ACF Regionals 2015: A Livable Community
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Tossups

1. The stick-breaking process is a constructive algorithm used to generate samples from a stochastic process named after this mathematician. This mathematician also names a multivariate continuous probability distribution defined on a n-dimensional simplex, which is the conjugate prior of the multinomial distribution. In analytic number theory, the Riemann zeta function is a simple non-trivial example of his type of series, which are sums over *n* of *a*-sub-*n* over *n* to a complex power *s*. This mathematician also names the eta function, a simple example of one of his L-functions. In contrast to Neumann boundary conditions, boundary conditions named after this man specify a function's value on the boundary of its domain. For 10 points, name this man who codified, and sometimes names, the pigeonhole principle.
ANSWER: Peter Gustav Lejeune **Dirichlet**

2. Jacob Thomasius blasted this man's views in *Adversus Anonymum.* This thinker argued that people make contracts only so long as they bring about a "greater good" or impede a "greater evil." This philosopher argued, contra Hobbes, that the "right to nature" is the same as what one has the power to do. This man called faith the "knowledge of God," without which obedience to God is impossible. Before Hume, he wrote that natural law disallows miracles in a book that supported a tolerant state with free speech, opposed clerical rule, and claimed that Ezra, not Moses, wrote the Torah. Elsewhere, he wrote on the passions in his chapter "Of Human Bondage." For 10 points, what man attacked the Bible in *Tractatus Theologico-Politicus* after Amsterdam's Jewry expelled him for writing the *Ethics*?
ANSWER: Baruch **Spinoza** [or Benedict **Spinoza**; or Benedictus de **Spinoza**]

3. Haydn's final numbered composition of this type opens with rolled chords in a dotted rhythm followed by descending passages in double thirds. That piece of this type features a second movement surprisingly in E major after a first movement in E-flat major. Pieces of this type comprise the bulk of the output of Muzio Clementi, who wrote over a hundred and established the genre in the Classical era. Mozart's compositions of this type include his K.545, which is his sixteenth in C major, labeled "semplice" or "for beginners," and his eleventh in A major, which concludes with the famous rondo "Alla Turca." For 10 points, name this genre of usually three-movement pieces for a solo keyboard instrument.
ANSWER: **piano sonata**s [prompt on **sonata**s]

4. Many leftist women in this country joined Black Sash societies to organize protests. One leader of this country authorized a letter bomb killing Ruth First, who wrote against this country's injustices from abroad. A Women's League in this country successfully argued for a quota in its majority party ensuring one-third female representation in its legislature. This country's journalist Helen Zille, who now leads its minority-party Democratic Alliance, broke a 1977 story detailing the beating and in-prison death of a prominent dissident. Women were exempted from its "pass laws." For 10 points, name this nation whose leading women included Mamphela Ramphele, the lover of Steve Biko, and anti-racist activist Winnie Mandela, the wife of long-imprisoned Nelson.
ANSWER: Republic of **South Africa**

5. After a character in this play escapes from a temple thanks to a sleeping spell, he claims to have been purified by the sacrifice of a pig. According to legend, the premiere of this play was so disturbing that a pregnant woman collapsed and died. A male criminal's footsteps are said to be filled with blood in this play, in which a judge is impressed by a defendant's unusual willingness to take responsibility for his actions. After placing a character under the protection of Hermes, another god in this play argues that mothers are merely vessels and not truly parents. In this play, Apollo argues in a trial decided by the vote of Athena, who promotes an ethic of justice to the Furies and gives them the title new name, meaning "kindly ones." For 10 points, name this final play of Aeschylus's *Oresteia*.
ANSWER: The *__Eumenides__*

6. Power lost due to a variation in this quantity is proportional to its peak value squared times frequency squared, all over resistivity, density, and a constant that is 1 for sheets and 2 for wires. This quantity causes a combination of circular motion and guiding center drift, and can be measured at low values via a device with parallel Josephson junctions, known as SQUIDs. Type I and II superconductors differ in the number of critical values for this quantity, which is crossed with the velocity in the Lorentz force and is given by a line integral in the Biot-Savart Law. This quantity, which has zero divergence and is the curl of the vector potential, is expelled from superconductors in the Meissner effect. For 10 points, name this quantity measured in teslas, whose lines run from north to south poles.
ANSWER: __magnetic field__ [accept __B__ field or __H__ field]

