

ACF Fall 2019

Packet by Georgetown A, Iowa A, UCF A, WUSTL A

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Tossups

1. A prince in this region cleared his path to the throne by killing his half brothers in the Strife of the Princes in 1398. After being ordered to attack a much larger army near Wihwa (“WEE-hwah”) Island, a general from this region instead returned to its capital and toppled King U (“ooh”). That man, Taejo (“TEH-jo”), established a dynasty whose later rulers included the developer of this region’s Hangul alphabet, Sejong (“SAY-jong”) the Great. With the help of the Ming dynasty and Admiral Yi’s turtle ships, forces from this region defeated two Japanese invasions to preserve its Joseon (“CHO-sun”) dynasty. For 10 points, name this East Asian region whose historic capitals include Kaesong (“KEH-sung”) and Seoul.

ANSWER: **Korea** [accept **Korean** peninsula; accept **Joseon** until read]

<World History>

2. A book on this time period states that “all art constantly aspires to the condition of music.” Another book on this time period opens by considering “The State as a Work of Art.” Walter Pater and Jakob Burckhardt wrote their magnum opuses on this period, whose so-called “manifesto” was an unpublished *Oration on the Dignity of Man*. The common name for this period was coined in a book of biographies by Giorgio Vasari. In this period, the trivium was replaced by the *Studia Humanitas*, or humanities, due to the rise of humanism. For 10 points, name this period following the Middle Ages named for “rebirthing” classical wisdom.

ANSWER: the **Renaissance** [or **Rinascimento**; or **rinascita**]

<Philosophy>

3. Six of these beings sit around a radio during a scene in which one of them named Antarctica claims that he will rejoice to see the Chernobyl disaster. A nurse named Belize visits a character who tells him about hearing the voice of one of these beings. In a work titled for these beings, Ethel Rosenberg haunts a man who pretends to have liver cancer. A play with two parts named “Millennium Approaches” and “Perestroika” is titled for these beings. These creatures title a play where Louis Ironson abandons Prior Walter, who suffers from AIDS. For 10 points, name these heavenly beings that are *In America* in the title of a play by Tony Kushner.

ANSWER: **angels** [accept **Angels in America**]

<American Literature>

4. This leader called avant-garde art “dog shit” and told artists “Gentlemen, we are waging war on you” in the Manège (“ma-NEZH”) Affair. This leader made a rival the ambassador to Mongolia after defeating the Anti-Party Group. This man declared “We build for our children and grandchildren” while arguing with an American vice president in the Kitchen Debate. This leader told a group of western diplomats “We will bury you” days after sending tanks to crush the 1956 Hungarian Revolution. This leader took power after the death of a man whose “cult of personality” he denounced in his “Secret Speech.” For 10 points, name this man who succeeded Joseph Stalin as leader of the Soviet Union.

ANSWER: Nikita **Khrushchev** (“KROOSH-choff”)

<European History>

5. A series of loops at the top of one copy of this musical work have been interpreted as tuning instructions. Hans von Bülow termed this work the “*Old Testament*” for the instruments that may play it. The first piece in this set, which is characterized by a series of simple C major arpeggios, accompanies the vocal melody of the *Ave Maria* setting by Charles Gounod (“goo-NOH”). Though Chopin’s set goes around a circle of fifths, his collection of

preludes were likely inspired by the structure of this earlier work. This collection advances a system intended to allow one to play in any key. For 10 points, name this keyboard collection of 24 preludes and fugues in every major and minor key, by J. S. Bach.

ANSWER: *The **Well-Tempered Clavier*** [or *Das **Wohltemperierte Klavier***; or *Das **Wohltemperirte Clavier***; or **BWV 846–893**; prompt on WTC; prompt on J. S. Bach’s preludes and fugues]

<Classical Music>

6. Defects of a protein in this organelle can cause the inability of a farnesyl group to be removed; that condition occurs in patients with Hutchinson–Gilford progeria. MCM2-7 is recruited to this organelle to participate in a process that is aided by BER (“B-E-R”) and NER (“N-E-R”). That process in this organelle is facilitated by PCNA and SSB’s. RAN protein facilitates transport through this organelle’s “pore complexes.” During prophase, the membrane of this organelle degrades as microtubules migrate to polar ends of the cell. Chromosomes condense in this double-membraned organelle during mitosis. For 10 points, name this organelle where DNA replication occurs.

