ACF Nationals 2013
Packet by MIT, George Mason, and Minnesota

## Tossups

- 1. One text on this subject asks if "egoism is to check egoism," and observes that "for a while at least the law can preserve its privileges against unprivileged egoism." That text, which was published in 1842, was attacked the following year in an essay that summarized its position as saying "we must emancipate ourselves before we can emancipate others"; that essay claims that it is only "in the North American states" that this subject loses its "theological significance and becomes a really secular" one. Another text on this subject that was published a century later attacks such authors as Edouard Drumont and Charles Maurras, and distinguishes between "authentic" and "inauthentic" types of a certain individual. Those texts were written by Bruno Bauer, Karl Marx, and Jean-Paul Sartre, whose "reflections" on this subject appeared just after World War II. For 10 points, give this term for a philosophical debate about the proper treatment of a certain religious minority.
- answer: the <u>Jewish question</u> [or *Die <u>Judenfrage</u>*; or <u>On the Jewish Question</u>; or <u>Zur <u>Judenfrage</u>; or <u>Reflections on the Jewish Question</u>; or <u>Reflexions sur la question juive</u>; or <u>Anti-Semite and Jew</u>]</u>
- 2. One of this author's novels describes the last day in the life of drug dealer Felix Cooper in its section "Guest." One character created by this writer had a crush on Nathan Bogle and finds her dog Olive dead a day after it is violently kicked; that character, Leah Hanwell, is best friends with a woman who changed her name to Natalie from Keisha Blake after escaping Caldwell. In another of her novels, Ryan Topps drives his scooter into a tree after becoming a Jehovah's Witness. She described how Millat's role in KEVIN leads him to try and shoot the former Nazi scientist Dr. Perret during a press conference for FutureMouse in a novel about the odd friendship between Archie Jones and Samad Iqbal. For 10 points, name this contemporary British author of *NW* and *White Teeth*. ANSWER: Zadie **Smith** [or Sadie **Smith**]
- 3. In the Blaise reaction, these functional groups interact with a zinc catalyst to form a beta-ketoester. They react with arenes to form aryl ketones in the Houben-Hoesch reaction. A namesake salt is formed from the interaction between these functional groups and alcohols in the Pinner Reaction. One method for synthesizing this functional group involves using aryl halides to react with a copper salt; that reaction is the Rosenmund-von Braun Reaction. Copper salts can also react with diazonium compounds to form these functional groups in the Sandmeyer Reaction. An SN2 reaction sees the alkyl variety of this functional group formed from the corresponding halide in the Kolbe Synthesis. They are known as cyanides in inorganic compounds. For 10 points, name this functional group that is characterized by a carbon nitrogen triple bond.

ANSWER: <u>nitriles</u> [accept <u>cyanides</u> before read]

- 4. One attendant of this being is the eternal foe of Horme; that guardian of this entity is a daughter of Aethir and Gaia known as Aergia. This deity's consort was the Kharite Pasithea, whom he was granted by Hera. He double-teamed Okenos with his brother Phobeter, one of the Oneiroi. Because of an aversion to hinges, this god chooses to live in a cave. In one myth, this god, usually portrayed as a wing-templed and sometimes bearded youth, falls in love with Endymion, granting him an unusual power related to his chief role. For 10 points, name this god who dwells near the Lethe and is served by his brothers Phantasos and Morpheus in his job as the Greek god of sleep.

  ANSWER: Hypnos [or Somnus]
- 5. A former mayor in this state, Retha Pierce, lost her position after she was busted in a DUI and threatened to kill a police officer. In response to a March 2013 filibuster to oppose Medicaid expansion, one politician from this state stated "it feels good to oppose the black guy in the White House." Besides Kris Crawford, Ted Turner's son Teddy Turner is currently running for a seat in this state's 1st Congressional district. Approximately 4 million social security numbers were exposed after hackers from China stole information from this state's taxpayers in October 2012. One Senator from this state resigned from his position in December 2012 to become the chairman of the Heritage Foundation. That Senator was replaced by the first African-American representative from this state since the 1890s, Tim Scott. The current governor of this state is the first ever Sikh governor in the United States. For 10 points, identify this state whose former senator was Jim DeMint, and whose current governor is Nikki Haley. ANSWER: South Carolina

