

ACF Regionals 2019

Packet by Cambridge A, Carleton College A, and Penn A

Tossups

1. A series of steps of knowledge of this deity begins with the “realm of righteous action” and ends with the “realm of truth.” The “Five Thrones” are examples of temples to this deity, which host continuous scripture recitation sessions that can last longer than 2 days each. The practice of naam japo consists of meditation on the names of this deity, and devotion to this deity can be hindered by the “Five Thieves.” A dedication to the “holy mouth of the tenth king” opens a prayer to this deity, which is said at the beginning of an Amrit Sanchar ceremony. A verse dedicated to this deity, the Mul Mantar, opens with the phrase “Ik Onkar” (“ick OWN-car”), which refers to the oneness of this deity. For 10 points, name this deity, the subject of many hymns in the Adi Granth.

ANSWER: **God** [accept any answers indicating the **deity** worshipped in **Sikhism**; accept **Waheguru**; prompt on **Ik Onkar** until read]

<Religion>

2. Because of a laudanum addiction, an author with this surname believed that he was always accompanied by a doppelgänger whom he called a “ghost” version of himself. A character with this surname draws gasps when he willingly chooses to read *Fordyce’s Sermons* after teatime. That character with this surname absurdly lists his reasons for proposing to his cousin, who promptly tells him that she is the “last woman in the world” who could make him happy. This is the surname of an obsequious clergyman who allies with Lady Catherine de Bourgh in *Pride and Prejudice*. An author with this surname wrote a detective novel in which Godfrey Ablewhite is revealed to be the one who stole the title diamond from Rachel Verinder. For 10 points, identify this surname of the author of *The Moonstone*, Wilkie.

ANSWER: **Collins** [accept William **Collins** or William Wilkie **Collins**]

<British Literature>

3. This musician’s first published instrumental song was a novelty rag called “Rialto Ripples.” A song composed by this musician is the origin of a 32-bar chord progression whose B section consists of seventh chords on scale degrees 3, 6, 2, and 5; that progression is the basis of many songs by other musicians, including “Anthropology” and “Cotton Tail.” This musician wrote a standard that was originally included in, but later removed from, several musicals that he collaborated on, including *Rosalie*, *Strike Up the Band*, and *Lady, Be Good*; that song is “The Man I Love.” A jazz chord progression known as “rhythm changes” derives from this composer’s song “I Got Rhythm.” One of this composer’s songs describes how “the livin’ is easy, the fish are jumpin’” on Catfish Row. For 10 points, name this composer who wrote the song “Summertime” for his opera *Porgy and Bess*.

ANSWER: George **Gershwin** [or George Jacob **Gershwin**; or Jacob Bruskin **Gershowitz**; accept Ira **Gershwin** or Israel **Gershowitz** until “32-bar” is read]

<Other Arts>

4. This mathematician usually names a formula consisting of a factor “ e -to-the-negative- γ - z , all over z ” times an infinite product, his “canonical product” for the gamma function. He’s not Jacobi, but a class of doubly-periodic meromorphic functions introduced by this mathematician can be used to parameterize elliptic curves and are written with a script P . This mathematician introduced a function written as the infinite sum, over n , of a -to-the- n times the cosine of the quantity “ b -to-the- n times πx .” He is the second namesake of a theorem about sequentially compact subsets of \mathbb{R}^n that can be proved by constructing a monotonic subsequence. A pathological function named for this man was the first known function to be continuous everywhere despite its derivative never existing. For 10 points, name this German mathematician who co-names a theorem about convergent subsequences with Bernard Bolzano.

ANSWER: Karl **Weierstrass** (“VYE-ur-shtross”) [or Karl Theodor Wilhelm **Weierstrass**]

<Other Science (Math)>

5. A messianic spiritual leader of this ethnic group who developed a semi-syllabic script for its language is known as the “Mother of Writing” despite being a man. The Department of Justice alleged that Harrison Jack, along with members of this ethnic group in the US, conspired to attempt a coup in another country in 2007. Many refugees from this ethnic group were relocated to Merced (“mur-SED”), California. A child suffering from epilepsy was the focus of a book about a culture clash between American doctors and an overseas community of these people, who believed that the child suffered from a condition translated roughly as “the spirit catches you and you fall down.” Vang Pao led a mass exodus of these people after they were threatened with “extermination to the last root” during the Secret War by the Pathet Lao. For 10 points, name these mountain people of Southeast Asia.