ANSWER: cell **nucleus**

<Biology>

7. Reuters (“ROY-ters”) exposed “consulting” payments between Rosemont Seneca Bohai and a firm in this country. Kwartal 95 inspired the name of this country’s ruling political party, which refused to enter a bloc with European Solidarity in 2018. This country’s president was asked about the server Crowdstrike in a 2019 press release, which encouraged that man to investigate this country’s Burisma energy company. The star of this country’s comedy TV show *Servant of the People* became its president in March 2019, defeating incumbent Petro Poroshenko. For 10 points, name this country whose President Volodymyr (“wo-lo-DIM-eer”) Zelensky was asked to investigate Hunter Biden by Donald Trump, sparking the latter’s impeachment process.

ANSWER: **Ukraine** [or **Ukrayina**]

<CE/Geo/Other/Pop Culture>

8. In this novel, a false princess tries to get a man to marry her by tossing an embroidered ball into his hat. A kingdom of entirely women in this novel bear children by drinking water from a river. Characters in this novel include a man who is beaten 800 times after he shatters a crystal goblet and another controlled by a headband that tightens at will. A character born from a stone egg is trapped under a mountain for five hundred years in this novel, but is freed so that he, Zhu Bajie (“joo ba-j’yeh”), and Sha Wujing can assist a monk trying to obtain Buddhist scriptures. For 10 points, name this classical Chinese novel about Tang Sanzang’s quest to reach India with Sun Wukong.

ANSWER: ***Journey to the West*** [or ***Xī Yóu Jì*** (“shee yo jee”); prompt on ***Monkey***]

<World/Other Literature>

9. One form of ritualized worship in this faith may involve the dipping of bells into boiling water, which are then shaken over the observers. The name of a common religious structure built by members of this faith translates as “bird perch,” possibly related to nearby animistic traditions. Small wooden plates with wishes on them are hung at temples of this faith, which are often protected by thick braided ropes and zig-zag paper streamers. The Sacred Mirror is held in one complex devoted to this faith whose buildings are torn down and rebuilt every 20 years. In this faith, large gates known as *torii* symbolize the entrances to the world of *kami*. For 10 points, name this faith, the indigenous religion of Japan.

ANSWER: **Shintoism** [accept ***kami-no-michi***] (The unmentioned clues refer to *kagura*, *ema*, *shimenawa*, *shide*, and the Ise Grand Shrine.)

<Religion>

10. This scientist and Planck name an equation describing the simultaneous diffusion and electrostatic interactions of a species. A modification to an equation named for this scientist introduces a constant of 26.7 times the natural

log of 10. At equilibrium, that equation named for him can be derived from the Butler–Volmer equation by setting a quantity denoted “eta” to zero. This scientist’s “heat theorem” was the first statement of the third law of thermodynamics. In an equation named for him, RT over the Faraday constant times z is multiplied by the natural log of the reaction quotient. For 10 points, what German scientist names an equation for calculating reduction potentials of galvanic cells?

ANSWER: Walther **Nernst** [or Walther Hermann **Nernst**]

<Chemistry>

11. The Knights Templar reportedly used a cipher based on the Maltese Cross to develop an early form of this industry during the Crusades. In 1516, a family that grew wealthy through this industry built the world’s oldest still-used social housing complex in Augsburg. A “double-entry” method was used in this industry by the Bardi and Peruzzi families who dominated it in Italy prior to the Hundred Years’ War. During the Middle Ages, “Court Jews” largely controlled this industry due to the Church’s ban on usury. Both the Fuggers and the Rothschilds made their fortunes in this industry. For 10 points, name this industry that consists of the loaning and storing of money.

ANSWER: **banking** [or word forms; accept **investing**; accept **loaning** money until read, but prompt after; prompt on **business** or **financing** or **accounting**] (The housing complex refers to the Fuggerei, and the “method” refers to double-entry bookkeeping.)

