**ACF Regionals 2018**

**Edited by Auroni Gupta, Will Alston, Kenji Shimizu, Will Holub-Moorman, and Stephen Eltinge**

**Packet by Northwestern A (Greg Peterson, Adam Silverman), Maryland B (Sarang Yeola), and Oklahoma A (Caleb Kendrick, Finn Bender, Maia Karpovich, Thatcher Chonka)**

Tossups

1. Parameters that characterize these devices in a SPICE model include KP and VTO. Klaus von Klitzing first discovered the quantum Hall effect by exposing one of these devices to a magnetic field. The quadratic model for these devices accounts for the body effect by predicting that *I*-sub-*D* varies with voltage squared. The simplest model for length modulation in these devices was developed by Shichman and Hodges, in analogy with the Early effect. In these devices, the inversion layer behaves analogously to a capacitor above the threshold voltage. These devices, the ideal form of which can achieve zero current in the cutoff regime, work by modulating the size of the channel between the source and drain by applying a voltage across the gate. For 10 points, name this most common type of transistor, usually comprising a metal oxide-semiconductor interface, unlike a bipolar junction transistor.

ANSWER: **field effect transistor**s [or metal-oxide-semiconductor **field effect transistor**s; or **unipolar transistor**s; or **FET**s; or **MOSFET**s; prompt on transistors; do not accept or prompt on “BJT” or “bipolar junction transistor”]

<Physics>

2. An artist with this surname painted the figures for the landscapes of the Borghese family’s Palazzo Rospigliosi (“roh-speel-YO-zee”). Another artist with this surname was commissioned to paint a compass-holding woman for a house honoring Michelangelo. Anthony van Dyck convinced an artist with this surname to paint at the court of Charles I. That artist’s child painted a woman about to pound a nail through the head of a sleeping man. The painting *Jael and Sisera* was made by an artist with this surname, who created a *Self-Portrait as the Allegory of Painting*. A woman struggles to slice off the head of an Assyrian general in a painting that an artist with this surname made after she was raped by fellow painter Agostino Tassi. For 10 points, give this surname of the father and daughter Orazio and Artemisia, the latter of whom painted a violent depiction of *Judith Slaying Holofernes*.

ANSWER: **Gentileschi** (The landscapes in the first sentence were painted by Agostino Tassi.)

<Painting/Sculpture>

3. One essay argues that this thinker discovered the survival of “obligation” long after the abandonment of the framework of divine law that made it “really intelligible.” It’s not Frege (“FRAY-guh”), but using an abstraction principle named for this thinker, Crispin Wright proved that Peano arithmetic can be derived from second-order logic. This thinker names a metaphysical thesis that states that in any two worlds with the same spatio-temporal distributions of local natural properties, contingent facts are the same. David Lewis proposed a supervenience thesis named for this thinker, who divided statements into “matters of fact” and “relations of ideas.” He argued that simple ideas are copies of simple impressions in a work that provides a counterexample to that idea by imagining a man who suddenly notices a “missing shade of blue.” For 10 points, name this Scottish author of *An Enquiry Concerning Human Understanding*.

ANSWER: David **Hume** (The first essay is Elizabeth Anscombe’s “Modern Moral Philosophy.”)

<Philosophy>

4. A character created by this author is ostracized for having an affair with an umbrella-maker’s daughter, before saving the illegitimate daughter from a fire and proving that he couldn’t be the father because he, Lorenzo, is actually a woman. This author ended a story with a woman staring down into the “abyss of night” and observing “beyond this was only darkness… unknowing and unknown.” This author retold the onion anecdote from *The Brothers Karamazov* as a story in which a character falls back into the Pool of Blood while trying to climb into Paradise on a spider’s thread that he claims is his alone. A story by this author has sections like “Story of the Murdered Man, As Told Through a Medium” explaining why a samurai has been found dead. For 10 points, name this Japanese author of stories like “In a Grove” and “Rashomon.”

ANSWER: Ryunosuke (“ryoo-NOHS-kay”) **Akutagawa**

<Short Fiction>

5. The real line under the *K*-topology is Hausdorff and has this property, but is neither regular nor normal. The generalized intermediate value theorem applies to spaces with this property, since it is preserved by the action of continuous functions. Spaces with this property are precisely those for which the only sets that are both open and closed are the empty set and the space itself. Spaces with the “simply-” type of this property have the trivial fundamental group. The topologist’s sine curve has this property, but not the related “local” property or the stricter “path” property. Formally, a topological space has this property if it cannot be partitioned into two disjoint nonempty open subsets. A space that lacks this property can be split into components. For 10 points, give this word that also describes a graph in which every vertex can be reached from every other vertex.

