomplishing this difficult feat, which Loki managed through a setup that involved attaching him to a goat by the testicles.
ANSWER: **making** Skadi **laugh** [or equivalents that make it clear that Loki is **causing laughter**; prompt on **entertaining** Skadi; prompt on **amusing** Skadi]

6. Answer these questions about the use of camels in military history, for 10 points each.
[10] This caliph defeated the army of Muhammad's surviving wife Aisha at the Battle of the Camel. Shi'a Muslims consider him to be the first caliph, rather than the fourth.
ANSWER: **Ali** ibn Abi Talib
[10] At this 546 BCE battle, Cyrus the Great's last-minute decision to mount warriors on camels led to many frightened horses on the losing Lydian side.
ANSWER: Battle of **Thymbra**
[10] These militiamen, many of them Bedouin tribesmen, fought under ibn Saud to unify the Arabian peninsula in the 1920s and led raids into Najd while traveling on camels. Their insistence on unapproved raids into Iraq and Kuwait led some to rebel against ibn Saud.
ANSWER: **Ikhwan** [or **Akhwan**]

7. Philosophers who supported this perspective included R.M. Hare and Charles Leslie Stevenson. For 10 points each:
[10] Name this philosophical theory according to which ethical statements, such as "killing is wrong," do not actually express meaning, but instead express a sentiment like "I don't like murder."
ANSWER: **emotivism** [or **expressivism**]
[10] The emotivist view of ethics was championed by this British philosopher and *bete noire* of Mike Tyson. You may know him better for writing *Language, Truth, and Logic*.
ANSWER: Alfred Jules **Ayer**
[10] Emotivist theories run into this problem when applied to more complex sentences, such as "If tormenting the cat is bad, getting your little brother to do it is bad," which apparently does not express a moral position towards torturing cats. It is sometimes named for two philosophers.
ANSWER: the **embedding** problem [or the **Frege-Geach** problem; or the **Geach** problem; or the **Frege-Geach-Searle** problem]

8. Answer these questions about contemporary art made by, or consisting of, women's bodies, for 10 points each.
[10] This 20ᵗʰ-century French artist had naked women cover themselves in paint and roll all over a canvas to paint it in his "anthropometry" series. He created many monochrome works with a vivid "international…blue" color.
ANSWER: Yves **Klein**
[10] This Yugoslav-born performance artist let audiences handle 72 objects, including a loaded gun, as she sat for six hours in *Rhythm 0*. This frequent collaborator with Ulay sat motionless across from MoMA audiences who berated her one-by-one in *The Artist is Present*.
ANSWER: Marina **Abramović**
[10] In this 1975 performance piece, Carolee Schneeman disrobed on stage, pulled a rolled-up piece of parchment out of her vagina, and read a speech on feminist theory which was printed on the parchment.
ANSWER: ***Interior Scroll***

9. They have won 23 national league titles and play their home games at Allianz Arena. For 10 points each:

[10] Name this soccer team, who on May 25th defeated Borussia Dortmund 2-1 to become champions of Europe for the fifth time.
ANSWER: FC **Bayern** Munich [accept Fußball-Club **Bayern** München, prompt on "FCB" or "Die Roten"]
[10] Bayern's clinching goal came in the 89th minute when this Dutch right winger took a backheel from Franck Ribéry and put the ball past Roman Weidenfeller. As he had assisted Mario Mandzukic's opening goal, this former Real Madrid player was also voted UEFA Man of the Match.
ANSWER: Arjen **Robben**
[10] This "short, fat" striker nicknamed "Der Bomber" played a key role in Bayern's run of three straight European Cups from 1974 to 1976. He also was the top scorer in the European Cup four times and top scorer in the Bundesliga seven times.
ANSWER: Gerhard "Gerd" **Müller**

10. Nikolas Skoufas, Athanasios Tsakalov, and Manolis Xanthos founded this organization in Odessa, inspired by their time with the Masons and the example of the Carbonari. For 10 points each:
[10] Name this secret society of Greek nationalists that supported and funded a rebellion in the Danubian Principalities of the Ottoman Empire in 1821.
ANSWER: the **Filiki Eteria** [or the **Friendly Society**]
[10] This Phanariot Greek was a famous leader of the Filiki Eteria, which supported his Sacred Band in its rebellion against the Ottomans. This namesake of a Michigan city was defeated at the Battle of Dragasani.
ANSWER: Alexander **Ypsilantis**
[10] This humanist scholar encouraged the Greek quest for national autonomy through his work on the Greek language, including his invention of a hybrid of classical and demotic Greek called Katharevousa.
ANSWER: Adamantios **Korais**