<European History>

12. Anne Geddes often photographs these subjects in bright and elaborate costumes. Norman Mailer claimed that giving one artist a camera was like giving a weapon to one of these people; that artist captured two identical examples of these people in black dresses with white collars and headbands for a photo imitated in Stanley Kubrick’s *The Shining*. Diane Arbus photographed one of these people in overalls with a strap fallen off as he holds a toy grenade in Central Park. The faces of two of these people are obscured in a photo of Florence Owens Thompson taken during the Great Depression. For 10 points, what type of people hug the title woman in Dorothea Lange’s *Migrant Mother*?

ANSWER: **children** [or **kids**; accept **babies** or **toddlers** or **youths** or other such equivalents; accept **boys** or **girls**; prompt on **brothers** or **sisters** or **siblings** or **twins**]

<Other Arts>

13. Juliet Herbert, who taught English to this character’s creator, first translated the novel that is titled for this character. A declaration of love for this character is intercut with a farmer being awarded a prize in manure. A blind beggar sings under the window while this character dies, after which a Legion of Honor is given to a pharmacist. This character throws out a torn-up letter during a carriage ride with a man whom she meets while pretending to take piano lessons in Rouen (“roo-AWN”). This resident of Yonville (“yon-VEEL”) has affairs with Léon Dupuis (“duh-PWEE”) and Rodolphe Boulanger. For 10 points, name this character married to Charles, who kills herself with arsenic in a novel by Gustave Flaubert (“flo-BAIR”).

ANSWER: **Emma** Bovary [or **Madame Bovary**; or **Emma** Rouault; prompt on **Bovary** or **Rouault**]

<European Literature>

14. Marvin Harris claimed that this thinker practiced “historical particularism” in opposition to contemporary theories of cultural evolution. The mnemonic “stones, tones, bones, and thrones” is used for a four-field classification that was long attributed to this thinker. At the Chicago World’s Fair, this scientist made a model village for fourteen Kwakiutl (“kwok-ee-OO-tull”) from British Columbia. After giving up “public anthropology,” he reproduced studies on the skull shapes of immigrants and their children in *The Mind of Primitive Man*, which promotes his idea of methodological cultural relativism. For 10 points, name this Columbia professor who taught Ruth Benedict and Margaret Mead in America’s first anthropology PhD program.

ANSWER: Franz **Boas**

<Social Science>

15. Flynn's taxonomy classifies the various designs and functionalities of these components, whose superscalar examples are classified as SISD ("sis-D") or MIMD ("mim-D"). A paper titled *First Draft of a Report on the EDVAC* ("ED-vack") marked the introduction of the von Neumann ("NOY-mahn") model in designing these components. ALUs in these components can perform two's complement, and signal buses transfer data between these components and peripherals. The clock rate of these components is typically measured in gigahertz. For 10 points, name these hardware components that carry out program instructions and are often referred to as the "brain" of a computer.

ANSWER: **CPUs** [or **central processing units**; accept **central processor**; accept **main processor**; accept **microprocessor**; prompt on **processors**; prompt on **processing units**]

<Other Science>

16. In the aftermath of this campaign, a news anchor declared that he could not "have faith any longer in the silver linings" found "in the darkest clouds." Soldiers about to initiate this campaign were told to "crack the sky, shake the earth" before attacking cities like Pleiku ("PLAY-koo") and Cholon ("CHUH-lun"). An iconic photograph taken during this campaign shows a man in plaid being summarily shot in the head. Thousands of civilians were killed in massacres at Huế ("hway") during this campaign, which also saw communist troops briefly seize the U.S. embassy in Saigon. For 10 points, name this 1968 offensive launched by North Vietnamese forces and named for a New Year's holiday.