ANSWER: **Hmong** people [accept **Miao**]

<World History>

6. A character created by this author works on the radio series *The Nature of Art* and splices together blank sections of tape to listen to. The protagonist of a novel by this author resents his mother for encouraging his sister Henrietta to volunteer for anti-aircraft duty during World War II. In a novel by this author, a rich entertainer who claims that he can smell through the phone returns to his apartment and makes angry phone calls after Marie leaves him. A novel by this author of “Murke’s Collected Silences” ends at the protagonist’s 80th birthday party, at which a novelty building-shaped cake is served. In that novel, in order to punish Nazi collaborators who worked on a building designed by his father, Robert Faehmel (“FEH-mull”) destroys St. Anthony’s Abbey. For 10 points, name this German author of *The Clown* and *Billiards at Half-Past Nine*.

ANSWER: Heinrich **Böll** [or Heinrich Theodor **Böll**]

<European Literature>

7. In an article that rejects the *in absentia* provision of one of these things for the first person to be born in the 22nd century, Donald Kaplan argued that the “vivid” type of these things helps fill in people’s “inner stories.” One philosopher argued that these things are passed along via a causal chain following an “initial baptism” in proposing an alternative to the “descriptivist” theory of them. Gottlob Frege (“FRAY-guh”) used the example of the morning star and the evening star to distinguish between the sense and reference of these things in his so-called “puzzle.” These things are “rigid designators” when they refer to the same object in every possible world in which the object exists, according to a book by Saul Kripke whose title pairs the process of generating them with “necessity.” For 10 points, identify these proper nouns, examples of which include “Sherlock Holmes.”

ANSWER: **names** [accept **Naming and Necessity**]

<Philosophy>

8. Five labor leaders were shot to death in 1977 near a railway station in this country by a far-right terrorist organization called the Apostolic Anti-Communist Alliance, or Triple A. This country’s “eight fundamental laws of the realm” were replaced by a new constitution in 1978. This country’s prime minister was assassinated by a car bomb planted by members of a separatist organization in Operation Ogre. In 1981, military leaders in this country attempted a coup by holding its legislature hostage, but the coup attempt, called 23-F, was foiled when this country’s king appeared on live television opposing the coup. This country became a constitutional monarchy after the accession of Juan Carlos I. For 10 points, name this country where the dictatorship of the Falange (“fuh-LANJ”) party ended after the 1975 death of Francisco Franco.

ANSWER: **Spain** [or Kingdom of **Spain**; or Reino de **España**]

<European History>

9. Superfluids experience a type of this process due to waves of phonon density in which the normal and superfluid components oscillate out of phase, called second sound. A relation between different forms of this process includes

the square root of the Reynolds number times the Prandtl number to the one-third power. That relation compares two types of this process in cylindrical systems and is the Churchill–Bernstein equation. The Biot (“bee-OH”) number compares internal and external forms of this process across a surface, and the Nusselt number is the ratio of two different forms of this process. The rate of this process, which can happen when bodies are in contact or through bulk motion of a fluid, is proportional to ΔT according to Newton’s Law of Cooling. For 10 points, name this transfer of energy exemplified by convection, conduction, and radiation.

ANSWER: **heat transfer** [accept thermal **energy transfer** or **heat exchange**; accept **second sound** until read; prompt on **sound** or **heat** or **heating** or **cooling** by asking “what physical quantity is being transferred?”; anti-prompt on **convection** or **conduction** by asking “can you be less specific?”]

<Physics>

10. *Composer and type of piece required.* One of these pieces opens with a held B-flat major chord under a gentle rising and falling theme that starts with the notes E-natural, F. The F-sharp major *largo* second movement of one of these pieces is marked *Cantabile e mesto* (“kahn-TAH-bee-lay ay MESS-toh”); that piece is sometimes nicknamed “Graveyard.” The third movement of one of these pieces is known as the “Witches’ Minuet,” and its first movement opens with two measures of falling fifths. The second movement of one of these pieces is a theme-and-variations on the composer’s own hymn “God Save Emperor Francis,” which later became the *Deutschlandlied* (“DOYTCH-lahnd-leed”). A set of six of these pieces, which includes ones nicknamed “Sunrise,” “Fifths,” and “Emperor,” was dedicated to Count Erdödy (“AIR-der-dee”) and labeled Opus 76. For 10 points, name these pieces of chamber music by the Austrian “Father” of their form.