ANSWER: **connected**ness [accept word forms like **connected**]

<Other Science (Math)>

6. The grandmother of one of this author’s protagonists jabs him in the face with a crucifix to exorcise the devil she thinks has caused his horrific acne. After the Texan nymphomaniac Joyce divorces him for being unable to sexually satisfy her, the protagonist of a novel by him moves back in with the beer-bellied Betty, whom this author based on the love of his life, Jane Cooney Baker. The FBI kept a file on this author for crude newspaper columns, which were eventually published as *Notes of a Dirty Old Man*. John Martin offered him a lifetime gig writing for Black Sparrow Press, on the condition that this author quit his menial job as a mail carrier, which he had detailed in his debut novel. This author created the slobby, comically oversexed alter-ego Henry Chinaski to serve as the protagonist of his novels *Post Office* and *Ham on Rye*. For 10 points, name this misanthropic, alcoholic Los Angeles author.

ANSWER: (Henry) Charles **Bukowski** [or Heinrich Karl **Bukowski**]

<Long Fiction>

7. Emmanuel Laroche deciphered a set of hieroglyphs in this country with about 520 glyphs, which were in use until the 6th century BC. This modern-day country is the main home of the Neolithic farmers central to Colin Renfrew’s hypothesis of Indo-European expansion. The Yortan culture was found in this modern-day country, as were a female figurine with her hands on feline-shaped armrests, called “Seated Woman,” and almost all remnants of the Luwian civilization. A city in this modern-day country contains a structure rebuilt in full in a museum in Berlin, called that city’s namesake “Altar.” This modern-day country contains the ancient sites of Pergamon and Çatalhöyük (“chuh-TALL-huh-YOOK”). For 10 points, name this country where Heinrich Schliemann discovered “Priam’s Treasure” in the ruins of Troy.

ANSWER: Republic of **Turkey** [or **Türkiye** Cumhuriyeti] (The glyphs are Luwian / Hittite hieroglyphs.)

<Historio/Archaeo>

8. In September 2017, a Loyola University theology professor outed a popular American scholar of this religion in a sexting scandal. Leopold Weiss was a European revivalist of this religion. John Esposito’s many writings on this religion include one whose title idea comes from the first chapter of one of its scriptures; that concept is “the straight path.” Most major Chinese translations of this religion’s scriptures were authored by scholars with the surname Ma. In November 2017, a Swiss scholar of this religion quit teaching at Oxford after allegations of sexual assault. An author who practices this religion examined the life of Jesus in the 2013 book *Zealot*. This religion professes six articles of faith, or *iman*. For 10 points, name this religion whose places of worship were, in Switzerland, banned from building minarets.

ANSWER: **Islam** [or **Muslim** theology; accept specific varieties such as **Sunni** or **Shia** Islam] (The first person referenced is Nouman Ali Khan; the Swiss scholar is Tariq Ramadan; *Zealot* is by Reza Aslan.)

<Religion>

9. Positions that this man took late in life include railroad commissioner for Presidents McKinley and Roosevelt and ambassador to the Ottoman Empire for President Hayes. When the Crescent City White League attempted to overthrow the Reconstruction-era government of Louisiana, this man commanded federal police and black militias in quashing the rebels at the Battle of Liberty Place. That contributed to this man’s reputation as a “scalawag,” prompting frequent criticism of his actions on July 2, 1863, by “Lost Cause” authors. This lieutenant general served under Braxton Bragg at Chickamauga, having been voluntarily reassigned to the Western Theater after he disagreed with his commander’s ordering of Pickett’s Charge at Gettysburg. For 10 points, name this “Old War Horse” and principal subcommander of Robert E. Lee.

ANSWER: James “Pete” **Longstreet**

<US History>

10. This composer included musical depictions of fishing, yachting, and tennis among a set of twenty-one short piano pieces. The right hand plays the notes [read slowly] “C E-flat D C” followed by a pair of grace note Bs to open an F minor piece by this composer in free time. A collection of seven pieces by this composer ends with a literal “rehash” of music he wrote for *The Angora Ox* and uses 25 bars from a rejected draft of his “cold pieces” for the third of its numbered *Morceaux* (“more-SO”). He wrote a short atmospheric piece marked *lent et douloureux* (“lawn ay doo-loo-RUH”) that begins with alternating G major seventh and D major seventh chords and nominally depicts Greeks exercising. For 10 points, name this French mentor of Les Six (“lay sees”), the composer of *Three Pieces in the Shape of a Pear*, six *Gnossiennes* (“g’no-see-EN”), and three *Gymnopédies* (“jeem-no-pay-DEE”).