ANSWER: **Tet** Offensive

<American History>

17. This artist riffed on earlier works in a painting that reduces a portrait of Madame Cézanne to a simple diagram as well as a depiction of his studio with Matisse's *The Dance* in the background. This artist mocked abstract expressionism in paintings and sculptures of black-outlined brushstrokes. A painting by this artist shows a woman who would "rather sink than call Brad for help!" The title of one of this artist's paintings appears in bold yellow text in front of an exploding fighter jet. This artist used speech bubbles and Ben-Day dots in many of his works, which were often inspired by comic books. For 10 points, name this Pop artist who painted *Drowning Girl* and *Whaam!*

ANSWER: Roy **Lichtenstein**

<Painting/Sculpture>

18. In one myth, Nüwa cuts the legs off one of these animals named Ao to repair the sky. In the Iroquois creation myth, a frog spits onto the back of one of these animals so that Sky Woman has a place to stand. A common indigenous name for North America refers to the belief that the continent is held up by one of these animals. The earth is supported by elephants who all stand on the back of one of these animals, according to Hindu cosmology. After stealing Apollo's cattle, Hermes uses an oxhide, a sheep's guts, and a part from one of these animals to create a musical instrument. For 10 points, the lyre was made out of the shell of what type of animal?

ANSWER: **turtles** [or **tortoise**]

<Mythology>

19. The appendix to a novel by this author categorizes a language into everyday phrases, compound words, and technical language, corresponding to A, B, and C vocabularies. This author produced a parodic translation of a phrase from Ecclesiastes ("uh-KLEE-zee-ASS-teez") in an essay that attacks pretentious diction and dying metaphors as causing the decline of the English language. In a novel by this author, the lexicologist Syme becomes an "unperson" due to his intelligence. A fictional language created by this author introduced the terms "doublethink" and "thoughtcrime." For 10 points, Newspeak restricts the thoughts of residents of Oceania in what author's dystopian novel *Nineteen Eighty-Four*?

ANSWER: George **Orwell** [or Eric Arthur **Blair**] (The lead-in describes "The Principles of Newspeak.")

<British Literature>

20. A time-of-flight spectrometer named for this phenomenon uses an electrostatic field to focus ion beams. An ideal type of this phenomenon has intensity proportional to cosine theta and is named for Johann Heinrich Lambert. Ellipsometry uses measurements of this phenomenon to study thin films. This phenomenon does not occur for polarized light at Brewster's angle. Davisson and Germer expected to see the diffuse form of this phenomenon in their namesake experiment, while in its specular form, the angle of incidence is equal to the outgoing angle. Optical fibers use the total internal form of, for 10 points, what phenomenon that occurs when light strikes a mirror?

ANSWER: **reflection** [or word forms; accept total internal **reflection**; accept **reflectron** mass spectrometry]

<Physics>

Bonuses

1. The title character of this story notes that people have lost faith in priests, but that he is now expected to perform miracles. For 10 points each:

[10] Name this story in which two horses magically appear to the title character, whisking him away to his work and leaving a mysterious groom alone with his servant girl Rosa.

ANSWER: “A **Country Doctor**” [or “Ein **Landarzt**”]

[10] “A Country Doctor” was written by this author. Gregor Samsa wastes away after he is transformed into a giant insect overnight in this man’s novella *The Metamorphosis*.

ANSWER: Franz **Kafka**

[10] *Description acceptable*. This character from *The Metamorphosis* delivers food to Gregor and is the only one who will go in his room alone. The story ends with her stretching her legs while on the tram.

ANSWER: Gregor’s **sister** [or **Grete** Samsa]

<European Literature>

2. Answer the following about programming paradigms, for 10 points each.

[10] This computer scientist popularized structured programming, which focuses on writing clear, readable code. He also devised an algorithm that solves the shortest path problem in a graph with non-negative edge weights.

ANSWER: Edsger W. **Dijkstra** (“DIKE-struh”)

[10] Languages such as C++ (“C-plus-plus”) and Java exemplify this widely used programming paradigm, which allows for the creation of variables, data structures, and classes that contain data in the form of fields.

ANSWER: **object-oriented** programming [prompt on **OOP**]

[10] In this programming paradigm, the output of a procedure is solely dependent on its arguments. Examples of languages that support this paradigm include Common Lisp and OCaml (“oh-camel”).

ANSWER: **functional** programming [prompt on **declarative** programming]

<Other Science>

3. An essay by this man opens by declaring “The problem of the twentieth century is the problem of the color-line.” For 10 points each:

[10] Name this African-American thinker who collected his essays on race in *The Souls of Black Folk*. He came to oppose Booker T. Washington’s Atlanta Compromise and advocated for civil rights advances in the early 1900s.