11. Answer the following questions about industrial processes used to form elements and compounds of chemical interest. FTPE:
[10] Name the process where partially molten magnesium at 800 degrees Celsius is used to reduce the oxides and halides of titanium and zirconium.
ANSWER: **Kroll** process
[10] This process involves the reaction of benzene with propene in a sulfuric acid medium to generate isopropyl benzene, which is then oxidized by molecular oxygen in the presence of radical initiators to generate the phenol and acetone products
ANSWER: **Cumene** process
[10] This precursor to the Ostwald process for the manufacture of nitric acid involves the use of electric lightning bolts to generate nitrous oxides, which were then further oxidized to nitrogen dioxide and then dissolved in water to form nitric acid and some recycled gases.
ANSWER: **Birkeland-Eyde** process

12. Answer these questions about Benedict Anderson's *Imagined Communities*, for 10 points each.
[10] Anderson argues that this device sped up the standardization of regional dialects into languages that could easily be read across wider areas. It aids a type of "capitalism" that precedes nationalism.
ANSWER: the **printing press**
[10] Anderson notes that print-languages might emerge from regional obscurity to unite a nation with the example of this country, where Anderson did his Ph. D thesis. Another social scientist in this nation recorded the cry of "Pulisi! Pulisi!" from a "superorganism."
ANSWER: **Indonesia**
[10] This Marxist historian put forward the "threshold principle" as a competing theory of nationalism's advent in *Nations and Nationalism Since 1780.* He also bookended his four-volume history of Europe from 1789 to 1991 with *Age of Revolution* and *Age of Extremes.*
ANSWER: Eric John Ernest **Hobsbawm**

13. This character holds a piece of bread and butter while supervising the hanging of a marquee by four workmen, and is horrified when a delivery man from Godber's bakery tells of a man who fell off his horse. For 10 points each:
[10] Name this sister of Jose, a girl who is often complimented on her black hat trimmed with gold daisies and a long velvet ribbon. She delivers a basket of food to the Scott residence.

ANSWER: **Laura** Sheridan [or Laura **Sheridan**; do not accept "Mrs. Sheridan," who is Laura's mother, or "Laurie", who is Laura's brother]
[10] This New Zealand short story author wrote about Laura Sheridan's concern for the recently-deceased Mr. Scott in "The Garden Party".
ANSWER: Katherine **Mansfield** Beauchamp [or Katherine **Beauchamp**; or Katherine **Murry**; or Lili **Heron**]
[10] In Mansfield's "The Garden Party," this group of people is described as "too like frogs for words" by Kitty Maitland, due to their green coats. Laura begs her father to give these people drinks.
ANSWER: the **band** of musicians at the garden party

14. This process generally modeled by using a random walk with particles sticking to each other and to a fixed seed particle. For 10 points each:
[10] Name this process which was described by Witten and Sander in 1981 to describe irreversible colloidal cluster formation. It is not dominated by convection and describes such phenomenon as matter combining to form dust or dendrite crystals and electrodeposition.
ANSWER: **diffusion-limited aggregation** [accept **DLA**]
[10] One problem that diffusion-limited aggregation can model is Hele-Shaw flow, which is a type of incompressible and irrotational flow and thus has a potential function that satisfies this equation. Poisson's equation is a modification of this equation when the right hand side is not zero.
ANSWER: **Laplace**'s equation
[10] Diffusion-limited aggregation can also model dielectric breakdown, which is the formation of electrically conducting regions in insulators when exposed to strong examples of this phenomenon. This phenomenon changes the index of refraction linearly in the Pockels effect.
ANSWER: **electric field** [accept **E field**]

15. This artist made a series of woodcuts showing a skeletal Death visiting people of all ranks in society, including "The Rich Man" and "The Emperor." For 10 points each:
[10] Name this artist of the *Dance of Death*, a court painter to Henry VIII best known for *The Ambassadors*.
ANSWER: Hans **Holbein** the Younger
[10] In the top-left corner of *The Ambassadors*, one of these objects is half-visible behind a green curtain; it is another reminder of the impermanence of earthly life along with the anamorphic skull.
ANSWER: a silver **crucifix** [or a **cross**; or a statue of **Jesus on the Cross**; prompt on a **Jesus** statue]
[10] Marcus Gheeraerts the Younger is best-known for this way over-the-top painting of Elizabeth I, in which she she stands on top of a globe next to a floating sonnet as lightning strikes in the top right over a Latin inscription reading, "She can, but does not avenge."
ANSWER: the **Ditchley Portrait**