6. This document was necessary because of a land dispute mediated by the March Commission that stemmed from a patent the Earl of Warwick gave to Lords Say, Sele, and Brook. This document, which uses the word "combination" instead of "government," was transcribed into the record by Thomas Welles, who later served as governor under it. This government notably omits any reference to the king or crown. It requires voting to be done on slips of paper for all offices of the magistracy, and requires candidates to have served in at least one office in their home parish before they are eligible to be governor. John Haynes led to its creation and became the first governor under this document, most of which was written by Roger Ludlow. Joseph Wadsworth is credited with protecting this document from Edmund Andros. For 10 points, name this document co-authored by Thomas Hooker that was the 1639 charter of government of Connecticut.

## ANSWER: Fundamental Orders of Connecticut

- 7. One of this author's poems imagines that "the earth shall melt away and be dissolved and the sky will roll up like a scroll" after hearing a voice crying, "Time shall be no more!" Another of this author's poems describes how Sister Caroline is taken away from her "big bed of pain" by the gentle title character. This author warned "your arm's too short to box with God" at the beginning of a poem about a young man seduced by the pleasures of Babylon. He wrote "yet with a steady beat, have not our weary feet come to the place for which our fathers sighed?" in a poem that implores "let our rejoicing rise, high as the listening skies." Aaron Douglas illustrated one of his poetry collections, which includes a poem in which God says "I'm lonely -- I'll make me a world." He included his poems "Go Down Death," "The Prodigal Son," and "The Creation" in a book of "Seven Negro Sermons in Verse." For 10 points, name this African-American poet of *God's Trombones* and "Lift Every Voice and Sing." ANSWER: James Weldon **Johnson**
- 8. In her essay, "Circles and Squares," Pauline Kael wondered why John Huston's early works were rejected while this man's embarrassing "Indian Epic," released in America as *Journey to the Lost City*, was praised. One of his films sees Professor Novotny taken hostage in an attempt to get Mascha to reveal the location of a man who has assassinated Reinhard Heydrich. This director of *Hangmen Also Die* starred as himself directing a film adaptation of the *Odyssey* in a 1963 film by Jean-Luc Godard. One of his films opens with the title character hypnotizing the hero, Edgar Hull. He told of the "Thousand Eyes" and "Testament" of the title gambler in his sequels to his film about Dr. Mabuse. In another of his films, the whistling of "In the Hall of the Mountain King" helps a blind street vendor identify Hans Beckert as a child murderer. For 10 points, name this German director of *M* and *Metropolis*. ANSWER: Fritz **Lang** [or Friedrich Christian Anton **Lang**]
- 9. This phenomenon can be modeled by imposing the Landau gauge on a multi-band Hamiltonian, the eigenvalues of which are then highly degenerate shifted Landau levels. The naïve treatment of this behavior predicts that the central quantity is simply proportional to the filling fraction, but that treatment does not explain observed plateaus at precise, regularly spaced values of conductivity, which are caused by localized energy levels due to impurities. This effect gives rise to a quantum equal to Planck's constant over electron charge squared, which is named for the first person to observe this effect. For 10 points, name this effect in which crossed magnetic and electric fields cause discrete changes in net charge carrier movement, as first observed by Klaus von Klitzing.

  ANSWER: integer **quantum Hall** effect [do not accept "fractional quantum Hall effect"]
- 10. The second in command of these people was known as the "Three Brethren," who had to lead the chanting of the Pater Noster every 33 days. Much of what we know about this group was written by Guy De Cheliac, who wrote about this group's medicinal practices. This group was at one point led by Verturino of Bergamo, who took this group on daily pilgrimages to the mountains outside of the village of Trentino. This group often carried large purple banners that displayed sayings of the Virgin Mary. One branch of this group was known as the Bianchi, which was led by a blind man who claimed to be a prophet. This group sang songs known as Geisslerlieder in the Holy Roman Empire, where they were known as the Brotherhood of the Cross. Members of this group often attacked gamblers, prostitutes, and Jews when they entered villages, and their goal was to escape the "Dance of Death." For 10 points, identify this religious movement popular during the Black Death, which involved people beating themselves for repentance.