ANSWER: W. E. B. **Du Bois** (“doo boyce”) [or William Edward Burghardt **Du Bois**]

[10] To oppose Washington’s accommodation of white rule, Du Bois founded this short-lived civil rights organization named for the “mighty current” of change it hoped to inspire. It was later absorbed by the NAACP (“N-double-A-C-P”).

ANSWER: **Niagara** Movement

[10] In a 1935 book on this period, Du Bois challenged the racialized “Dunning School” perspective and defended African-Americans’ role in it. Eric Foner has extensively cited Du Bois in his studies of this period.

ANSWER: **Reconstruction** [accept **Black Reconstruction in America**]

<American History>

4. Eight women with eight ribbons accompany the *Grand Adage* in this choreographer’s *Fanny Elssler pas de deux*. For 10 points each:

[10] Name this choreographer known for his 1960 production of *La fille mal gardée* (“la FEE mall gar-DAY”). This longtime chief choreographer for Ninette de Valois included his “Fred step” in many productions.

ANSWER: Frederick **Ashton** [or Sir Frederick William Mallandaine **Ashton**]

[10] Ashton’s first major ballet was a comic version of this Prokofiev ballet based on a fairy tale. The fairy godmother sends the title character to a secret garden with her prince at its end.

ANSWER: **Cinderella** [accept **Zolushka**; accept **Cendrillon**]

[10] After de Valois left, Ashton became the director of this ballet company based in Covent (“CUV-int”) Garden. It got its current name after it received a charter from the Queen.

ANSWER: The **Royal** Ballet [accept **Vic-Wells** Ballet; accept **Sadler’s Wells** Ballet]

<Other Arts>

5. Eagly and Karau (“KAH-rao”) theorized that people will be evaluated according to how well they seem to fit into these things in a study of prejudice against female leaders. For 10 points each:

[10] Name these sets of behaviors attached to certain jobs, genders, and other situations. People may emulate “model” persons named for them when “playing” make-believe games such as House or RPGs.

ANSWER: social **roles** [accept **role congruity** theory; accept role **models**; accept **role-playing** games; accept **role** theory]

[10] Role theory adopts the idea of people as “actors” from this symbolic interactionist’s dramaturgical model. This sociologist wrote on that subject in *The Presentation of Self in Everyday Life*.

ANSWER: Erving **Goffman**

[10] Labelling theory asserts that criminals fall into the role of a criminal because they believe that they are a “criminal.” In this situation with a three-word name, a person’s belief that X will happen causes X to happen.

ANSWER: **self-fulfilling prophecy** (also coined by Merton)

<Social Science>

6. During times of crisis, these people were often scapegoated and buried alive near the Colline Gate. For 10 points each:

[10] Name these Roman priestesses who served 30-year terms maintaining the city’s sacred fire.

ANSWER: **Vestal Virgins** [or **Vestals** or **Vestalis**; prompt on **Virgins**]

[10] Upper class Roman women were the only lawful participants in an annual festival honoring this goddess. During that festival to this goddess in 62 BC, Publius Clodius Pulcher dressed as a woman and tried to seduce Julius Caesar’s wife, leading Caesar to divorce her.

ANSWER: **Bona Dea** [accept **Bona Dea** scandal]

[10] Women were also essential in spreading this religion across the Roman empire. St. Helena encouraged her son Constantine the Great to promote toleration of this religion.

ANSWER: **Christianity**

<European History>

7. The essay *A Room of One’s Own* credits this writer with proving that women could make a living through writing, declaring that “All women together ought to let flowers fall upon” her grave. For 10 points each:

[10] Name this Restoration playwright and novelist. A group of soldiers court, threaten, and are threatened by local women in her play *The Rover*.

ANSWER: Aphra **Behn** (“bane”)

[10] Behn turned to writing after a stint in debtor’s prison because she wasn’t paid for her work in this profession for Charles II. George Smiley and Alec Leamas are members of this profession created by John Le Carré.

ANSWER: **spy** [accept secret **agent**]

[10] In Behn’s novel *Oroonoko*, the title prince is captured by English slavers and brought to this continent, where he starts a rebellion. Candide travels to this continent to search for El Dorado.