ANSWER: Erik (Alfred Leslie) **Satie**

<Music>

11. A request by colonial officials resulted in an 18th-century epic from this country explaining how *vanniar* chieftains came to its north. An ancient hospital complex found at this country’s peak of Mihintale (“mee-heen-TAH-lay”) is mentioned in the records of Fa Xian (“fah shyen”). A few years after its last native dynasty collapsed, nobility in this modern-day country launched the Uva rebellion. The seat of power in this modern-day country shifted to Polonnaruwa from Anuradhapura (“uh-noo-RAH-dah-POO-ruh”) after it was conquered by the king of the Cholas, Raja Raja I. This country’s Temple of the Sacred Tooth Relic is found in the city of Kandy, the capital of its final indigenous kingdom before its British annexation. For 10 points, name this country formerly known as Ceylon and located just southeast of India.

ANSWER: **Sri Lanka**

<Other History>

12. In a play titled for this type of place, a character looks from a heap of clothes on the floor into a mirror before remarking on “ornaments,” “laces,” and “gilded copes.” In that play named for this type of place, the Court Envoy remarks that pictures of a Bishop, a Judge, and a General are “true images born of a false spectacle,” and Chantal’s lover Roger castrates himself after he plays the role of George, the Chief of Police. While in one of these places, a character remarks that she’d like “a falconer’s voice / To lure this tassel-gentle back again!” and begs another character to “swear not by the moon, the inconstant moon.” The customers in Irma’s brothel pose as bureaucrats to restore order after a revolution in a play named for this type of place by Jean Genet. For 10 points, a famous scene in which Juliet asks “What’s in a name?” and “wherefore art thou, Romeo?” is set on what type of outdoor platform?

ANSWER: **balcony** [accept *Le* ***Balcon*** or the “**balcony**” scene]

<Drama>

13. The P234S mutation in an enzyme that regulates this phenotype completely reverses its specificity. In humans, most genetic variation in this trait is found in the last exon on chromosome 9 at band 9q34.2. The most common allele controlling this phenotype has a guanine-261 deletion to cause a frameshift. The gene controlling this trait encodes proteins that either have N-acetylgalactosamine or galactose sugar groups. After discovering polio, Karl Landsteiner figured out this phenotype’s molecular basis. The gene controlling this trait determines how the von Willebrand factor is post-translationally glycosylated. This phenotype is a classic example of co-dominance, since heterozygotes of its dominant allele do not agglutinate when challenged by either of two antigens. For 10 points, name this trait that in humans is usually classified as A, B, AB, or O.

ANSWER: **blood type** [or word forms; or any specific blood type like **A**, **AB**, **B**, or **O** until it is read]

<Biology>

14. Popularization of this artist’s work was helped by a 1991 *New Left Review* essay calling it a “phantasmagoria.” Suzy Lake is often cited as a major mutual influence on this artist, who invited Lake to a 1975 exhibition at Hallwalls and used digital editing to superimpose the title performers over each other to create the “Clowns” series. This artist’s later work imitating Old Masters includes a reworking of Raphael’s Fornarina simply called “No. 205.” For one series, this artist ordered dolls and prosthetic limbs from medical supply catalogues and used them to imitate porn. Before Andreas Gursky’s *Rhine II* sold, a photo from this artist’s “Centerfolds” series set a price record. This artist rose to prominence with a series of self-portraits inspired by ’50s and ’60s movies, showing herself in stereotypical female roles. For 10 points, name this conceptual photographer of *Sex Pictures* and *Untitled Film Stills*.

ANSWER: Cindy **Sherman** (The essay is “The Phantasmagoria of the Female Body” by Laura Mulvey.)

<Other Art (Photography)>

15. A character in this movie rolls his own cigarettes, because he is “trying to live by bartering alone.” A character in this movie instantly begins sobbing after instigating a game of “first one to cry wins” among a theater class rehearsing *Merrily We Roll Along*. When her boyfriend Kyle declares his distaste for “Crash Into Me” by the Dave Matthews Band, the protagonist of this film declares “I fucking love this song,” and then asks him to drop her off at her best friend Julie’s house just before prom. The title character of this movie applies to a private university in New York as a means of escaping her hometown of Sacramento. For 10 points, name this 2017 Greta Gerwig film in which Saoirse (“SEER-shuh”) Ronan plays a teenager with a troubled relationship with her mother.