ANSWER: string **quartets** by Franz Joseph **Haydn** [prompt on partial answer; accept answers that also include **Opus 76** or **Erdödy** until read, as all the pieces in the tossup are from Op. 76; prompt on **SQ**]

<Music>

11. The final sentence of an essay claims that this technique has emerged twice: at the end of “antique theocracy” and when “modern ‘anthropocracy’ (‘anthro-PAW-cracy’) first reared itself.” That essay about this technique “as symbolic form” is by Erwin Panofsky. An advocate of this technique developed a method for it dubbed the “legitimate construction” by later scholars. One historian blamed an obsession with this technique for the eccentric personality of an artist who used it at the bottom of his painting *The Hunt in the Forest*. A key figure in the development of this technique demonstrated it by aligning a painting of a baptistery with the baptistery itself, and having viewers look through a hole in the back. That man, Filippo Brunelleschi, helped popularize this technique’s “linear” form. For 10 points, name this technique developed during the Renaissance to illustrate pictorial depth and distance on a flat surface.

ANSWER: **perspective** [or linear **perspective**; accept **Perspective as Symbolic Form**] (The third clue refers to Alberti’s *De pictura*.)

<Painting>

12. The protagonist of a novel from this country invents a fake saint to support his bureaucracy, which synchronizes all the clocks in this country; that novel from this country is called *The Time Regulation Institute*. In another novel from this country, 500 cats are imported to kill rats in order to fight the bubonic plague. The narrator of that novel creates a siege weapon with a scholar to whom he bears a strong physical resemblance. The narrator of that novel from this country becomes the slave of a man known as Hoja. An author from this home country of Ahmet Hamdi Tanpınar created the poet Ka, who negotiates Blue’s release by ensuring that Kadife removes her headscarf during a production of *The Spanish Tragedy*. For 10 points, name this home country of the author of *The White Castle* and *Snow*, Orhan Pamuk.

ANSWER: **Turkey** [or Republic of **Turkey**; or **Türkiye** Cumhuriyeti]

<World Literature>

13. John Damrell founded the National Association of Fire Engineers after an 1872 fire in this city, which was also the first American city to establish building height and area restrictions. Peter Hurkos used ESP to try to find a serial killer in this city. The deadliest nightclub fire in history occurred at this city's Cocoanut Grove club. In 1990, over half a billion dollars worth of art, including Rembrandt's *Storm on the Sea of Galilee*, was stolen from this city's Gardner Museum. In 1919, twenty-one people died after the collapse of a tank caused a wave of sticky molasses to rush through this city's North End neighborhood. Governor Calvin Coolidge declared that "there is no right to strike against the public safety" in opposition to a 1919 strike of this city's police officers. For 10 points, name this capital of Massachusetts.

ANSWER: **Boston**

<American History>

14. Tenax is a polymer that is particularly good at this process, which is why it's used in purge and trap methods. The reverse of this process is modeled using Arrhenius kinetics via the Polanyi-Wigner equation. An equation used to model this process has the same mathematical form as the Michaelis-Menten equation and assumes that all sites for this process are equivalent. Industrial nitrogen generation often uses the "Pressure-Swing" variety of this process. Brunauer, Emmett, and Teller expanded a simpler model of this process to account for multiple layers. That model describes this process in isothermal conditions and is the Langmuir ("LANG-myoor") model. Zeolites and charcoal are commonly used to facilitate this process thanks to their high surface areas. For 10 points, name this process in which gaseous or liquid molecules bind to a surface but are not absorbed.

ANSWER: **adsorption** [or **adsorbing**; do not accept or prompt on "absorption" or "absorbing"]

<Chemistry>

15. This author wrote about a giant Venus flytrap that refuses to eat anyone and a man piloting a fake iceberg to Florida in a collection of bar stories told by Harry Purvis called *Tales from the White Hart*. In one of his novels, Jan Rodricks becomes the last living human after Earth's children merge into a hive mind thanks to the influence of Karellen and the other Overlords. The line "overhead, without any fuss, the stars were going out" ends a story by this author in which monks use a computer to list the title appellations. This author of *Childhood's End* and "The Nine Billion Names of God" wrote a novel in which the *Discovery One* is sent on a mission to Iapetus, during which Dave Bowman is forced to shut down the computer HAL 9000. For 10 points, name this author of *2001: A Space Odyssey*.

ANSWER: Arthur C. **Clarke** [or Arthur Charles **Clarke**]

<Trash>

16. In one myth, this animal was created when Xuanwu ("shwen-woo") washed his stomach in a river to dissolve his sins. In Fujian Province, many tombs are shaped to look like this animal, possibly because it is thought to find good places for burial. Along with a snake, a black one of these animals represents the North in the Four Symbols. A creature who is half-dragon and half this animal, Bixi ("bee-shee"), is traditionally depicted in plinths for steles ("stee-leez") that are rubbed for good luck. One of these animals is said to carry the three islands of the Eight Immortals. After a fight between Gonggong and Zhuanxu ("j'wen-shoo") causes a flood, Nüwa cuts off the legs of that animal, Ao ("ow"), to repair the sky. Along with oxen bones, parts of these animals were heated and observed for cracks. For 10 points, name these reptiles whose shells were used in Chinese divination.