ANSWER: **South America** [prompt on **America**]

<British Literature>

8. Answer the following about deathly ships, for 10 points each.

[10] This legendary phantom ship, the subject of an opera by Richard Wagner, is said to forever sail the seas. It is named for its European country of origin.

ANSWER: The **Flying Dutchman** [or De **Vliegende Hollander**; or Der **fliegende Holländer**]

[10] In 2018, a record number of real-life “ghost ships” full of dead sailors from this country washed up on other shores. This country claims to have found the cave where the mythical founder Dangun (“DAH-N-goon”) lived.

ANSWER: **North Korea** [or **Democratic People’s Republic of Korea**; prompt on **Korea**; do not accept or prompt on “South Korea” or “Republic of Korea”]

[10] During Ragnarok, Loki is said to ride on Naglfar (“naggle-far”), a ship constructed from these objects taken from the corpses of the dead.

ANSWER: **nails** [accept **toenails** or **fingernails**]

<Mythology>

9. In March 2015, scientists reported this phenomenon in almost three thousand atoms. For 10 points each:

[10] Name this phenomenon that, according to the EPR paradox, violates locality.

ANSWER: quantum **entanglement**

[10] Measuring a property of one particle causes this event to occur to the entire entangled system. This irreversible event occurs when a wavefunction in superposition is projected onto an eigenstate by observation.

ANSWER: wavefunction **collapse**

[10] Quantum entanglement has been proposed as a source of the “arrow of” this concept, which states that this concept is asymmetric. This quantity is measured in seconds.

ANSWER: **time**

<Physics>

10. A Mannerist painting of Laocoön (“lay-AH-koh-on”) and his sons set outside this non-Trojan city shows the Trojan horse approaching this city. For 10 points each:

[10] Name this Spanish city. *The Disrobing of Christ* hangs in this city’s cathedral, and a painting titled *View of* this city features a dramatic, cloudy sky.

ANSWER: **Toledo** [accept *View of Toledo*]

[10] This Mannerist artist painted *View of Toledo*. His painting *The Opening of the Fifth Seal* depicts a scene from the Book of Revelation and was an inspiration for Picasso’s *Les Femmes d’Alger* (“lay duh-mwah-ZELL dah-veen-YON”).

ANSWER: El **Greco** [or Doménikos **Theotokópoulos**]

[10] In this El Greco painting, Jesus, Mary, and many saints welcome the title figure to heaven while St. Stephen and St. Augustine lower his body into the ground. This painting is split between an earthly lower half and a heavenly upper half.

ANSWER: *The **Burial of the Count of Orgaz*** [accept answers referring to the **burial** or **funeral** of the **Count of Orgaz**]

<Painting/Sculpture>

11. This author describes the astronomer Caroline Herschel as “an instrument in the shape / of a woman trying to translate pulsations / into images” in her poem “Planetarium.” For 10 points each:

[10] Name this American poet. The speaker searches for “the drowned face / always staring toward the sun” and “the ribs of the disaster” in the title poem of this author’s collection *Diving into the Wreck*.

ANSWER: Adrienne **Rich** [or Adrienne Cecile **Rich**]

[10] The speaker “wander’d off” and “look’d up in perfect silence at the stars” in this author’s poem “When I Heard the Learn’d Astronomer.” This poet also wrote *Leaves of Grass*.

ANSWER: Walt **Whitman**

[10] The speaker of Rich’s poem “Yom Kippur 1984” searches for “something to bind me to this coast as” this Whitman poem “once bound me back there.” This poem notes, “the great star early droop’d in the western sky.”

ANSWER: “**When Lilacs Last in the Dooryard Bloom’d**” [prompt on “**lilacs in the dooryard**”]

<American Literature>

12. Following a 1707 disaster off the Isles of Scilly, the British government offered a series of sizeable prizes for anyone who could come up with a reliable procedure for performing this task. For 10 points each:

[10] Name this task that Edmund Halley failed to perform by studying isogonic lines of magnetism. John Harrison invented a series of devices dubbed H1 through H5 to do this task, but he was swindled out of the prize money.