7. The first chapter of this novel is epistolary and recounts a love affair that devolves into "telegrams and anger." This novel analogizes the lower classes as goblins pounding in the abyss while its protagonist and her sister listen to Beethoven's Fifth Symphony. A character in this novel exiles herself to Germany after a bad tip forces her impoverished friend to quit his clerking job. The protagonist of this novel refuses to break off an engagement to Henry after learning that he had an affair with Jacky and insists that he "connect" the incidents in his life. A man in this novel pushes over a bookcase with a sword, giving Leonard Bast a heart attack. In her dying hour, Ruth Wilcox signs over the deed to this novel's title estate to Margaret Schlegel. For 10 points, name this novel by E.M. Forster.
ANSWER: *__Howards End__*

8. Xuan Wu's stomach turned into one of these animals. Nuwa cut the legs off of one of these named Ao and used those legs to prop up the sky. Apollo transformed into first this animal, and then a snake, in order to rape Dryope. A nymph who did not attend Zeus and Hera's wedding, Chelone, was turned into this animal. An object derived from one was used by Heracles to kill Linus. One of these animals ensured that Mount Mandara did not fall into the milk ocean, and another killed travelers who stooped to wash the feet of Sciron and got pushed off of a cliff. Vishnu's second avatar, Kurma, is one of these animals. Hermes killed an ox and one of these on the day he was born, so as to fashion a lyre. For 10 points, name this animal, which in many Native American myths holds the earth on its back.
ANSWER: __turtle__s [or __tortoise__s]

9. In *Final Fantasy VI*, one of these objects can be found after setting a clock in Zozo, and that item is Edgar's most damaging Tool. A crossbow that fires these objects is one of the prosthetic hand transformations used by Hoss Delgado in *The Grim Adventures of Billy and Mandy*. Patrick Bateman drops one of these down a stairwell in order to kill a fleeing prostitute in *American Psycho*. Angel is killed with one of these things by the Colombian cocaine dealer Hector the Toad in a controversial scene from *Scarface*. One of them is attached to Ash Williams's arm in *Evil Dead II* to replace his demon-possessed hand, and a serial killer who uses one wears a mask made from human skin. For 10 points, name these popular zombie-slaying tools used by Leatherface to carry out a massacre in Texas.
ANSWER: __chainsaw__s

10. In Flory-Huggins theory, the enthalpy change associated with this phenomenon is proportional to the interaction parameter chi times kT times the lattice volume fraction phi-sub-2. This phenomenon will occur as concentration increases beyond the Plait point, and does *not* occur inside the dome on a ternary phase diagram. A paradox named for this process is related to the Gibbs paradox. The increase in entropy due to this process is equal to negative the number of moles times R, times the sum over components of mole fraction times log of mole fraction. A magnetized bar does this process within lab glassware. In an ideal solution, this process evolves no heat. For 10 points, name this process which is used to make a liquid's concentration more homogeneous, by adding an impeller or stirrer.
ANSWER: **mix**ing [accept **stir**ring until "stirrer" is read; anti-prompt on "dissolving" or "solvation"]

11. A member of this family forced magistrates of a captured city to draw a fig from a donkey's anus with their teeth. Another ruler from this family issued a legal code for an island in the Constitutions of Melfi, and signed a peace with Al-Kamil for control of Jerusalem. The founder of this dynasty, which succeeded the House of Supplinbürg, faced a sacred war wagon called the Carroccio in one battle. That founder suppressed the Commune of Rome and its leader Arnold of Brescia, beat the Seljuks at the battle of Iconium, and held the Diet of Roncaglia after losing at Legnano to the Lombard League. This dynasty's founder went with Richard I and Philip II on the Third Crusade, but drowned in the Saleph River. For 10 points, name this German dynasty begun by Frederick Barbarossa.
ANSWER: House of **Hohenstaufen** [or **Swabian** dynasty; or **Staufer**]