ANSWER: **turtles** [or **tortoises**]

<Mythology>

17. Eric Wolf argues that the increasing presence of "fog coverings" in this practice reflected the uniform quantitative standards spread by capitalism. Helen Codere noted that this practice only became a "central and all-encompassing institution" after the founding of Fort Rupert. One work describes how an individual who failed to engage in this practice was known for his "rotten face," and claims that "one has no right... to refuse" this practice.

Large, flattened pieces of copper were sometimes broken or destroyed as part of this practice, which, according to one work, gave expression to a variety of social institutions as a “total social fact” or “total prestation.” Rich members of the Haida (“HIGH-duh”) and Tlingit (“KLING-it”) continue to lead their kin groups in this practice, which was analyzed in Marcel Mauss’s *The Gift*. For 10 points, name this reciprocal gifting ceremony common to cultures of the Pacific Northwest.

ANSWER: **potlatch** [prompt on gifting or similar answers]

<Social Science>

18. Chronic use of this medication in vegetarians or people with chronic kidney disease can cause pyroglutamic acidosis. Active metabolites of this compound include AM404, which is generated by reaction with arachidonic (“uh-RACK-ih-DON-ick”) acid. Plasma levels of this drug appear on the y-axis of the Rumack–Matthew nomogram. Ingesting over 10 grams of this substance causes buildup of the toxic metabolite NAPQI, which can be eliminated by using N-acetylcysteine (“N-uh-SEE-tull-SIS-teen”) to regenerate stores of glutathione. Overdose of this substance is the most common cause of acute liver failure in the US. This medication is combined with hydrocodone in Vicodin (“VIKE-uh-din”). This compound is thought to inhibit the COX site of prostaglandin H2 synthase, unlike NSAIDs (“EN-seds”), which inhibit cyclooxygenase. For 10 points, name this analgesic commonly marketed as Tylenol.

ANSWER: **acetaminophen** (“uh-SEE-tuh-MIN-uh-fin”) [or **paracetamol** or **APAP**; accept **Tylenol** until read]

<Biology>

19. It’s not Canada, but the erection of poorly-constructed timber frame houses in this country in the late ’90s and early 2000s led to the “leaky homes crisis.” This country experienced a 1984 constitutional crisis when its outgoing prime minister refused his successor’s instructions to devalue its currency. After the 1979 Iranian oil shock, this country launched petrochemical projects under the “Think Big” strategy. This country’s prime minister David Lange (“LONG-ee”) declared it a nuclear-free zone. Free-market policies in the 1990s in this country were pejoratively called Ruthanasia, which succeeded liberal economic policies of the 1980s nicknamed Rogernomics. This country’s rugby team is called the All Blacks. For 10 points, name this nation that moved its capital from Auckland to Wellington in 1865.

ANSWER: **New Zealand** [or **Aotearoa**]

<World History>

20. This poem’s main character remarks of “how all things fade and perish” before painting a number of symbols, including white and dark circles representing Life and Death. At the end of this poem, people say “Farewell forever!” to the main character before various natural phenomena also wish him farewell. After failing to kill a man wearing an apparently magical shirt, the protagonist of this poem is told to shoot him on the top of his head by a woodpecker. Like *Alhalla* by Henry Rowe Schoolcraft, whose research informed this poem, this poem imitates the *Kalevala* in its use of trochaic (“tro-KAY-ick”) tetrameter. This poem takes place “by the shores of Gitche Gumee (“GITCH-ee GUM-ee”),” which is an Ojibwe (“oh-JIB-way”) name for Lake Superior. For 10 points, name this epic poem about a lover of Minnehaha, written by Henry Wadsworth Longfellow.

ANSWER: *The **Song of Hiawatha***

<American Literature>

21. On March 30, 1949, this country was rocked by nationwide protests against it joining NATO. This country was occupied by British forces during World War II after it was invaded in Operation Fork. The “Match of the Century” between Boris Spassky and Bobby Fischer was held in this country in 1972. This country submitted to the authority of a foreign king in the “Old Covenant” of 1262. In 1986, Mikhail Gorbachev and Ronald Reagan met at a summit in this country’s capital city that eventually resulted in the signing of the Intermediate-Range Nuclear Forces Treaty. Disputes over fishing rights between this country and Britain led to the Cod Wars. This country’s parliament is the

oldest in the world, meeting since 930, and is called the Althing. For 10 points, name this island nation whose capital is Reykjavík.