ANSWER: **Flagellent** Movement [or self-**flagellant**s]

11. This composer included the tracks "Cerulean," "Disappointment Lake," and "Tourist Song" on his album *Hoodoo Zephyr*. Jorja Fleezanis premiered this composer's violin concerto, which climaxes with a furious "Toccare." A piano piece by this composer begins with a long A Lydian section followed by a short A Phrygian section and then continues to alternate Lydian and Phrygian modes around the circle of fifths. Another work by this composer opens with a pre-recorded tape of a cityscape before a young boy repeats the word "missing." His *Two Fanfares for Orchestra* include a piece driven by a constant woodblock ostinato, as well as *Tromba Lontana*. This composer of *Phrygian Gates* and *Short Ride in a Fast Machine* paid tribute to the victims of 9/11 in *On the Transmigration of Souls*. For 10 points, name this minimalist American composer of the operas *Doctor Atomic* and *Nixon in China*.

ANSWER: John Coolidge Adams

12. One protein involved in this process is inhibited by fusidic acid. That protein uses GTP hydrolysis to induce translocation in another molecule involved in this process, while a different protein increases the fidelity of this process by delaying GTP hydrolysis under certain circumstances. Those two proteins are EF-G and EF-Tu, respectively. Streptomycin inactivates one structure used in this process. One molecule involved in this process is modified using a namesake aminoacyl synthetase. More than one input can result in the same output to this process due to a degree of flexibility in the terminal position known as the wobble effect. A cloverleaf-shaped molecule provides the monomeric units used in this process, which are identified by the presence of the correct anticodon. For 10 points, name this process in which ribosomes build polypeptides from mRNA transcripts.

ANSWER: translation

13. In 2012, four foreign legislators traveled to Palisades Park, New Jersey, to request the removal of a memorial to this group. In 1990, Jan Ruff-O'Herne testified before the US House of Representatives about being one of these people. Ahn Sehong is a photographer famous for tracking down surviving members of this group. In 1994, a fund was established for the benefit of these people, though it only lasted eleven years. The western analog of this group were the "Joy Divisions" employed by Germany. The Kono Statement was an apology to these people, though it has been repudiated by Shinzo Abe, who claims that these people served voluntarily. For 10 points, name this group of mostly Chinese and Korean women forced into sexual slavery under Japanese colonial rule.

ANSWER: **comfort women** [or **ianfu**]

14. A sculpture of one member of this family draws heavily from the *Capitoline Agrippina* and sees the sandals-wearing female subject seated with her left arm rested on the back of her chair. A later female member of this family was the subject of a 1915 sculpture that was removed from the Salon des Independents for looking too much like a penis. A woman who was born into this family was sculpted in a work whose wooden base originally rotated, and that sculpture could only be viewed via torchlight with the special permission of the subject's husband, Prince Camillo. One member of this family was depicted nude holding an orb and a staff in a work now at the base of a staircase in the Apsley House. Brancusi's *Princess X* depicts a member of this family, two of whose members were sculpted as "Mars the Peacemaker" and as a Greek goddess lying upon a divan by Antonio Canova. For 10 points, the *Venus Victrix* depicts a member of what family whose patriarch is Napoleon?

ANSWER: **Bonaparte** [prompt on **Borghese**]

15. In one of this author's novels, an etching of *The Defeat of Reichenfels* inspires the story of a soldier wandering through a snowy city to deliver a mysterious box. This author wrote the sections "the brush descends the length" and "the whole house is empty" in a novel that opens with the protagonist observing a chat between Franck and A. on a veranda. Another of his novels stars a watch salesman named Matthias, who may have murdered Jacqueline Leduc. In yet another of his novels, the detective Wallas attempts to solve the murder of professor Daniel Dupont, but ends up killing Dupont himself. This author of *In the Labyrinth* and *Jealousy* wrote the screenplay for Alain Resnais's *Last Year at Marienbad*. For 10 points, name this French proponent of the "new novel," the author of *The Voyeur* and *The Erasers*.