12. A replica of this sculpture stands in front of William Tecumseh Sherman in the last monument made by Augustus Saint-Gaudens. This sculpture was originally placed above a reflecting pool in a sanctuary to the gods. The base of this sculpture was originally slotted into a counterbalance to prevent this sculpture from collapsing. Filippo Tommaso Marinetti claimed that a speeding car was more beautiful than this sculpture in the *Futurist Manifesto*. Its base is the blue marble prow of a ship, and the Louvre added a wing and a breast that were lost in transit before displaying it atop the Daru Staircase. For 10 points, name this headless sculpture discovered in Samothrace depicting the goddess Nike.
ANSWER: *Winged Victory* of Samothrace [or *Nike* of Samothrace until "Nike" is read]

13. During an insurrection, members of this industry tied a sheriff named Nuto to the gallows by his foot and ripped him apart. That occurred shortly after a worker in this industry was appointed *gonfaloniere* of justice. This industry employed the canuts of Lyon. Elsewhere, members of this industry staged a revolt that brought Michele di Lando to power. This industry was controlled by the Lana and Calimala guilds in one city. A device with punched cards was invented by Joseph Marie Jacquard to aid it. One form of this industry began in the Byzantine Empire after two monks smuggled eggs out of China in bamboo, and relied on mulberry trees. In 1378, workers in this industry called *ciompi* revolted against Florentine elites. For 10 points, name this industry that makes goods out of wool and silk.
ANSWER: **textile**s [or **cloth**ing; or **wool**; or **silk**; prompt on "weaving" or "loom"]

14. The speaker of a poem by this author pledges, "I will keep you there forever" in the "round-tower of my heart" "till the walls should crumble to ruin, and molder in dust away." A poem by this author begins by describing the farmer of Grand-Pre, who dies of a heart attack after a mini-riot is quelled by Father Felician. Another of this author's characters fasts for seven days, during which he wrestles Mondamin. This poet of "The Children's Hour" wrote a poem in dactylic hexameter beginning "This is the forest primeval," and used a *Kalevala*-esque trochaic tetrameter for a poem in which the grandson of Nokomis weds Minnehaha "By the shores of Gitche Gumee." For 10 points, name this American poet of "Evangeline" who tried to draw on Ojibwe lore in "The Song of Hiawatha."
ANSWER: Henry Wadsworth **Longfellow**

15. It's not Habakkuk, but the story of this *man* is read as Haftarah on Shavuot. This man, who relates that he spent time along the Chebar river, uses human excrement as the fuel to cook his food while lying on his side for 430 days. Merkabah mysticism is based on an image from this man's accounts, which include a war launched against the land of Magog by the eponymous prince of Gog. This Biblical character sees the faces of men, lions, eagles, and oxen surrounding the throne of God on God's chariot, and has a vision of "wheels turning inside of wheels" before he is told to breathe life into a group of reanimated bodies in the "valley of dry bones". For 10 points, name this Old Testament prophet whose namesake book comes before Hosea and after the Lamentations attributed to Jeremiah.
ANSWER: **Ezekiel** [or the Book of **Ezekiel**]

16. An artist from this country painted over human femur bones with the colors of his country's flag, and opened a fake "Museum of Modern Art, Department of Eagles" in his own home. A group of critics in this nation rejected a work in which the artist's sister Mitche sits at a cluttered dining table eating oysters. Along with Georges Lemmen and Fernand Khnopff, the painter of that work was a member of a group in this nation founded by Octave Maus. An artist from this country showed a monkey's crucifixion in *The Vile Vivisectors*, and evoked a Mardi Gras parade in a painting showing a crowd of mask-like faces marching under a banner reading "Vive La Sociale." For 10 points, name this nation home to Marcel Broodthaers, Les XX [lay vant], and James Ensor, the artist of *Christ's Entry Into Brussels*.
ANSWER: **Belgium**