ANSWER: ***Lady Bird***

<Trash>

16. A poem set “at the fourth watch” opens with the striking image of “the mountains disgorging” this object. “Chill winds howl” after the “Fire Star ebbs away” in a poem from the *Book of Songs* titled for the “seventh” of these objects. In the “deep forest unpierced by man,” this object and the speaker “face each other” at the end of Ezra Pound’s translation of Wang Wei’s “Bamboo Grove.” In an oft-memorized four-line poem, the speaker lowers his head after looking at this object “and dreams of being home.” The speaker hopes to be reunited with his shadow and this object “in the far Milky Way” at the end of a poem in which he lifts a cup of wine to summon this object while “drinking alone” by its light. For 10 points, according to an apocryphal story, Li Bai drowned trying to grasp the reflection of what celestial body in a river?

ANSWER: **moon** [or **yue**liang]

<Non-Epic Poetry>

17. Janice Perlman’s *The Myth of Marginality* is a sociological study of urban poverty in this country. A book titled for the “races” of this country argues that its inhabitants are so guided by emotion that they can be described as “cordial men.” Outside of France, Auguste Comte’s Religion of Humanity mainly gained traction in this country. One book about this country analyzes the phrase “great lubricity” to illustrate the impact of a certain population on the “sexual and family life” of this country. That book about this country analyzes the “Big House” of the Noruega family to illustrate the relationship between its title groups, *The Masters and the Slaves*. For 10 points, name this home country of Gilberto Freyre (“zheel-BAIR-too FRAY-ree”), who coined the term “Lusotropicalism” to characterize the nature of its colonization by Portugal.

ANSWER: Federative Republic of **Brazil**

<Social Science>

18. This process occurs along either a horizontal or vertical gradient in a technique that produces III-V bulk materials. After being pipetted into a solution of immersion oil, samples undergoing nanoliter osmometry are subject to this process. A protein sample on a grid is plunged into vial of ethane, where it rapidly undergoes this process, in a form of transmission electron microscopy whose developers won the 2017 Nobel in Chemistry. Biological reagents are often subjected to this process, followed by lowering the pressure to “dry” them before shipping. A substance undergoing this process [emphasize] *releases* an amount of energy equal to its enthalpy of fusion. Because it disrupts hydrogen bonds when dissolved in water, ethylene glycol is used in additives named for being “anti” this process. For 10 points, name this phase transition that liquid water undergoes at 0 degrees Celsius to become ice.

ANSWER: **freezing** [or **solidification**; or **crystallization**; or **ice formation** until “ice” is read; or word forms of those answers; do not accept or prompt on “melting” at any point, since none of the clues apply to it]

<Chemistry>

19. Philostratus’s *Life of Apollonius of Tyana* mentions a mythical race of people from Ethiopia and India who used a huge example of these body parts as a shield for sunlight. Krishna was killed when a hunter shot an arrow at this body part of his, mistaking it for the head of a stag. All of the Gigantes possessed dragon scales on this body part. Travelers were thrown off of a cliff into the mouth of a huge turtle while they completed a task relating to this body part of the bandit Sciron. By some accounts, this body part was pierced during the childhood of Oedipus. The guardian of Crete, Talos, died when he removed a nail in this body part that kept ichor (“IKE-er” or “EEK-er”) in his body. Hera sent the crab Cancer to weaken Heracles by snapping this body part. For 10 points, name this body part that the Sphinx said man had “four of” in the morning and “two of” in the afternoon.

ANSWER: **foot** [or **feet** or **ankle**s or **heel**s; prompt on leg] (The first clue refers to the Skiapodes.)

<Mythology>

20. A leader of these people was the presumed patron of Cosmas the Priest, the author of the virulent *Sermon Against the Heretics*. A document called the *Nominalia* lists mythical ancestors of these people’s ruling clan, whose symbol resembled the letters “I-Y-I.” Growing stratification in the realm ruled by these people may have prompted the rise of a sect that considered the Christian cross to be evil, held that Satan created the world, and may have grown out of the dualistic Paulicians. High taxes under this people’s ruler Peter I may have prompted the rise of Bogomilism. These people’s emperors included Krum and Samuel, the latter of whom was defeated at the Battle of Kleidion, after which a Greek ruler had thousands of these people blinded. For 10 points, name this semi-nomadic group that ruled a Balkan empire, whom the Byzantine Emperor Basil II was known for slaying.

ANSWER: **Bulgar**s [or **Bolghar**s or **Bulgarian**s or **Bolgharoi** or **Bolgari**; accept Basil the **Bulgar**-Slayer]

<European History post-600>

Bonuses

1. A poet from this movement committed himself to the Benedictine Abbey of Solesmes for the final thirty years of his life, which he spent compiling aphorisms in volumes such as *The Book Besides Me*. For 10 points each:

[10] Name this literary movement that was defined as “psychic automatism in its pure state” in a manifesto written by André Breton. It aimed to bridge depictions of reality and the unconscious, much like an identically-named artistic movement led by Salvador Dalí.