ANSWER: Alain Robbe-Grillet

16. During this event, a group of individuals known as the "Weathercocks" assaulted people who went hunting for animals. Two perpetrators of this event attempted to justify their actions in a book called "Execution of Justice"; those men were William Allen and Edmund Campion. During this event, a group of individuals went knocking on peoples' doors asking "If thou has not wheat bread, thou shall give the poor barley." One episode of this event saw Robert Samuel claim he had a vision of the prophet Samuel ascending a tall ladder to heaven. This event resulted in the dissolution of the College of Fothringham. Joan Trunchfield was known as the "Maiden of Ipswich" during this event. Most of the atrocities of this event were overseen by Reginald Pole, and this event resulted in the death of Hugh Latimer. For 10 points, identify this event that was recorded in John Foxe's Book of Martyrs, where such individuals as Nicholas Ridley and Thomas Cramner were burned at the stake.

ANSWER: <u>Marian Persecutions</u> [accept clear equivalents or anything that suggests Queen Mary I prosecuting Protestants]

17. Thomas Huxley's essay "Natural Rights and Political Rights" attacks this book for expressing the same ideas as Rousseau and the Physiocrats. Supporters of this book call the moment that they first understood its ideas "seeing the cat." Its fourth book includes a thought experiment about an "unbounded savannah" that grows into a populous city in order to illustrate its central argument. This book, which was inspired by its author's experience editing the *Oakland Transcript*, defines rent as the price that labor pays to use its own power. Subtitled "An Inquiry into the Cause of Industrial Depressions and of Increase of Want with Increase of Wealth," it was published in 1879 and claims that social development leads to inequality. For 10 points, name this book that proposes a single tax on land, written by Henry George.

ANSWER: Progress and Poverty

18. In 2003, Rayner et al. used SpeX to observe this body's surface, suggesting that an unexpected albedo feature on it is due to Brucite. It is the largest body potentially subject to the dynamic closure/collisional erosion phase of the so-called Nice Model. Along with nearby Egeria, this body's escape velocity is one of the lowest known in the Solar System. The oblateness of this member of the Gelfion family dictates that it is differentiated; modeling by McCord et al. suggests a liquid water mantle. This body is expected to be visited in 2015 by the Dawn spacecraft. For 10 points, identify this dwarf planet that is the largest object in the asteroid belt and was originally discovered in the early 1800s by Carl Friedrich Gauss and Giuseppe Piazzi.

ANSWER: 1 Ceres

19. This polity's court was largely bound by the *Assise sur la Ligice*, which required counts and barons to initiate civil war if a ruler created an unlawful tax. During polity's early history, settlers who emigrated here gained much of their wealth by working as farmhands on the estates of the Bubalus family. In addition to serving as bishop of his hometown, Dagobert of Pisa was an important religious leader in this polity. This state signed the Pact of Warmund, which allied it with Venice. The consort of one king of this state fortified her position with loyal followers in a castle known as the "Krak." A succession crisis in this polity happened because one king was a leper who could not sire children. The first ruler of this polity notably refused the title of "king," and this polity lost a major battle under the leadership of Guy de Lusignan. For 10 points, identify this Crusader State ruled by Godfrey of Bouillon and many kings named Baldwin.

ANSWER: Kingdom of **Jerusalem** 

20. Following this passage, its speaker tells a messenger "Bid them achieve me and then sell my bones." Prior to this passage, its speaker disguises himself under a cloak and exchanges gloves with the cynic Michael Williams. Its speaker declares that "outward things" such as gold or garments "dwell not in my desires," and that "if it be a sin to covet honour, I am the most offending soul alive." This passage imagines a person who will "yearly on the vigil feast his neighbors" and remember names "familiar in his mouth as household words." It occurs in Act Four, scene three, and begins with its speaker telling his cousin Westmoreland "wish not one man more." Its speaker declares that "he today that sheds his blood with me shall be my brother," and addresses its audience as "we happy few, we band of brothers." For 10 points, name this speech given by Shakespeare's Henry V on the eve of the Battle of Agincourt.