ANSWER: calculating **longitude** [accept the **longitude** problem; prompt on answers regarding accurate **timekeeping**; do not accept or prompt on anything about “latitude”]

[10] Following World War I, four of Harrison’s marine chronometers were rediscovered in this specific location’s Royal Observatory. This London area with a namesake “Mean Time” sits directly on the Prime Meridian.

ANSWER: **Greenwich** (“GREN-itch”) [accept Royal Observatory, **Greenwich**; accept **Greenwich** Mean Time]

[10] This other Londoner tried to solve the longitude problem, but largely quit after developing a spring-powered pocket watch. This member of the Royal Society coined the word “cell” in his best-seller, *Micrographia*.

ANSWER: Robert **Hooke**

<European History>

13. In an abandoned sequel to this book, the unfaithful Sophie leaves the protagonist, who had earlier learned of natural religion from a Savoyard vicar in this book. For 10 points each:

[10] Name this educational treatise which proposed that women like Sophie should only be educated for the pleasure of men. Jean-Jacques Rousseau considered it his most important work.

ANSWER: **Émile**

[10] This philosopher was prompted in part by the sexist views on women’s education presented in *Émile* to write *A Vindication of the Rights of Women*.

ANSWER: Mary **Wollstonecraft**

[10] Rousseau’s belief that women soften men and deprive them of the masculinity of the ancients in part motivated a letter critiquing this other thinker’s proposition to establish a theater in Geneva. After that letter, this physicist resigned from co-editing the *Encyclopédie* with Denis Diderot.

ANSWER: Jean-Baptiste le Rond **d’Alembert** (“dal-om-BAIR”)

<Philosophy>

14. Some species require this condition to respire, leading to their designation as “obligate.” For 10 points each:

[10] Name this condition required for anammox (“ann-AMM-ox”) to occur. “Facultative” organisms switch to fermentation under this condition.

ANSWER: **anaerobic** [accept **lack of oxygen** or similar phrases; accept obligate **anaerobes** or facultative **anaerobes**]

[10] When food is fermented in an environment lacking sufficient salinity or acidity, there is a chance that a species in this genus of bacteria will grow. That species in this genus causes botulism.

ANSWER: **Clostridium**

[10] According to some chefs, it is best to use water with this quality when fermenting cucumbers to make pickles. This term refers to a low concentration of calcium and magnesium ions.

ANSWER: **soft** water

<Biology>

15. NASA archaeologist Tom Sever pioneered the use of remote sensing to study this civilization’s collapse. For 10 points each:

[10] Name this Mesoamerican civilization whose decline in the 8th and 9th centuries led to the effective abandonment of cities like Tikal in the Yucatan peninsula.

ANSWER: **Mayan** civilization

[10] Early classical Mayan cities traded and fought with this powerful city-state in the Valley of Mexico. It is home to the Avenue of the Dead and the Pyramids of the Sun and the Moon.

ANSWER: **Teotihuacan** (“TAY-oh-tee-wah-KAHN”)

[10] This Mexican state contains Tulum, a walled port city built centuries after most Mayan cities collapsed. This state became a Mexican territory in 1902 after its indigenous Mayan population was defeated in the Caste War.

ANSWER: **Quintana Roo** (“roh”)

<World History>

16. In a Carol Ann Duffy poem, this character “took an axe to a willow to see how it wept” and “took an axe to a salmon to see it leapt.” For 10 points each:

[10] Name this fairy tale character who “took an axe to the wolf” and “saw the glistening, virgin white of my grandmother’s bones” in that poem. She is named for an accessory with a certain color.

ANSWER: Little **Red Riding Hood** [or Little **Red Cap**]

[10] In this author’s retelling, Little Red Riding Hood sleeps with the wolf instead. This author of *Nights at the Circus* included many fairy tale retellings in *The Bloody Chamber*.

ANSWER: Angela Olive **Carter** [or Angela **Pearce**; or Angela **Stalker**]

[10] Outfits featuring red cloaks in this novel allude to Little Red Riding Hood. In this novel, Nick and the Commander are thought to be stand-ins for the huntsman and the wolf.