17. A character created by this man owns a cat named Hamilcar and is ultimately rewarded with a rare manuscript for his kindness in giving some firewood to his freezing neighbors. In a satirical novel by this author, a fake dragon designed in part by Orberosia is killed by Kraken, after which those two become king and queen of a civilization which progresses through all the stages of history. Marcel Proust's literary mentor, Bergotte, was modeled on this author, who created a man who removes Jeanne from a cruel school and pays her dowry by selling his library. In another novel by this man, the Devil tricks a monk named Mael into going to the North Pole to baptize birds. For 10 points, name this European author of *The Crime of Sylvester Bonnard* and *Penguin Island*.
ANSWER: Anatole **France** [or Anatole **Thibault**]

18. The MEPE-ASARM peptides inhibit this process, which is upregulated by the five SIBLING proteins. Expression of CBF-alpha-1, also known as RUNX2, is crucial for this process to occur. A namesake sialoprotein may function as a guide for the accumulation of phosphate compounds during this process. This process can proceed in either an intramembranous or an endochondral manner. Collagen deficiencies can lead to a disease known as this process "imperfecta." This process requires the formation of a cartilage layer, followed by mineralization. When the rate of resorption is faster than the rate of this process, osteoporosis occurs. For 10 points, name this process by which structures such as the fibula and femur are formed.
ANSWER: **bone formation** [or **ossification**; or **osteogenesis**; or **bone morphogenesis**; or **dentinogenesis**; or **odontogenesis**; or **tooth development**]

19. The activity of these things is divided into eight types over four quadrants in Joseph McGrath's circumplex model, and their development is described by the "Forming Norming Storming Performing" model of Bruce Tuckman. These things dysfunction when they meet one of three "basic assumptions" proposed by Wilfred Bion. Action in these things can be ensured using the by-product theory of Mancur Olsen. Henri Tajfel developed a "minimal" paradigm for these things to explain their segregation into "in" and "out" types. Kurt Lewin founded the study of the "dynamics" of these things, in which conformity due to a desire for unanimity leads to bad decision making, their namesake "think." For 10 points, name these hopefully-cohesive collections of people who interact.
ANSWER: social **groups** [accept **teams**; prompt on other similar answers]

20. This politician's son lost an election for governor after founding the Solidarity Party to ditch two candidates backed by Lyndon LaRouche. This politician aimed to prove his frugality by being photographed with a hole in his shoe. Alabama Senator John Sparkman ran on a ticket with this politician, whose own grandfather of the same name was Vice President under Grover Cleveland. This divorcée reclaimed a frequent smear by proclaiming, "Eggheads of the world, unite!" This man, who served as Ambassador to the UN during the Cuban Missile Crisis, lost one election after an opposing VP candidate agreed to return all ill-gotten donations except his dog Checkers. For 10 points, name this Democratic governor of Illinois who lost two presidential elections to Dwight Eisenhower.
ANSWER: Adlai Ewing **Stevenson** II [do not accept "Adlai Stevenson Jr."]

TB. In one essay, this thinker described an unscrupulous but powerful class of men full of "coarse energy" he called the "bruisers." At the end of another essay, he imagined an ideal artist who could "walk the world over" and be unable "to find a condition inopportune or ignoble." This thinker described the gift of "a wicked dollar which by and by I shall have the manhood to withhold" in an essay instructing the reader to "speak what you think now in hard words, and tomorrow speak what tomorrow thinks in hard words again." That essay by this thinker proposes that "to be great is to be misunderstood" and argues, "A foolish consistency is the hobgoblin of little minds." For 10 points, name this American author of "The Poet" and "Self-Reliance."
ANSWER: Ralph Waldo **Emerson**

Bonuses

1. This effect would be seen maximally if the LM curve were vertical, implying that increasing government spending only causes interest rates and not overall output to increase. For 10 points each:
[10] Name this phenomenon in which increasing interest rates caused by fiscal policy would cause a decrease in private sector investment.
ANSWER: **crowd**ing **out**
[10] Full crowding out is the opposite of a liquidity trap, in which this type of policy can't affect interest rates at all, and fiscal policy must be used. Milton Friedman said inflation is "always and everywhere" this type of phenomenon.
ANSWER: **monetary** policy [accept "Inflation is always and everywhere a **monetary** phenomenon"]
[10] In order to control real interest rates, the Fed should obey this rule, which says that the nominal interest rate should cover any changes in inflation. It was named for a Stanford economist who formulated it in 1993.
ANSWER: **Taylor** rule [or **Taylor**'s principle, etc.]