ANSWER: Henry V's <u>St. Crispin's Day Speech</u> [accept "<u>Band of Brothers</u>" Speech before read; accept equivalents such as <u>Henry V's speech before Agincourt</u> until Agincourt]

## **Bonuses**

- 1. 20. Secondary characters in this novel include the pharmacy manager Seigismundo Ballester and Doña Lupe, who helps convince one of the title characters to spend time in the convent of Las Micaelas. For 10 points each:
- [10] Identify this 1887 novel in which Juanito Santa Cruz obsesses over the lower-class first title character, despite her marriage to Maxi Rubín and his own marriage to the barren second title character.

ANSWER: Fortunata and Jacinta [or Fortunata y Jacinta]

[10] The many works of this prominent Spanish realist include the forty-six historical *Episodios Nacionales*, as well as *Fortunata and Jacinta*.

ANSWER: Benito Perez Galdos

[10] This title character of a wildly popular 1901 play by Galdos falls in love with the scientist Maximo, though the mystic Pantoja attempts to send her to a convent. She shares her name with a mythical woman who helps her brother Orestes kill Clytemnestra.

ANSWER: Electra

- 2. This process is carried out by bacteria of the genus *Frankia*, which associate with plants in actinorhizal mutualisms. For 10 points each:
- [10] Name this process by which atmospheric nitrogen is converted into biologically available ammonia.

ANSWER: N <u>fixation</u> [or nitrogen <u>fixation</u>; accept word forms]

[10] Nitrogen fixation is carried out by cyanobacteria like those of the genera *Nostoc* or *Anabaena*, which form these structures that have a high concentration of nitrogenases. These specialized cells have multiple cell walls to prevent oxygen from entering.

ANSWER: heterocysts

[10] Anabaena species form mutualisms with the "Mosquito" type of these plants, which have vascular tissue but reproduce via spores. These plants are divided into eusporangiate and leptosporangiate lineages.

ANSWER: **fern**s [or *Pteridophyta*]

3. This author's works include *Roman Chronology to the Time of Caesar* and *Roman Coinage*. For 10 points each: [10] Name this German Nobel-winner of a three-volume *History of Rome*.

ANSWER: Christian Matthias Theodor Mommsen

[10] Mommsen translated many works by this Roman historian, who worked in the administration of Theodoric the Great. This historian wrote the *Institutiones* and founded the Vivarium monastery.

ANSWER: Flavius Magnus Aurelius Cassiodorus Senator

[10] Mommsen later extended his *History of Rome* to the reign of this emperor, who issued the disastrous Edict on Maximum Prices and founded the Tetrarchy.

ANSWER: Gaius Aurelius Valerius Diocletianus Augustus

- 4. This work was dedicated to Paul Sacher and was written in time to mourn Germany's destruction in World War II. For 10 points each:
- [10] Name this "Study for 23 Strings" scored for ten violins, five violas, five cellos, and three double basses. Its score includes the words "In Memoriam" over a quotation of the funeral march from the *Eroica* symphony.

ANSWER: <u>Metamorphosen</u>, Study for 23 Strings

[10] *Metamorphosen* was composed by this German, who also wrote the operas *Der Rosenkavalier* and *Salome*. ANSWER: **R**ichard **Strauss** [prompt on **Strauss**]

[10] This tone poem by Richard Strauss begins with a movement divided into three themes representing its three main characters. It includes a love scene in its third movement adagio and uses the oboe d'amore to represent a baby who noisily splashes around in its bath.

ANSWER: Sinfonia Domestica

- 5. This novel was inspired by the story of Elizabeth Whitman, who died in childbirth on the side of the road. For 10 points each:
- [10] Identify this early American epistolary novel by Hannah Webster Foster. Its title character, Eliza Wharton, is seduced and abandoned by the degenerate gambler Major Sanford.

ANSWER: *The Coquette* 

[10] In *The Coquette*, Major Sanford is compared to Lovelace, who drugs and seduces Clarissa Harlowe in a novel by this author of *Pamela*.

ANSWER: Samuel Richardson

[10] *The Coquette* is an example of this popular eighteenth and early nineteenth century genre of novels, which also includes *Charlotte Temple* and *The Power of Sympathy*. They appeal to readers' feelings of compassion and emphasize the natural goodness of humanity.