16. Answer the following about religious chants, for 10 points each.
[10] Yogis believe that reciting these sacred formulas while meditating can bring them in contact with the divine. They generally consist of two *shlokas*, but can be as short as the syllable "Om."
ANSWER: **mantras**
[10] This short prayer, important in Hesychasm, simply consists of the Greek for "Lord Jesus Christ, Son of God, have mercy on me, the sinner." Eastern Orthodox ascetics will often repeat it throughout the day.
ANSWER: the **"Jesus Prayer"** [or "The **Wish**; or "he **Euche**"; prompt on "The **Prayer**]
[10] Followers of Nichiren Buddhism chant this four-word phrase, meaning "Devotion to the Wonderful Dharma of the Lotus," to reveal their Buddha-nature.
ANSWER: "**Namu Myoho Renge Kyo**" [or "**Nam Myoho Renge Kyo**"]

17. This war's namesake tribe had assisted American colonists in the Tuscarora War, but rebelled after hunting conditions worsened and they became hundreds of thousands of deerskins in debt. For 10 points each:
[10] Name this 1715-1716 war in which the namesake tribe rose up and killed hundreds of traders in South Carolina, but was defeated when the colonists allied with Virginia and the Cherokee. William Gilmore Simms wrote a "romance" about it.
ANSWER: the **Yamasee** War
[10] Colonial South Carolina also weathered this 1739 slave rebellion led by an Angolan slave named "Jemmy" or "Cato." After this rebellion, a law was passed forbidding masters from teaching their slaves to read.

ANSWER: the **Stono** Rebellion
[10] Carolina was originally owned by this set of eight friends of Charles II, including George Monck and Edward Hyde, whose attempts to enforce the Navigation Acts were a cause of Culpeper's Rebellion.
ANSWER: the **Lords Proprietors**

18. This poem describes a diamond necklace that reads, "Noli me tangere, for Caesar's I am" about the neck of a metaphorical "hind." For 10 points each:
[10] Name this poem about the author's decision to stop pursuing Anne Boleyn.
ANSWER: "**Whoso List to Hunt**"
[10] "Whoso List to Hunt" is a sonnet by this poet at the court of Henry VIII, credited with introducing the sonnet to English poetry.
ANSWER: Sir Thomas **Wyatt**
[10] "Whoso List to Hunt" is adapted from a sonnet by this humanist author of "The Ascent of Mount Ventoux" and *Africa*.
ANSWER: **Petrarch** [or Francesco **Petrarca**]

19. Name these things having to do with supervised learning for 10 points each:
[10] Widely used algorithms for this type of learning include ID3, CHAID, and ASSISTANT. Often used in data mining, this robust method classifies data via root, internal, and leaf nodes.
ANSWER: **Decision tree** learning
[10] This probabilistic model assumes that features are independent given class, then uses a theorem named for an 18th-century English minister and applies a decision rule. It is very effective for classifying text documents and is often used in spam filtering.
ANSWER: **Naive Bayes** classifier [prompt on Bayes classifier, accept word forms like "classification"]
[10] In computational learning theory, this measure is the maximum cardinality of a set of data points that can be shattered by a classification algorithm. It is sometimes thought of as a measure of the "richness" of a class of set.
ANSWER: **V**apnik-**C**hervonenkis **dimension**

20. James Douglas cried, "I will follow thee or die!" before hurling a casket containing this object into the Muslim forces at the Battle of Teba, where Douglas did die. For 10 points each:
[10] Name this body part that Douglas carried with him while going on Crusade in Spain, as its original owner wished.
ANSWER: **R**obert **Bruce's** Embalmed **Heart** [or **R**obert **Brus' Heart**; or **R**obert the **Bruce's heart**]
[10] Robert the Bruce is better-known for his defeat of Edward II's army at this 1314 battle, where Bruce split Henry de Bohun's head with a battleaxe.
ANSWER: Battle of **Bannockburn**
[10] While her husband Thomas Randolph campaigned with Bruce, the countess "Black Agnes" was protecting this town's castle. In a 1650 battle here, Oliver Cromwell drove back an invading Scottish army loyal to Charles II and commanded by David Leslie.
ANSWER: **Dunbar** [or the Battle of **Dunbar**; or **Dunbar** Castle]