ANSWER: **Surrealism** [or word forms, like **Surrealist**]

[10] This French poet coined the term “surrealism” in the preface to his play *The Breasts of Tiresias*. He collected many shaped poems in his volume *Calligrammes*.

ANSWER: Guillaume **Apollinaire** [or Wilhelm Albert Włodzimierz Apolinary **Kostrowicki**]

[10] This poet penned the Surrealist-inspired volume *Solar Throat Slashed*, which is titled for the enigmatic final line of Apollinaire’s poem “Zone,” a year after publishing a book-length poem describing a statue of Empress Josephine towering over the natives of his home country.

ANSWER: Aimé (Fernand David) **Césaire**

<Non-Epic Poetry>

2. Answer the following about an uncommon instrument called the flugelhorn, for 10 points each.

[10] A widespread myth holds that the flugelhorn was created by this Belgian, probably due to its similarity to a horn that his family patented. This man died in poverty forty years before Alexander Glazunov wrote a concerto for an instrument he invented.

ANSWER: Adolphe **Sax**

[10] The flugelhorn, like the cornet, is extremely similar to this primary instrument of Wynton Marsalis, Roy Hargrove, and Louis Armstrong.

ANSWER: **trumpet**

[10] Since his trumpet had been stolen, this West Coast jazz musician’s album *Baby’s Breeze* primarily features him playing the flugelhorn. This musician’s greatest commercial success came for a vocal album titled [he] *Sings*.

ANSWER: (Chesney Henry) “Chet” **Baker**

<Other Art (Jazz)>

3. Answer the following about what Thomas Young was doing when he [emphasize] *wasn’t* busy shooting light waves through tiny slits, for 10 points each.

[10] With Helmholtz, Young first theorized that this ability in humans is due to the presence of three types of cells. Defects in this ability are probed in the Ishihara test, which encodes a number amid many circles.

ANSWER: **color vision** [or equivalents like **seeing color**s; prompt on partial answer; prompt on color blindness]

[10] While holidaying in 1814, Young made the first real breakthrough toward this achievement and published his results in the Encyclopedia Britannica. Jean-François Champollion is usually credited with this achievement.

ANSWER: **translating** the **Rosetta Stone** [or **translating** Egyptian **hieroglyph**ics; accept rough contextual synonyms for translating such as **decoding**; prompt on partial answers that do not mention either the Rosetta Stone or hieroglyphics specifically]

[10] Several notes in Young’s writings describe a plan to create this kind of alphabet, usable by all languages. The “International” alphabet of this type is used by linguists to transcribe sounds from any language.

ANSWER: **phonetic** alphabet [accept International **Phonetic** Alphabet]

<Other Academic>

4. Answer the following about pillars in Asian mythology, for 10 points each.

[10] In a Hindu story, these two gods come upon a pillar of light and attempt to find where it ends; one becomes a boar to find the bottom, whereas the other becomes a swan and flies up. These two gods join Shiva in the Trimurti.

ANSWER: **Brahma** AND **Vishnu** [prompt on partial answer]

[10] This Chinese goddess repaired the Pillar of Heaven, or the Wall of Heaven, by cutting off the four legs of a turtle and melting some colorful stones to patch up the sky. Later, she created humanity.

ANSWER: **Nüwa** [or **Nu Gua** or **Wahuang** or **Empress Wa**]

[10] In Japanese myth, Izanagi and Izanami constructed the pillar Ame-no-mihashira to perform their first marriage ceremony, which was ruined when Izanami performed this action. As a result, they had to remarry.

ANSWER: she **spoke first** [or she **greeted** her husband **first** before he spoke; or equivalents]

<Mythology>

5. In a 1966 issue of the *Times Literary Supplement* focusing on “New Ways in History,” E. P. Thompson introduced this three-word term to English-language historiography in an essay of the same name. For 10 points each:

[10] Give the English name for this historiographic approach whose French equivalent was first used in 1932 by Lucien Febvre. Other British employers of this anti-Great Man approach include George Rudé and Richard Cobb.

ANSWER: **history from below** [or ***histoire vue d’en bas*** *et non d’en haut*; **do not reveal this answer otherwise** but prompt on people’s history]

[10] “History from below” advocate Howard Zinn is best known for writing a textbook titled [this kind of] *History of the United States*. North Korea and Bangladesh are both this kind of “Republic.”

ANSWER: **people’s** history [or **People’s** Republic; or **People’s** Democratic Republic; accept *A* ***People’s*** *History of the United States*; prompt on democratic]

[10] In 2017, two new episodes of a popular televised *People’s History* of this country were released. Secret foreign fraternities called “Hunter’s Lodges” backed a December 1837 revolt in this country’s “Lower” portion.