2. This composer's clarinet quartet begins and ends with movements labeled "Notturno" and "Abschied," respectively, and he reworked his concerto for violino grande into his single-movement Cello Concerto No. 1. For 10 points each:
[10] Name this composer. His choral works include one whose first part concludes with "Et surgens omnis" and whose second part begins with "Et in pulverem," interspersing Gospel texts with passages from Psalms and Lamentations.
ANSWER: Krzysztof **Penderecki**
[10] Penderecki rose to international fame with this tone cluster-heavy piece for fifty-two strings, which he dedicated after its premiere to a historical tragedy.
ANSWER: *Threnody to the Victims of Hiroshima* [or *Threnody for the Victims of Hiroshima*; or *Tren ofiarom Hiroszimy*]
[10] Penderecki composed a "Polish" one of these large-scale works, to which he later added a chaconne in memory of John Paul II. Mozart died before completing the "Lacrimosa" and later sections of his in D minor.
ANSWER: **requiem**s [prompt on "mass(es)"]

3. This collection opens with a discussion among young women of what to do about the plague in their city besides pray. For 10 points each:
[10] Name this collection of 100 stories told by seven ladies and three gentlemen fleeing Florence. It was written by Giovanni Boccaccio.
ANSWER: the *Decameron* [or *Decamerone*]
[10] In an early *Decameron* story, Melchizedek tells a story about three of these identical objects to avoid Saladin's question of which religion is truest. Gotthold Lessing's *Nathan the Wise* adapts that same story about these objects.
ANSWER: **ring**s [or the Parable of the Three **Ring**s]
[10] After the first day of story-telling, Dioneo pleads to exempt himself from sticking to any given theme for the day; in exchange, he accepts this responsibility for the remainder of the *Decameron*.
ANSWER: he tells the **last story** every day [or **go**ing **last** each day]

4. Accretion of hydrogen onto these stars leads to an increase in their intensity during a nova. For 10 points each:
[10] Name these stellar remnants which also undergo Type IA supernovae. These stars form from red giants that don't turn into neutron stars.
ANSWER: **white dwarf**s [prompt on **dwarf**s or **dwarf** stars]
[10] Most white dwarfs consist mainly of this element and oxygen. The reignition of thermonuclear fusion in a white dwarf leading to a Type I supernova begins with this element.
ANSWER: **carbon**-12 [or **C**]
[10] Although the progenitor white dwarfs of Type IA supernovae are theoretically limited to 1.4 solar masses by the Chandrasekhar limit, this 2003 supernova had a progenitor star of 2 solar masses. It is believed to have been caused by the collision of two white dwarfs.
ANSWER: **Champagne** Supernova [or SN 2003**fg**]

5. This poem's speaker refuses "to discriminate against 'business documents and school-books.'" For 10 points each:
[10] Name this poem whose speaker praises things that are "useful" and "genuine" like the image of "imaginary gardens with real toads in them."
ANSWER: "**Poetry**"
[10] This woman, who wrote "I, too, dislike it" in "Poetry," described "the turquoise sea of bodies" in "The Fish."
ANSWER: Marianne **Moore**
[10] Marianne Moore compared this activity to writing in a poem that explains, "you can never tell with either / how it will go / or what you will do." Prior to statisticians, fans of this game are mentioned in "Poetry" as an example of things not admired because they are not understood.
ANSWER: **baseball**

6. It was discovered in 1947 that the lambda particle did not decay as fast as predicted, resulting in the formulation of a new conservation law for this property. For 10 points each:
[10] Name this quantum number that is +1 for the K-zero meson and -1 for the K-plus meson, but zero for pions and leptons. Like similar numbers, it is generally conserved but can change by one unit in weak interactions.
ANSWER: **strange**ness
[10] According to one formula, this value is equal to the isospin plus half of the sum of strangeness and the baryon number. This value for the electron was calculated by Robert Millikan.
ANSWER: **charge** [or elementary **charge**]
[10] The aforementioned formula is named for this man and Nishijima. This physicist also theorized the Eightfold Way system of organizing baryons and mesons into sets of eight.
ANSWER: Murray **Gell-Mann**