ANSWER: **sentimental** novels [or novels of **sentiment**; or novels of **sensibility**]

- 6. This work opens with the assertion that "Men will always deceive themselves by abandoning experience to follow imaginary systems." For 10 points each:
- [10] Name this book that was published pseudonymously in 1770. It advocated for philosophical materialism and expressed its author's atheistic viewpoint.

ANSWER: The <u>System of Nature</u> (or, the Laws of the Moral and Physical World) [or <u>Système de la Nature</u> (ou Des Loix du Monde Physique et du Monde Moral)]

[10] The *System of Nature* is the best-known work of this 18th-century philosopher, whose other works include *Christianity Unveiled*. He is thought to have been the model for the atheistic Wolmar in Rousseau's *Julie, or the New Heloise*.

ANSWER: Paul-Henri **Thiry**, Baron d'**Holbach** (accept either underlined part)

[10] Holbach's materialism derived from his study of this 17th-century English philosopher, whose *De Cive* and *De Homine* he translated into French.

ANSWER: Thomas **Hobbes** 

- 7. The one-dimensional version of this problem is significantly easier to solve than higher-dimensional ones. Lars Onsager was the first to determine an analytic expression for magnetization in terms of temperature in this model in 2-space. For 10 points each:
- [10] Name this model of ferromagnetism.

ANSWER: the **Ising** model

[10] One reason for the difficulty in solving other-than-1-D Ising models is the presence of these phenomena, which are absent in the 1-D problem. They may be explained in terms of magnetization superselection sectors, as in the work of Rudolf Peierls.

**ANSWER: phase transitions** 

[10] The Ising model and its phase transitions can be understood through the partition function of this entity, which is determined by a sum over partition functions for different numbers of particles. It is an extension of a less-commonly used collection form, from which it differs by the specification of a chemical potential.

ANSWER: **grand canonical ensemble** [or **macrocanonical** ensemble; do not accept or prompt on partial answers such as "canonical ensemble"]

- 8. One part of this work shows Mercury handing a bag of gold to Robert Morris, while Ceres is shown seated on a McCormick Reaper in this painting. For 10 points each:
- [10] Name this fresco by Constantino Brumidi in which the title figure appears atop a rainbow-colored arch flanked by Victoria and Liberty.

ANSWER: The <u>Apotheosis of</u> George <u>Washington</u>

[10] Brumidi also painted a fresco of the Holy Trinity for the Cathedral in this country's capital city. The artist of the mural *Man at the Crossroads* was born in this country.

ANSWER: Mexico [or United Mexican States; or Estados Unidos Mexicanos]

[10] Brumidi painted a portrait of this fellow American artist seated in front of an easel with his right hand placed on an object that brought him more lasting fame. The title figure grasps his poisoned robe in this man's *Dying Hercules*, and he also painted 1831's *Gallery of the Louvre*.

ANSWER: Samuel Finley Breese Morse

- 9. Reasons for this action included the fact that the proposed structure would have rested entirely in a single state, as well as the President's personal dislike of Henry Clay. For 10 points each:
- [10] Name this presidential action that prevented the federal government from purchasing stock in a Kentucky-based construction company.

ANSWER: Maysville Road veto

[10] The construction of the Maysville Road would have fallen under this general category of public works projects. This two-word phrase was promoted by Alexander Hamilton's Report on Manufacturers and was later incorporated into Henry Clay's American System.

ANSWER: internal improvements

[10] The funding of the Maysville Road was championed by this Representative from Kentucky. He also served as Governor of Kentucky.

ANSWER: Robert Perkins Letcher

- 10. When Aeneas lands in Latium, Juno enlists the aid of Alecto to start a war. Name some things that Alecto does then, for 10 points each.
- [10] Alecto visits this wife of Latinus and incites her to oppose the marriage of Aeneas to her daughter, Lavinia.

ANSWER: Amata

[10] Amata instead wants Lavinia to marry this man. Alecto also visits this king of the Rutulians to make him declare a war against the Trojans, in which he kills Pallas and wears his belt until Aeneas kills him in single combat.