ANSWER: **Canada**

<Historio/Archaeo>

6. Charges in this configuration produce an electric field that falls off as one over the fourth power of distance, and its strength is described by a symmetric traceless rank-2 tensor. For 10 points each:

[10] Name this charge configuration that produces a saddle-shaped electric potential.

ANSWER: **quadrupole**

[10] This physicist won a Nobel Prize for inventing an ion trap that confines charged particles at the saddle point of a rapidly-rotating electric quadrupole, often for use in mass spectrometers.

ANSWER: Wolfgang **Paul** [do not accept or prompt on “Wolfgang Pauli”]

[10] The Paul ion trap usually oscillates within this range of frequencies, stretching from 3 kilohertz to around 1 gigahertz. Electromagnetic waves in this range lie at the long-wavelength end of the spectrum.

ANSWER: **radio** frequency

<Physics>

7. In behavioral economics, prospect theory models the decisions people make that involve this phenomenon. For 10 points each:

[10] Name this phenomenon that is classically measured by the negative ratio of the second and first derivatives of utility, according to the Arrow–Pratt measure.

ANSWER: **risk** [accept **risk** aversion]

[10] Daniel Kahneman and Amos Tversky developed prospect theory as an alternative to this theory, which predicts the value of a set of probabilistic outcomes based on its namesake statistical function.

ANSWER: **expected** utility theory [accept **expect**ation or **expected** value]

[10] Risk aversion only accounts for part of the so-called “equity premium puzzle,” which tries to explain the large disparity in premiums between government bonds and these assets.

ANSWER: **stock**s

<Social Science>

8. A teenage girl in this novel is so obsessed with classical music that she carves a violin from a ukulele and crouches in the shrubs outside of an estate to hear the symphonies being played inside. For 10 points each:

[10] Name this novel in which the tomboy Mick Kelly befriends the deaf-mute John Singer, who shoots himself through the heart after learning that his friend Spiros Antonapoulos has died.

ANSWER: *The* ***Heart is a Lonely Hunter***

[10] Carson McCullers’s novel *The Heart is a Lonely Hunter* exemplifies the particularly sinister and disturbing “Southern” variant of this genre of novels like *Frankenstein* and *Dracula*.

ANSWER: Southern **Gothic**

[10] This Virginian author, who decried the “aimless violence” of Southern Gothic literature, explored the decay of Southern aristocracy in her autobiographical novel *Barren Ground* and her Pulitzer-winning book *In This Our Life*.

ANSWER: Ellen (Anderson Gholson) **Glasgow**

<Long Fiction>

9. Identify the following steps one takes while encoding a message with the RSA algorithm, for 10 points each.

[10] First, one chooses two very large numbers *p* and *q* of this type. Algorithms for identifying numbers of this type include the Miller–Rabin test and the sieve of Eratosthenes (“air-uh-TOSS-thuh-neez”).

ANSWER: **prime** numbers

[10] The next step is to select two integers *n* and *e*, where *n* equals “*p* times *q*” and *e* is coprime to the Euler totient (“OY-ler TOE-shint”) of *n*. Together, *n* and *e* constitute this portion of the RSA system, which can be widely disseminated.

ANSWER: **public key** [prompt on key]

[10] Finally, for the private key one selects an integer *d* that has this relation to *e* modulo the totient of *n*. 3 and 5 have this multiplicative relationship modulo 7.

ANSWER: multiplicative **inverse**s [accept answers indicating that the **product is congruent to 1**]

<Other Science (Computer Science)>

10. This body was elected thanks to popular dissatisfaction with the handling of a wave of thousands of postwar strikes, enabling Republicans to take the House for the first time in 16 years. For 10 points each:

[10] Name this gridlocked legislative body that was used as a whipping boy during the 1948 election. It actually managed to pass 906 bills.

ANSWER: **Do-Nothing Congress** [or **80th** United States **Congress**]

[10] The Do-Nothing Congress overrode Truman’s veto to pass this legislation, which restricted closed shops and required union officers to sign affidavits that they were not Communists.

ANSWER: **Taft–Hartley** Act [or **Labor Management Relations Act of 1947**]

[10] The Do-Nothing Congress also proposed the 22nd Amendment to impose this restriction on the President, a response to FDR breaking a record. Many libertarians propose restrictions of this type on members of Congress.