7. This composer wrote for a wide array of percussion instruments in his ballet *The Creation of the World*, inspired by jazz and African mythology. For 10 points each:
[10] Name this French composer who was also inspired by Brazilian music for his ballet *The Ox on the Roof*.
ANSWER: Darius **Milhaud**
[10] In *The Creation of the World*, the influence of jazz on Milhaud is reflected in his use of these flattened intervals where a major interval is expected. They are usually thirds or sevenths flattened by a semitone or microtone.
ANSWER: **blue** notes
[10] The ballet opens with a solo for this instrument, which was played by jazz musicians including Sonny Rollins and John Coltrane.
ANSWER: **sax**ophone

8. A marathon along a route shaped like one of these objects was held on October 29, 2014. For 10 points each:
[10] Name these objects which were used as symbols during 2014 civic unrest by Joshua Wong and his Scholarists.
ANSWER: **umbrella**s
[10] The Umbrella Revolution has been led by students in this city protesting a perceived crackdown on democracy. This city was returned by Britain to China in 1997.
ANSWER: **Hong Kong**
[10] In protest, the students have decorated a wall named for this person with colored Post-Its. A more famous wall dedicated to this individual in Prague across from the French embassy is perpetually graffitied.
ANSWER: John **Lennon** [or the **Lennon** Wall]

9. This character sits in a bathtub for hours after hearing about how her grandfather was tortured. For 10 points each:
[10] Name this girl who loses faith in God after the execution of her uncle and is sent away to school in Austria after becoming politically outspoken. Later in life, her design for a theme park based on legendary characters is rejected.
ANSWER: **Marji Satrapi** [or **Marjane** Satrapi; accept any underlined name alone]
[10] Much of Marjane Satrapi's graphic novel *Persepolis* takes place under the rule of this Iranian leader, who notoriously issued a *fatwa* against Salman Rushdie for writing *The Satanic Verses*.
ANSWER: Ayatollah Ruhollah Mostafavi Moosavi **Khomeini**
[10] Ayatollah Khomeini is compared to Humbert Humbert in this Azar Nafisi "memoir in books" which has sections titled for Henry James, Jane Austen, and Jay Gatsby.
ANSWER: *Reading Lolita in Tehran*: A Memoir in Books

10. During an 1801 battle off the coast of this country, Horatio Nelson disobeyed Sir Hyde Parker's orders and attacked this country's fleet, launching the Gunboat War. For 10 points each:
[10] Name this European kingdom that served as a loyal ally of Napoleon under the rule of Frederick VI. In later years it disputed control of Schleswig-Holstein with Germany and was led by Christian X through World War II.
ANSWER: Kingdom of **Denmark** [accept **Denmark-Norway**]
[10] This treaty took Denmark out of the War of the Sixth Coalition. Its provisions ceded Heligoland to the United Kingdom and Norway to Sweden, though Denmark retained control of Greenland.
ANSWER: Treaty of **Kiel**
[10] The most important battle of the War of the Sixth Coalition was fought at Leipzig, where this Russian tsar and the Prince of Schwarzenberg decisively defeated Napoleon.
ANSWER: **Alexander I** of Russia

11. This man's tomb bears an epigraph including the misquoted line "Home is the sailor, home from the sea." For 10 points each:
[10] Name this author of *A Children's Garden of Verses*, which he dedicated to his childhood nurse, and a novel in which James and Henry take opposite sides in the Jacobite Rising to protect their family estate, Ballantrae.
ANSWER: Robert Louis **Stevenson**
[10] This protagonist of Stevenson's novel *Treasure Island* leaves the Admiral Benbow Inn to become a cabin boy on the *Hispaniola*.
ANSWER: **Jim** Hawkins [or James "Jim" **Hawkins**]
[10] In this story from Stevenson's *South Sea Tales*, the villain Case tricks his rival trader Wiltshire into marrying Uma to help his business, which is harmed because of a local taboo on her. Nevertheless, Wiltshire falls in love.
ANSWER: "The **Beach of Falesa**"