ANSWER: Turnus

[10] While this man was hunting, Alecto directs his hounds to a beautiful stag belonging to Tyrrheus. This man kills the stag, which leads to all sorts of unpleasantness.

ANSWER: Ascanius [or Julus]

- 11. Like the Hartree-Fock method, this method requires iteratively solving an approximate Hamiltonian, but it is generally less computationally intensive than HF. For 10 points each:
- [10] Name this quantum mechanical modeling theory. Originally based on the Thomas-Fermi model, it makes use of a namesake quantity that gives the expected number of electrons in a given volume.

ANSWER: density functional theory [or  $\overline{DFT}$ ]

[10] The conceptual basis for density functional theory is summed up in these two theorems, which guarantee the existence of a unique density functional that obtains its minimum at the electronic ground state.

ANSWER: **Hohenberg-Kohn** theorems

[10] Kohn-Sham DFT has a counterpart to this theorem from the closed-shell Hartree-Fock method. This theorem states that the first ionization energy is equal to the negative of the energy of the highest occupied molecular orbital. ANSWER: **Koopmans'** theorem

- 12. Some of these places contain a Mechtizah, which is a curtain that separates seating for both men and women. For 10 points each:
- [10] Identify these places of worship whose daily readings are kept in a closet known as an Aron Kodesh. Those daily readings are then carefully placed on a Bimah, and the letters on the readings can only be touched with a Yad. ANSWER: **Synagogue** [prompt on **Temple**]
- [10] Synagogues also contain these storage centers where the writings of the Jewish community are kept. A massive one was discovered in the 1880's in Cairo and contained over 300,000 letters.

ANSWER: Genizah

[10] Most of the documents found at the Cairo Genizah were deciphered by this man, who laid the foundations for Conservative Judaism in the US. This man also served as the second president of the Jewish Theological Seminary. ANSWER: Solomon **Schechter** 

- 13. Individuals who held this title were crowned on a temporary throne near the Obelisk of San Genarro. For 10 points each:
- [10] Identify this title that was held by such men as Rene of Anjou and Ferrante I, who ruled a kingdom that would later be merged with Sicily.

ANSWER: **King** of **Naples** [or **Doge** of **Naples**]

[10] Throughout the fifteenth century, Naples was in a personal union with this Spanish kingdom, which gained control of Sicily at the end of the Sicilian Vespers.

ANSWER: Kingdom of **Aragon** 

[10] During the Renaissance, most the production and tax profits came from this commune of the Salerno province. This commune was famous for its lemons and hemp, which brought Naples most of its income.

ANSWER: Amalfi

- 14. For 10 points each, answer the following about George Homans.
- [10] Homans wrote an "introduction" to the theories of this man, who named a "circle" at Harvard that Homans joined. A system in which no one can become better off without making someone else worse off is his namesake optimality.

ANSWER: Vilfredo Federico Damaso Pareto [or Wilfried Fritz Pareto]

[10] Homans pioneered this sociological theory, which describes social change or stability by way of negotiated bargaining between parties.

ANSWER: social exchange theory

[10] Homans's protégé, Peter Blau, burst onto the sociological scene with a 1956 work titled for this type of organization in modern society. Another theorist argued that this type of organization is trapping society in an "iron cage of rationality" and a "polar night of icy darkness."

ANSWER: **bureaucracy** [or **Bureaucracy** in modern Society]

- 15. General Sternwood hires this novel's protagonist to deal with a blackmail attempt organized by bookstore owner Arthur Geiger, though the protagonist also becomes interested in the disappearance of Rusty Regan. For 10 points each:
- [10] Identify this 1939 novel in which Raymond Chandler introduced the private detective Philip Marlowe. Its title is a euphemism for death.

ANSWER: The **Big Sleep** 

[10] Moose Malloy's appearance at a nightclub searching for his former girlfriend Velma Valento sets in motion the plot of this second Philip Marlowe novel.

ANSWER: Farewell, My Lovely

[10] Chandler dissects A.A. Milne's *The Red House Mystery* and praises Dashiell Hammett in this critical essay, which opens with the line "Fiction in any form has always intended to be realistic."