ANSWER: *The **Handmaid’s Tale***

<World/Other Literature>

17. Pearlite is a microstructure of this material. For 10 points each:

[10] Name this alloy produced with the Bessemer process. Chromium may be added to this alloy to increase corrosion resistance.

ANSWER: **steel**

[10] Pearlite consists of layered ferrite and this orthorhombic compound whose formula is Fe₃C. It is also known as iron carbide.

ANSWER: **cementite**

[10] Pearlite consists of alternating layers of two of these states, whose namesake diagrams plot temperature against pressure or weight percent. For water, these states include solid, liquid, and gas.

ANSWER: **phases** [or **phase** diagram; prompt on state of matter]

<Chemistry>

18. Though Joseph II privately collected his winnings from the Grand Duchess, Mozart was unhappy when a 1781 piano duel with this composer was called as a draw. For 10 points each:

[10] Name this Italian “father of the piano” who created six sonatinas for the instrument. Like his student Carl Czerny (“CHAIR-nee”), he wrote an etude collection titled *Gradus ad parnassum*.

ANSWER: Muzio **Clementi**

[10] Clementi is regarded as the founder of a piano-playing school based in this city. Johann Christian Bach is often nicknamed for this city, which also names a set of twelve Haydn symphonies including “Surprise,” “Military,” and “Drumroll.”

ANSWER: **London** [accept **London** Pianoforte School; accept **London** Bach; accept **London** symphonies]

[10] Clementi’s students included John Field, the Irish inventor of this genre of character pieces. Clementi-admirer Frédéric Chopin wrote 21 of these pieces, which are named for evoking the night.

ANSWER: **nocturnes** [or **nocturno**]

<Classical Music>

19. Answer the following about events surrounding cryptocurrencies in 2018, for 10 points each.

[10] The industry experienced the largest percent crash since the dotcom bubble after this country threatened to ban the firm Ethereum. The American-owned GM Daewoo competes with Hyundai and Kia in this country’s automobile economy.

ANSWER: **South Korea** [or the **Republic of Korea**; accept **Hanguk** or **Namhan**; prompt on **Korea**; do not accept or prompt on “Democratic People’s Republic of Korea” or “DPRK” or “North Korea”]

[10] In 2018, this leader announced Petro, a cryptocurrency backed by oil fields in the Atapirire (“AH-tah-pee-REE-ray”) Parish, as part of an “economic offensive.” This leader’s namesake “diet” refers to how his citizens lost an average of 26 pounds in 2016 due to food shortages.

ANSWER: Nicolás **Maduro** Moros

[10] In 2018, David A. Marcus spearheaded development of this cryptocurrency produced by Facebook and geared towards “financial inclusion.” Nydia Velázquez and other House Democrats have argued that this cryptocurrency would “break the international monetary system.”

ANSWER: **Libra**

<CE/Geo/Other/Pop Culture>

20. This deity’s nine manifestations are celebrated during a festival whose final day, Vijayadashami (“vee-juh-yuh-DUSH-mee”), culminates in the immersion of clay-and-straw *murti* statues into local rivers. For 10 points each:

[10] Name this deity, whose victory over a buffalo demon is celebrated during Navaratri. During Ashwin, frenzied drummers known as *dhaki* perform as part of a similar, overlapping holiday, this deity’s namesake “puja.”

ANSWER: **Durgā** [accept **Durga** Puja; accept Navad**urgā**; accept **Durgotsava**; prompt on **Devi**; prompt on **Parvati**; prompt on **Adi Parashakti**; prompt on **Gauri**]

[10] During Navaratri, local artisans produce festive displays full of *golu*, a type of these objects. In reality, Haiti has nothing to do with the “Voodoo” variety of these things, which can be stuck with pins to harm one’s enemies.

ANSWER: **dolls** [accept Voodoo **dolls**; accept **figurines**; prompt on **poppets**; prompt on **effigies**; prompt on **idols**; prompt on **models**]

[10] Two weeks following Durga Puja is this other Hindu festival. During this five-day festival, individuals create vibrant *rangoli* floor art, and light many oil lamps known as *diyas*.

ANSWER: **Diwali** [accept **Divali**, **Deepawali**, or **Dipawali**; prompt on **Dhanteras**; prompt on **Festival of Lights**]

<Religion>