ANSWER: **Iceland** [or Republic of **Iceland**; or **Ísland**]

<European History>

Bonuses

1. This city's Idumota Market is a hub for home video distribution. For 10 points each:

[10] Name this populous lagoon city divided into two major sections: a "Mainland" that includes the port of Apapa, and an "Island" that includes Ikoyi and Bar Beach.

ANSWER: **Lagos**

[10] Lagos is the most populous city in this African country, which moved its capital from Lagos to the planned city of Abuja in 1991.

ANSWER: **Nigeria**

[10] In order to stop coastal erosion, this planned city is being built adjacent to Lagos by reclaiming land from the Atlantic Ocean on the site of Bar Beach.

ANSWER: **Eko Atlantic** City [or **Nigeria International Commerce** City]

<Geography>

2. This man became the highest-profile person to be executed in a "legal purge" in his country after World War II. For 10 points each:

[10] Name this politician who overthrew Haakon VII to take power in 1940.

ANSWER: Vidkun **Quisling**

[10] Quisling was the wartime leader of this country. This was the northernmost country that was part of Nazi Germany's "Atlantic Wall."

ANSWER: **Norway**

[10] A Norwegian facility to produce this substance was successfully sabotaged in 1943 by British commandos in Operation Gunnerside.

ANSWER: **heavy water** [or **deuterium oxide**; accept **D2O** or **2H2O**; do not accept or prompt on "water" or "H2O"]

<European History>

3. This composer's most famous piece begins with a solo English horn playing a folk song from the Cévennes ("say-VEN") region; that theme reappears in all three of its movements. For 10 points each:

[10] Name this composer of *Symphony on a French Mountain Air* who also taught students such as Cole Porter, Isaac Albéniz ("ee-SAHK all-BAY-neese"), and Erik Satie.

ANSWER: Vincent **D'Indy** ("van-SAWN dan-DEE")

[10] Two other students of Vincent D'Indy were Arthur Honegger ("ar-TOOR oh-neh-GAIR") and Darius Milhaud ("dar-YOOS mee-YO"), who were members of this group of French composers based in Montparnasse with a numerical name.

ANSWER: Les **Six** ("lay SEESE") [or The **Six**]

[10] Like César Franck's ("say-zar FRONK's") *Symphonic Variations*, *Symphony on a French Mountain Air* prominently features this instrument. This instrument is also featured in a set of 24 variations on a violin caprice whose 18th variation slows and inverts the theme.

ANSWER: **piano** [or **pianoforte**] (The last piece described is Rachmaninoff's *Rhapsody on a Theme of Paganini*.)

<Music>

4. The minor poet Henry Petowe ("") wrote a completion of this unfinished poem. For 10 points each:

[10] Name this poem whose divisions were called "sestads" by George Chapman, who also wrote a completion of it. *As You Like It* quotes this poem's line "Whoever loved, that loved not at first sight?"

ANSWER: **Hero and Leander**

[10] *Hero and Leander* was the longest poem written by this British author before his death in a Deptford pub brawl in 1593. His dramatic works include *The Jew of Malta* and *Doctor Faustus*.

ANSWER: Christopher **Marlowe** [or Kit **Marlowe**]

[10] This poem by Marlowe occasioned many poetic replies, including John Donne's ("dun's") "The Bait" and a parodic reply by Walter Raleigh.

ANSWER: "The **Passionate Shepherd to His Love**"

<British Literature>

5. Generating vaccines that target this enzyme instead of hemagglutinin may be a promising approach for creating "universal" influenza vaccines. For 10 points each:

[10] Name this enzyme that cleaves terminal sialic acid residues during exit of virions. Zanamivir ("zuh-NAM-uh-veer") and oseltamivir ("aw-sul-TAM-uh-veer") inhibit this enzyme.

ANSWER: **neuraminidase** [or **NA**; prompt on **sialidase**]

[10] Hemagglutinin helps the influenza viral membrane to fuse with the membrane of these organelles. "Late" examples of these organelles fuse to lysosomes and are sometimes called multivesicular bodies.

ANSWER: **endosomes** [prompt on **vesicles**]

[10] Following the fusion of membranes, influenza nucleoproteins that encapsulate negative strands of these nucleic acids are released into the cell.