12. Answer the following about types of non-standard philosophical logic which do wacky things with truth values, for 10 points each.
[10] This ancient school developed a form of logic based on propositions rather than terms, letting them derive more complex truth-functions than Aristotle. Zeno of Citium founded this school, which opposed the Epicureans.
ANSWER: **Stoic**s [or **Stoicism**]
[10] Logicians using this non-Western language had the *catuskoti*, or *four* truth values, including "both true and false." Writings in this language discuss a form of reason called *nyaya* and an inherent emptiness called *sunyata*.
ANSWER: **Sanskrit** [or **Samskrt**am]
[10] This type of logic, based on the work of Jan Łukasiewicz and Lofti Zadeh, assigns propositions a truth value between 0 and 1 to represent degrees of truth. In philosophy, it is useful for analyzing problems of vagueness.
ANSWER: **fuzzy** logic

13. Muhammad removed a statue to this god from the Kaaba after the Battle of Badr. For 10 points each:
[10] Name this moon god of the ancient Arabians. Statues of this god frequently show him performing divination using arrows, one of which allegedly pointed to the Prophet Muhammad's father, Abdullah.
ANSWER: **Hubal**
[10] Arabian mythology also includes many stories of these spirits which were given free will by Allah, who made them out of fire. They don't actually grant wishes.
ANSWER: **djinn** [or **djinni**; or **genie**s]
[10] In Arabian tales, these usually-female monsters hang out in deserts and do dastardly stuff like lead travelers to their deaths. A spurious translation of *Arabian Nights* is the likely origin for stories in which they live in graveyards and eat corpses.
ANSWER: **ghoul**s [or **ghul**]

14. A chance encounter between this artist and his patron Alfred Bruyas inspired a work in which he depicted himself dressed in all white, with a long pointy beard, a walking stick, and a backpack. For 10 points each:
[10] Name this painter of *The Meeting*, which is sometimes called *Good Morning, Monsieur [this artist]*. He caused a lot of controversy for his rather graphic depiction of a woman's genitals in *The Origin of the World*.
ANSWER: Jean Désiré Gustave **Courbet**
[10] This other French painter referenced Courbet in his *Good Morning, Monsieur [his own name]*, in which he showed himself at a fence wearing a brown coat and a blue hat. He also painted *The Yellow Christ*.
ANSWER: Eugène Henri Paul **Gauguin**
[10] *The Meeting* was also referenced in this man's *Have a Nice Day, Mr. Hockney*, which is set in Venice Beach and includes a group of rollerbladers. This pop artist designed the cover of *Sgt. Pepper's Lonely Hearts Club Band*.
ANSWER: Sir Peter Thomas **Blake**

15. Answer the following about pyrroles, for 10 points each.
[10] Pyrroles have 6 pi electrons, which means they have this property according to Hückel's rule. Benzene is the textbook example of these compounds with strongly delocalized electrons.
ANSWER: **aromatic**ity
[10] The first step of the van Leusen synthesis of pyrroles is an example of this reaction in which tosylmethyl isocyanide is reacted with an enone in the presence of base in an example of this reaction. Generally, this reaction is the nucleophilic conjugate addition to an alpha, beta-unsaturated carbonyl compound.
ANSWER: **Michael** addition [or **Michael** reaction]
[10] This scientist names a synthesis of pyrroles that reacts beta-ketoesters, alpha-haloketones, and primary amines. His namesake pyridine synthesis involves 2 equivalents of a beta-ketoester, formaldehyde, and ammonium acetate.
ANSWER: Arthur Rudolf **Hantzsch**

16. The laws of Lycurgus in this city established its rule by a council of elders called the Gerousia and two concurrent kings from the Agiad and Eurypontid lines. For 10 points each:
[10] Name this Greek city-state on the Peloponnese, which was led by Leonidas at the Battle of Thermopylae.
ANSWER: **Sparta** [prompt on "Lacedaemonia"]
[10] All male citizens of Sparta underwent this education and training program. Emphasizing physical strength and military prowess, this system took seven-year-olds from their families and placed them in groups called *agélai*.
ANSWER: *agoge*
[10] Unlike the militaristic *agoge*, this ancient educational system emphasized the liberal arts, science, and culture. Athens was a leading proponent of this system.
ANSWER: *paideia*