ANSWER: **term limit**s [or **limited to two term**s; accept equivalents indicating a restriction on how long a President serves in office]

<US History>

11. The protagonist of a novel by this author is hot on the trail of an international criminal that he sees enter the Majestic Hotel, when he receives word that a dead man who looks just like the criminal was found in the toilet of a train car. For 10 points each:

[10] Name this Belgian author of *The Strange Case of Peter the Lett*, the first of his seventy-six novels about the detective Jules Maigret.

ANSWER: Georges (Joseph Christian) **Simenon**

[10] Maigret is far less theatrical than his countryman Hercule Poirot, who solves the title crimes of this author’s novels *The Murder of Roger Ackroyd* and *The Murder on the Orient Express*.

ANSWER: (Dame) Agatha (Mary Clarissa) **Christie** [or Agatha **Miller**; or Lady **Mallowan**; or Mary **Westmacott**]

[10] Both Simenon’s novel *Mon Ami Maigret* and Christie’s book *The Mystery of the Blue Train* are set aboard a luxury express train headed to this region. Dick and Nicole Diver entertain fellow American expatriates in a villa in this area in F. Scott Fitzgerald’s novel *Tender Is the Night*.

ANSWER: **French Riviera** [or **Côte d’Azur**; or the **Azure Coast**; or answers indicating the **French Mediterranean** coast; prompt on Southern France]

<Long Fiction>

12. Answer the following about ways Western culture permeated the Soviet Union, for 10 points each.

[10] The name of this method of spreading propaganda into the Eastern Bloc is followed by “Free Europe” and “Liberty” in the names of two organizations funded by the CIA.

ANSWER: **radio** broadcasting [accept **Radio Free Europe** or **Radio Liberty**]

[10] In 1989, the USSR paid a company that distributed this type of product with enough naval equipment to briefly make it the sixth largest military power. A “white” form of this type of product was specifically made for Soviet marshal Georgy Zhukov.

ANSWER: **soda** [accept **pop**, **cola**, **carbonated drink**s and equivalents; accept **Coca-Cola** or **Pepsi**; prompt on beverages or drinks]

[10] A Soviet underground movement distributed American and British music through records fashioned out of these items, which enabled the *stilyagi* counterculture to proliferate.

ANSWER: **X-ray**s [accept **roentgenizdat**]

<European History post-600>

13. This critic’s most famous work illustrated the close-reading techniques of New Criticism with reference to a selection of poems ranging from “The Canonization” to “Among School Children.” For 10 points each:

[10] Name this literary critic, a co-founder of the *Southern Review* and author of the collection *The Well-Wrought Urn*.

ANSWER: Cleanth **Brooks**

[10] Brooks founded the *Southern Review* along with Charles Pipkin and this other New Critic, who wrote the novel *All the King’s Men*.

ANSWER: Robert Penn **Warren**

[10] The first issue of the *Southern Review* included “Prodigal,” an essay by John Donald Wade on this author of the novella *The Return of the Prodigal*, in which Eugene Gant returns to his hometown.

ANSWER: Thomas (Clayton) **Wolfe** [do not accept or prompt on “Tom Wolfe”]

<Miscellaneous Lit>

14. In one paper, this author argued against a distinction between two types of propositions, as typified by “No unmarried man is married” and “No bachelors are married,” by using synonyms. For 10 points each:

[10] Name this philosopher who, in the same paper, extended Pierre Duhem’s idea of “underdetermination” to advance the position of “confirmational holism.”

ANSWER: Willard Van Orman **Quine** [or W. V. O. **Quine**]

[10] The analytic–synthetic distinction and reductionism are the two title “dogmas” of this school of philosophy that were critiqued in that paper by Quine. John Locke was the principal advocate of this school, which argues that all knowledge originates from experience.

ANSWER: **empiricism** [or word forms; or “Two Dogmas of **Empiricism**”]

[10] In “Two Dogmas of Empiricism,” Quine criticizes this philosopher’s idea of state-descriptions and L-determined statements. This Vienna Circle member wrote *The Logical Constitution of the World*.

ANSWER: Rudolf **Carnap**

<Philosophy>

15. This composer had a pretty sweet 21st birthday party, celebrated by attending the premiere of his own symphonic poem, *The Rock*. For 10 points each:

[10] Name this Russian whose Piano Concerto No. 2 begins with soft, bell-like chords. His collection *Morceaux de fantaisie* (“more-SO duh fan-teh-ZEE”) contains his Prelude in C-sharp minor, often called “The Bells of Moscow.”

ANSWER: Sergei **Rachmaninoff**

[10] The first piece in *Morceaux de fantaisie* is a piano piece titled for this literary genre. The adjectival form of this genre names two piano trios by Rachmaninoff, the first of which has only a single movement.