ANSWER: **RNA** [or **ribonucleic acids**]

<Biology>

6. In *The Art of Cruelty*, Maggie Nelson notes that she would've loved to have seen a version of this artist's work *Jet of Water* painted by a 79-year-old Sylvia Plath instead. For 10 points each:

[10] Name this artist who depicted a man sitting in front of two bisected halves of a cow in his painting *Figure with Meat*.

ANSWER: Francis **Bacon**

[10] *Figure with Meat* is one of the many paintings by Bacon that were inspired by Diego Velázquez's 1650 portrait of this pope.

ANSWER: **Innocent X** ("the tenth") [or Giovanni Battista **Pamphili**]

[10] The other major visual inspiration for *Figure with Meat* was this 17th-century artist's painting *Flayed Ox*. This Dutchman painted *The Night Watch*.

ANSWER: **Rembrandt van Rijn** [accept either underlined portion; or **Rembrandt** Harmenszoon van Rijn]

<Painting>

7. The first author known by name, Enheduanna, was the high priestess of this goddess. For 10 points each:

[10] Name this ancient goddess of love who descends into the realm of her sister Ereshkigal. The later Levantine goddess Astarte is considered to be a version of this deity.

ANSWER: **Ishtar** [or **Inanna**]

[10] Ishtar is a possible candidate for the identity of the nude, winged figure depicted on this terracotta plaque on display at the British Museum. The central figure of this work uses her talons to perch on two lions.

ANSWER: **Queen of the Night** Relief [or **Burney Relief**]

[10] A largely discredited theory posits that the figure on the Queen of the Night relief is an early depiction of this figure, a beautiful female demon known for stealing young children.

ANSWER: **Lilith**

<Mythology>

8. This geometry is exemplified by sulfur hexafluoride. For 10 points each:

[10] Name this molecular geometry where six atoms bond symmetrically to a central atom, corresponding to the vertices of a platonic solid.

ANSWER: **octahedral** geometry

[10] Octahedral complexes in which the central metal atom is bonded to three bidentate chelates can isomerize via two mechanisms, neither of which involve breaking the metal–chelate bond. Name either.

ANSWER: Ray–Dutt twist OR Bailar twist [accept either underlined portion]

[10] Octahedral complexes undergo this effect in order to break degeneracy of their d orbitals. In this effect, one axis of the complex elongates.

ANSWER: Jahn–Teller (“yahn teller”) effect [or Jahn–Teller distortion]

<Chemistry>

9. This author created Fred Peloux, who goes to dinner with his friend Desmond and stays for months awaiting the return of his wife Lea. For 10 points each:

[10] Identify this one-named French author of *Cheri*, who wrote about a girl born into a family of courtesans in *Gigi*.

ANSWER: Colette [or Sidonie-Gabrielle Colette]

[10] Colette wrote four novels about this recurring character, including one about her “at school,” in which she clashes with her headmistress Miss Sergent before having an affair with her assistant Miss Lanthénay.

ANSWER: Claudine

[10] In another novella by Colette, Camille is jealous of her husband Alain’s love for one of these animals and throws it off a balcony. Lewis Carroll created one of these animals who disappears gradually until only his grin is visible.

ANSWER: cat [or *La Chatte*; accept Cheshire Cat]

<European Literature>

10. Answer the following about the history of Bolivia in the 19th century, for 10 points each.

[10] This South American independence leader, along with his lieutenant Antonio José de Sucre, was instrumental in winning Bolivia its independence.

ANSWER: Simón Bolívar [or Simón José Antonio de la Santísima Trinidad Bolívar Palacios Ponte y Blanco]

[10] Bolivia lost its Pacific coastline to Chile and Peru in a war fought over this mineral resource that is used in fertilizer and gunpowder. That war is sometimes named after this resource.

ANSWER: saltpeter [or sodium nitrate; accept Saltpeter War or *Guerra del Salitre*]

[10] Bolivia’s economy became more dependent on the mining of this resource towards the end of the 19th century. The British Isles were an important source of this resource in antiquity.

ANSWER: tin

<World History>

11. Many later works of art depicted this man’s supposed relationship with his model, the courtesan Phryne (“FRY-nee”). For 10 points each:

[10] Name this ancient Greek sculptor who portrayed a youthful god leaning against a tree and striking at a lizard in his *Apollo Sauroktonos*.

ANSWER: Praxiteles

[10] Praxiteles became the first creator of a full-scale female nude with his depiction of this goddess for her temple at Knidos. He was also once thought to have created a now-armless statue of this goddess found on Milos.