17. People born in this place emerge from lotus flowers rather than being born from women. For 10 points each:
[10] Name this blissful place presided over by Amitabha Buddha, and revered by the White Lotus Society.
ANSWER: the **Pure Land** [or **Jingtu**; or **Jodo**; or **Jeongto**; or **Tịnh Độ**]
[10] Pure Land Buddhism is a subset of this sect of Buddhism whose name means "Great Vehicle." It's typically considered less old than Theravada.
ANSWER: **Mahayana** Buddhism
[10] The monk Honen taught that doing this action frequently with complete conviction and mindfulness was the only requirement for being reborn in the Pure Land. Some critics think it's awfully easy to do this.
ANSWER: **recite** the **name** of **Amitabha** Buddha [or **recite** the **Buddha's name**; or **say**ing **Namu Amida Butsu**; accept obvious equivalents such as **chant**ing the **name** of **Amitabha** Buddha; prompt on answers such as "reciting," "praying," "chanting," "meditation," or "mantra"]

18. Charles Darwin complained that this bodily feature, "whenever I gaze at it, makes me sick!" For 10 points each:
[10] Name this body part used in courtship. Darwin's hypothesis about the origin of this feature, presented in *The Descent of Man*, prompted Malte Andersson's experiments on a similar feature belonging to the widowbird.
ANSWER: the **peacock**'s **tail** [or **peacock feathers**; or obvious equivalents; prompt on "tail" or "feathers"]
[10] Darwin proposed that the peacock's tail emerged from this type of selection, in which secondary characteristics increase the odds that an individual can find a mate. Ronald Fisher claimed it leads to "runaway selection."
ANSWER: **sexual** selection
[10] Amotz Zahavi used the Arabian babbler as the justification for this principle from signaling theory. This principle proposes that costly attributes, like the peacock's tail, are more reliable than other signals.
ANSWER: **handicap** principle

19. The name of the Lan Xang kingdom, an ancestor of modern-day Laos, literally referred to a million of these creatures under a parasol. For 10 points each:
[10] Name these creatures, whose albino variety was especially prized.
ANSWER: **elephant**s [or Asian **elephant**s; or white **elephant**s; or albino **elephant**s]
[10] Prince Phetracha led this kingdom's "Royal Elephant Corps." This kingdom in modern-day Thailand, which warred with Lan Xang, was displaced by Taksin the Great in the 18th century.
ANSWER: **Ayutthaya** kingdom
[10] Until they started saying "Thailand," Europeans used this Sanskrit-derived name to refer to Thailand through its Ayutthaya era and its still-reigning Chakri dynasty.
ANSWER: **Siam** [or **Siam**ese empire]

20. The eastern end of this landmark was also the northwestern terminus of the still-extant Chesapeake and Ohio Canal, allowing goods to be loaded onto boats and taken to Washington, D.C. For 10 points each:
[10] Name this early federal public works project, which extended west from Maryland to Vandalia, Illinois.
ANSWER: **National Road** [or **Cumberland Road**; or **National Pike**]
[10] The National Road helped inspire this Kentucky senator's American System. This three-time failed presidential candidate proposed many high tariffs and government-funded infrastructure projects.
ANSWER: Henry **Clay**
[10] These parts of the United States postal system, where private parties bid for often-corrupt contracts to carry mail, inspired the creation and funding of more public works projects in early America.
ANSWER: **Star Route**s

21. This character says she is a two-months orphan, then performs a sing-and-dance routine of Prenez garde à Tchou-Tchin-Tchou. For 10 points each:
[10] Name this hammy character who has a super-awkward encounter within the backroom of Madame Pace's [PAH-cheh's]dress shop.
ANSWER: the **Step-Daughter** [do not accept or prompt on "Daughter"]
[10] The Step-Daughter and the Father are among this Italian playwright's *Six Characters in Search of an Author*.
ANSWER: Luigi **Pirandello**
[10] An argument between the Mother, the Step-Daughter, and the Father over the brothel scene prompts the Manager to repeatedly ask for this process to occur.
ANSWER: the **curtain fall**ing [or equivalents; prompt on **intermission**]