ANSWER: "The Simple Art of Murder"

- 16. This city is home to a film industry nicknamed "Lollywood." For 10 points each:
- [10] Name this second largest city of Pakistan.

ANSWER: Lahore

[10] Lahore is the capital of the Pakistani province with this name. The Indian province with this name has its capital at Chandigargh.

ANSWER: Punjab

[10] This fourth largest city in Pakistan is technically within Punjab, but its closeness to Islamabad makes it increasingly part of the same metro area as the capital.

ANSWER: Rawal**pindi** 

- 17. This operation is implemented in hardware by Wallace trees. For 10 points each:
- [10] Name this operation that is the analog of Boolean AND.

ANSWER: multiplication [accept equivalents like times]

[10] The intermediate reductions in Wallace trees are carried out by these circuits, which produce two outputs usually labeled S and C, the latter of which is produced by ANDing the two inputs.

ANSWER: half-<u>adder</u>s [or half-<u>summer</u>s]

[10] The other gate in a half-adder is this one, which is two concave lines, the latter connected to a semicircle.

ANSWER: exclusive or

- 18. The Clark Amendment banned the US government from giving federal aid to private groups engaged in this conflict, which saw substantial Cuban intervention. For 10 points each:
- [10] Identify this long-lasting conflict that was fought on and off between 1975 and 2002 in the namesake African nation. One side, the MPLA, was led by Jose Eduardo dos Santos.

ANSWER: Angolan Civil War

[10] Dos Santos fought against this rival faction, led by Jonas Savimbi.

ANSWER: <u>UNITA</u> [or <u>National Union for the Total Independence of Angola</u>; or <u>Uniao Nacional para a Independencia Total de Angola</u>]

[10] This 1991 agreement, signed in Lisbon, briefly halted the Angolan Civil War. It collapsed less than a year later when UNITA challenged the results of an election.

ANSWER: **Bicesse** Accords

19. The second suite of this name ends with a "Farandole" and was arranged by Ernest Guiraud. For 10 points each: [10] Identify this name shared by two orchestral suites arranged from the incidental music its composer wrote for an Alphonse Daudet play.

ANSWER: L'Arlesienne

[10] This French composer of *The Pearl Fishers* wrote *L'Arlesienne*. His final opera ends with the title woman being fatally stabbed by Don Jose.

ANSWER: Georges Bizet [or Alexandre César Léopold Bizet]

[10] In Act One of *The Pearl Fishers*, Nadir and Zurga sing this duet in which they declare eternal friendship after realizing they both fell in love with the same woman.

ANSWER: "Au Fond du Temple Saint"

20. This novel includes the autobiographical *Memoirs of a Lady of Quality*, written by the notorious adulteress Viscountess Vane. For 10 points each:

[10] Name this picaresque novel whose title character is raised by Commodore Hawser Trunnion.

ANSWER: The Adventures of Peregrine Pickle

[10] Peregrine Pickle was written by this Scottish author of Humphry Clinker and Roderick Random.

ANSWER: Tobias George **Smollett** 

[10] Smollett's lifelong bitterness about the failure of his tragedy *The Regicide* led him to satirize this man as Marmoset in *Roderick Random*. He was praised for his naturalistic style of acting as the lead in numerous Shakespeare plays at Drury Lane.

ANSWER: David Garrick

- 21. Damian Woetzel danced this work for his farewell from the New York City Ballet. For 10 points each:
- [10] Name this ballet commissioned by Sergei Diaghilev, which premiered in 1929. Boris Pochno wrote the libretto for this ballet, which is based on a story from the Gospel of Luke.

ANSWER: The Prodigal Son

[10] *The Prodigal Son* was written by this Russian composer of the opera *The Love for Three Oranges*. He used a bassoon to represent the Grandfather in *Peter and the Wolf*.

ANSWER: Sergei Sergeyevich Prokofiev

[10] Prokofiev also composed this set of twenty short dissonant piano pieces based on poetry by Konstantin Balmont. Its tenth piece is titled *Ridicolosamente*.

ANSWER: Visions Fugitives [or Fugitive Visions]