ANSWER: Aphrodite [or Venus; accept Aphrodite Cnidus or Aphrodite of Milos or Venus de Milo]

[10] This other renowned sculptor of the 4th century BC was the personal sculptor of Alexander the Great. He or his circle created the bronze originals from which the *Apoxyomenos* (“apoxy-OM-uh-nohss”) and the *Farnese Hercules* (“far-NAY-zay Hercules”) were copied.

ANSWER: Lysippos

<Other Arts>

12. This work is divided into five sections, the first of which runs from Advent to Christmas. For 10 points each:

[10] Name this work compiled by Jacobus da Varagine (“va-RAH-jee-nay”). Due to its massive popularity among medieval readers, it was one of the first books to be mass distributed by printing press.

ANSWER: the **Golden Legend** [or **Legenda Aurea**]

[10] The *Golden Legend* consists of hagiographies, which are biographies of Christian people of this type.

ANSWER: Christian **saints**

[10] A chapter of the *Golden Legend* nominally dedicated to Pope Pelagius includes an extensive biography of this other historical figure. In that chapter, this figure is deceived by the heretical monk Sergius.

ANSWER: **Muhammad** [or **Mahomet**]

<Religion>

13. Kierkegaard applied this concept to the type of “guilt” felt by one experiencing the “dizziness of freedom” that constitutes anxiety. For 10 points each:

[10] Name this concept. A 1947 work titled for the “ethics” of this concept argues that unlike “absurdity,” it allows man “through failure and outrage, to save his existence” by working toward securing the freedom of others.

ANSWER: **ambiguity** [or **ambiguous**; accept *The Ethics of **Ambiguity*** or *Pour une morale de l’**ambiguïté***]

[10] *The Ethics of Ambiguity* is a book by this French existentialist philosopher who wrote that “One is not born, but rather becomes, a woman” in *The Second Sex*.

ANSWER: Simone de **Beauvoir**

[10] In 1971, de Beauvoir authored the “Manifesto of the 343,” in which she declared that she had performed this action. Judith Jarvis Thomson wrote about a violinist who needs a blood transfusion in a philosophical “defense” of this action.

ANSWER: **abortion** [accept equivalents, such as **ending a pregnancy**]

<Philosophy>

14. The narrator of Hella Haasse’s novel *The Black Lake* grows up in this modern-day country. For 10 points each:

[10] Name this modern-day country which is the setting of Multatuli’s novel *Max Havelaar*. It’s the home country of Minke, the protagonist of *This Earth of Mankind* by Pramoedya Ananta Toer (“prah-MOOD-yah ah-nan-tah TOOR”).

ANSWER: **Indonesia** [or Republic of **Indonesia**; or Republik **Indonesia**]

[10] The aforementioned novels all deal with the colonization of Indonesia by this European country.

ANSWER: **Netherlands** [or **Nederland**; accept **Holland** or the **Dutch**]

[10] Vicki Baum used the 1906 Dutch intervention in Bali as the setting for a novel named after these two concepts. A book named after these two concepts partly grew out of the essay “Come Back to the Raft Ag’in, Huck Honey!”

ANSWER: **love** AND **death** [accept **Love and Death** in Bali or **Love and Death** in the American Novel]

<Other Literature>

15. This historian was Hadrian’s secretary, but was dismissed after he got too close to Hadrian’s wife Sabina. For 10 points each:

[10] Name this author of *The Twelve Caesars*.

ANSWER: Gaius **Suetonius** Tranquillus

[10] According to Suetonius, the last words of this first emperor of Rome were “Have I played the part well? Then applaud as I exit.”

ANSWER: **Augustus** [accept **Octavian**]

[10] However, the public record shows Augustus’s last words to be “I found Rome a city of” this material and “left it a city of” this other material. Please give the two materials in the order as they were in the original quote.

ANSWER: **brick** AND **marble** [accept **clay** in place of “brick”]

<Ancient History>

16. Cataclysmic variables are a type of this system in which a donor provides mass to the accretion disc of a white dwarf. For 10 points each:

[10] Name these two-component systems. One type of these systems changes in magnitude as its members eclipse each other.

ANSWER: **binary** stars [or **binary** systems; accept eclipsing **binaries**]

[10] The area where mass is gravitationally bound to one member of a binary system is a teardrop-shaped “lobe” of this name, after a French astronomer. This name also describes the point at which an object disintegrates due to tidal forces.