ANSWER: **elegy** [or **elegies**; accept Trio **Élégiaque** or **Elegiac** Trio; do not accept or prompt on anything else]

[10] William Finn’s song cycle *Elegies* commemorates victims of this event, which also inspired John Adams to compose *On the Transmigration of Souls*.

ANSWER: **9/11** [or **September 11**th attacks or equivalents]

<Music>

16. Answer the following about Christian views on affluence, for 10 points each.

[10] This doctrine holds that financial success is a sign of God’s blessing. Prominent pastors of this belief include Joel Osteen and Reverend Ike, who are frequently criticized for their exorbitant spending.

ANSWER: **prosperity gospel** [or **health and wealth gospel**, or **prosperity theology**; prompt on gospel of success; prompt on partial answer]

[10] In the canonical gospels, Jesus is quoted as saying that it is easier for a camel to go through this thing than for a rich person to enter heaven. Some believe that there was a gate in 1st-century Jerusalem with this name.

ANSWER: **eye** of a **needle** [accept word forms such as a **needle’s eye**; prompt on partial answer]

[10] This charitable Christian group believes in voluntary poverty. It was founded by Dorothy Day in 1933, who sold the first 2,500 copies of its namesake newspaper for one cent each, a practice still continued today.

ANSWER: **Catholic Worker** Movement [accept *The* ***Catholic Worker***]

<Religion>

17. Stuart Kauffman created one these constructs that is “tunably rugged” because it has local extrema that can be adjusted by changing its two parameters, *N* and *K*. For 10 points each:

[10] Name these representations that display peaks corresponding to genotypes with high replication rates, and valleys for those with low rates.

ANSWER: **fitness landscape**s [or **adaptive landscape**s; prompt on evolutionary landscapes]

[10] The *x*-axis of a fitness landscape is often written as the “frequency” of these different forms of genes, which may be “dominant” or “recessive” relative to one another.

ANSWER: **allele**s

[10] A similar landscape that plots traits instead of fitness can be used to illustrate this phenomenon, in which organisms display different phenotypes and behaviors, like switching from asexual to sexual reproduction, in different environments.

ANSWER: phenotypic **plasticity**

<Biology>

18. A manifesto written by this movement’s leader rejects “art for art’s sake” and declares his intention of creating “living art.” For 10 points each:

[10] Name this movement whose works were displayed in a pavilion just outside the Exposition Universelle after it rejected a massive canvas of an artist’s studio. It is also exemplified by the now-lost painting *The Stone-Breakers*.

ANSWER: **Realism** [accept social **realism**]

[10] This artist created those paintings, including the 200-square-foot depiction of his great-uncle’s funeral, *A Burial at Ornans*.

ANSWER: Gustave **Courbet**

[10] Officials from this country commissioned erotic works like *Sleep* and *The Origin of the World* from Courbet. A circular painting set in this country features 24 nude women, some of whose details are obscured by steam.

ANSWER: **Ottoman** Empire [or **Turkey**; accept *The* ***Turkish Bath*** or *Le* ***Bain Turc***]

<Painting/Sculpture>

19. An example of this good called *Lignum vitae* has been a major export of northern South America since the first Spanish colonization. For 10 points each:

[10] Identify this type of good. The modern-day nation of Brazil is named for a type of this good valued by Portuguese traders.

ANSWER: **wood** [or **lumber** or **timber**; accept **brazilwood**]

[10] A valuable type of rosewood, *Dalbergia retusa*, is named for this Central American country, much of whose wood is now protected by the Bosawás Biosphere Reserve. Its namesake lake is home to an aggressive bull shark.

ANSWER: (Republic of) **Nicaragua** [accept **Nicaraguan** Rosewood or Lake **Nicaragua**]

[10] Historically, Chinese traders referred to this region as Tan Heung Shan, or “Fragrant Sandalwood Hills,” due to its prominence in the wood trade. Foreign investment poured into sugar plantations in this region following the Reciprocity Treaty signed by its “Merry King” in 1875.

ANSWER: **Hawaii** [accept equivalents such as **Hawaii**an islands]

<Other History>

20. Answer the following about electron paramagnetic spectroscopy, for 10 points each.

[10] EPR spectroscopy is commonly used to study these highly reactive chemical species that have unpaired electrons.

ANSWER: free **radical**s

[10] EPR spectroscopy sheds light on the symmetry-control of this phenomenon, in which electron-deficient species such as radicals are stabilized by donation from adjacent sigma bonds.

ANSWER: **hyperconjugation** [do not accept or prompt on “conjugation”]

[10] The absorption signals in EPR are typically plotted as this function of their raw value, because otherwise the dipole moments are so large that the peaks wind up too close together to see.

ANSWER: the first **derivative**

<Chemistry>