ANSWER: **Roche** lobe [accept **Roche** limit or **Roche** radius]

[10] This class of eclipsing binaries, named for the “Demon Star” of Perseus, is semi-detached, meaning that the more massive primary component has an unfilled Roche lobe. The larger secondary component of this system lies above the main sequence and fills its Roche lobe.

ANSWER: **Algol** variables

<Other Science (Astronomy)>

17. This psychologist co-names with “Nebraska” a battery of tests used to determine neuropsychological deficiencies on fourteen scales. For 10 points each:

[10] Name this Soviet neuropsychologist who published a case study about the incredible memory abilities of journalist Solomon Shereshevsky in his *The Mind of a Mnemonist*.

ANSWER: Alexander **Luria**

[10] Luria noted that when Shereshevsky heard a musical tone, he would see a color, suggesting that he had this disorder in which the stimulation of one sense leads to automatic experiences in other senses.

ANSWER: **synesthesia** [or word forms, such as **synesthetic**]

[10] Luria’s postwar work included research into the regulative function of this ability as a source of voluntary behavior. Individuals with Broca’s aphasia often suffer from “automatism” associated with this ability.

ANSWER: **speech** [or **speaking** or **talking** or equivalents; prompt on **language**]

<Social Science>

18. Like the essay that follows it, “Many Thousands Gone,” this essay criticizes the depiction of the character Bigger Thomas. For 10 points each:

[10] Name this James Baldwin essay that calls *Uncle Tom’s Cabin* a “very bad novel” because of its excessive sentimentality.

ANSWER: “**Everybody’s Protest Novel**”

[10] “Everybody’s Protest Novel” compares *Uncle Tom’s Cabin* to this Richard Wright novel in which Bigger Thomas murders Mary Dalton and Bessie Mears.

ANSWER: **Native Son**

[10] Frantz Fanon (“fah-NAWN”) wrote that Bigger Thomas acted in response to “the world’s anticipation” in this book, whose section “The Negro and Psychopathology” analyzes the psychological effects of colonization on black people.

ANSWER: **Black Skin, White Masks** [or **Peau noire, masques blancs**]

<American Literature>

19. This slogan titles a 2001 book on “tourism and national identity” by Miami University professor Marguerite S. Shaffer. For 10 points each:

[10] Give this three-word phrase used in early 20th-century advertising to convince wealthy Americans to visit domestic tourist sites rather than go abroad.

ANSWER: “**See America First**”

[10] The “See America First” campaign was largely funded by this industry. The Union Pacific and Central Pacific were two companies in this industry.

ANSWER: **railroad** industry [or **train** industry; accept equivalents]

[10] This national park was billed as “America’s Switzerland” by the Great Northern Railway. This Montana park contains the Triple Divide of the Americas.

ANSWER: **Glacier** National Park

<American History>

20. This physicist and an Indian colleague proposed a state of matter that forms when the total number of particles exceeds the total occupation number of all excited states. For 10 points each:

[10] Name this physicist who, along with Bose, proposed those condensates in which a macroscopic fraction of bosons all occupy a single quantum state.

ANSWER: Albert **Einstein** [accept **Bose–Einstein condensates**]

[10] The first atomic BEC was created by Eric Cornell’s group at JILA with atoms of this alkali metal using evaporative cooling in a magnetic trap. Those experiments used the isotope of this element with mass number 87, which is less common than its 85 isotope.

ANSWER: **rubidium**-87 [or **Rb**-87]

[10] The spectrum of these excitations in BECs can be derived from a perturbative expansion to the Gross–Pitaevskii (“pih-TAH-yiff-ski”) equation. The theory was developed by a Soviet physicist who also developed a quasi-particle transformation to diagonalize the Hamiltonian for BCS superconductors.

ANSWER: **Bogoliubov** (“bo-go-LYOO-bov”) excitations [or **Bogoliubov** spectrum; accept **Bogoliubov** transformation]

<Physics>

21. According to Bell’s theorem, no theory of quantum mechanics can possess hidden variables and this property. For 10 points each:

[10] Name this property that is contrasted with “action at a distance.”

ANSWER: **locality**

[10] This thought experiment by Einstein and two other physicists used showed that quantum mechanics allows for nonclassical correlations and argued that it is an incomplete theory because it violates local realism.

ANSWER: **EPR** paradox [or **Einstein–Podolsky–Rosen** paradox]

[10] Many experiments that test local hidden variable theory, such as those of Freedman, Clauser, and Aspect in the 1970s and ’80s, measured this degree of freedom of entangled photons produced by calcium sources. This degree of freedom corresponds to the geometrical orientation of a transverse wave.

ANSWER: **polarization**

<Physics>