1. **The Taylor-Proudman theorem holds when this force dominates a body's motion in a fluid, while it is balanced by viscous stress in Ekman layers. It equals negative two times an object's mass times the cross product of the object's velocity and the global rotation rate, so it only acts on moving objects in (\*)** rotating reference frames. For 10 points—name this fictitious force that sets the direction of cyclone rotation.

answer: Coriolis force (or Coriolis effect)

<SCI, PHYS>

2. **The endpoint of the movement of these devices is called an ictus. Louis Spohr was an early advocate of this device. Pierre Boulez** [boo-LEZ] **did not perform with one of these implements. This object was also eschewed by Leopold Stokowski** [stuh-KOW-skee] **in the film *Fantasia*** [fan-TAY-zhuh]**. When using one of these devices, a (\*)** downbeat should be a straight downward motion. For 10 points—name these sticks used to keep time by conductors.

answer: baton (prompt on ”(conductor's) wand(s)” or ”(conductor's) stick(s)”)

<FA, OTHER>

3. **This man, who was deemed the “greatest living soldier” by the Duke of Wellington, was mocked for writing a letter in which he alluded to eating “a hasty plate of soup.” This man, who won the Battle of Chippewa in the War of 1812, was criticized for executing members of the St. (\*)** Patrick's Battalion after the Battle of Chapultepec. For 10 points—what general created the Anaconda Plan and was nicknamed “Old Fuss and Feathers”?

answer: Winfield Scott

<HIST, AMER>

4. **This author wrote about a man who praises the convenience of a baggage car while traveling with Mr. Smooth-it-away in a parody of *The Pilgrim's Progress* titled “The Celestial Railroad.” In a novel by this author, Mistress Hibbins suggests that the devil has placed a mark on the chest of the (\*)** Massachusetts minister Arthur Dimmesdale [“dims-dale”]. For 10 points—what author wrote about the shaming of Hester Prynne [prin] in *The Scarlet Letter*?

answer: Nathaniel Hawthorne (or Nathaniel Hathorne)

<LIT, AMER>

5. **One of these objects allows the player to stay up all night to listen to the stories of Anju's Grandmother. The player can transform into a warrior who shoots sword beams by using the “Fierce Deity's” one of these. A villain who inhabits one of these objects tries to destroy (\*)** Termina [tur-“ME”-nuh] by bringing down the Moon. Majora [MUH-jor-uh] from the *Legend of Zelda* series resides in—for 10 points—what kind of object that conceals one's face?

answer: mask (accept All-Night Mask or Fierce Deity's Mask or Majora's Mask)

<TRASH, POP CULT>

6. **After molecular hydrogen, this compound is the most abundant molecule in the universe. In the water-gas shift reaction, this compound reacts with water to yield hydrogen gas and carbon dioxide. This diatomic** [“dye-atomic”] **gas binds to (\*)** hemoglobin 200 times more tightly than oxygen, which is why homes often have detectors for it. For 10 points—name this colorless, odorless, poisonous gas whose formula is CO [“C-O”].

answer: carbon monoxide (accept CO before “CO”)

<SCI, CHEM>

7. **In October 2015 CNN announced it had a sixth podium on stand-by should this man choose to join a Las Vegas debate. During a January 2016 Congressional address, it was announced this man would lead a “moonshot” effort to (\*)** cure cancer; a major factor in this man's decision *not* to seek the 2016 Democratic presidential nomination was the May 2015 death from cancer of his son, Beau [boh]. For 10 points—name this vice president.

answer: Joe Biden (Jr.) (or Joseph Robinette Biden Jr.)

<CE, CE>

8. **This character is curious to know whether the baby of the Duchess turned into a fig, or a pig. An executioner is unable to determine how to sever this character's head, to the displeasure of a king and queen who are hosting a chaotic game of croquet** [kroh-KAY]**. A (\*)** grin is left hanging in the air during the gradual disappearance of this animal. Lewis Carroll created—for 10 points—what feline who lives in Wonderland?

answer: Cheshire Cat [CHEH-shur] (or Cheshire Puss; prompt on “cat”)

<LIT, BRIT>

9. **In 1928 an attempt to harvest this resource began in the Brazilian town of Fordlandia. A photograph shows a man looking at his daughter's hand, which was cut off by the Force Publique for failing to produce this resource in the Congo. The name (\*)** “Olmec” refers to this resource, which can be strengthened by adding sulfur in a method discovered by Charles Goodyear. For 10 points—name this substance which can be vulcanized.

answer: (natural) rubber (accept Indian rubber or caoutchouc or latex or isoprene)

<HIST, OTHER>

10. **This character visited the hut of Molorchus** [mo-LOR-kuss] **in Cleonae** [KLEE-oh-nee] **before fighting a creature that lived in a cave with two entrances. Iolaus** [EE-oh-“louse”] **assisted this character in fighting an inhabitant of the swamp of Lerna. This son of Alcmene** [alk-MEEN-uh] **accidentally slew his own children, and as penance King (\*)** Eurystheus [yur-ISS-thee-uss] assigned him a series of tasks. For 10 points—name this hero who killed the Nemean [NEE-mee-un] Lion and the Hydra as two of his twelve labors.

answer: Hercules (or Heracles)

<RMPSS, MYTH>

11. **Viktor Klemperer's diaries describe his life in this city and its suburb of Dölzschen** [DURLZ-shin] **as a Jew under the Nazi regime. The Zwinger** [TSVING-ur] **Palace in this city is on the banks of the Elbe** [EL-buh]**. This capital of Saxony was the target of a 1945 event that killed 25,000 people, and which was described by a POW held here, (\*)** Kurt Vonnegut, in *Slaughterhouse-Five*. For 10 points—name this German city firebombed at the end of World War II.

answer: Dresden

<GEO, GEO>

12. **In the lower center of this painting, a woman eats a giant blackberry next a bird feeding a man a cherry. A pair of ears holds a carving knife in the rightmost portion of this work, whose leftmost portion shows a swarm of birds emerging from a hut, below which (\*)** Eve is presented to Adam by God. Scenes of Eden and Hell flank the nude revelers of the central panel in—for 10 points—what triptych by Hieronymus Bosch [“hi”-uh-RAHN-uh-muss “bosh”]?

answer: The Garden of Earthly Delights

<FA, VISUAL>

13. **This organelle is the site of the final step of gluconeogenesis** [GLOO-koh-“neo-genesis”]**, in which glucose-6-phosphate is converted into glucose. A variant of it found in muscle stores calcium ions. After a protein is synthesized, it is (\*)** transported by a translocon [“trans”-LOH-kahn] into this organelle. The presence or absence of ribosomes [RYE-buh-sohmz] distinguishes its “rough” and “smooth” types. For 10 points—name this organelle that forms a tube-like network in the cell.

answer: ER or endoplasmic reticulum (accept smooth endoplasmic reticulum or smooth ER before “synthesized”; accept sarcoplasmic reticulum; do not accept or prompt on answers containing “rough”)

<SCI, BIO>

14. **The use of gillnets to catch totoaba** [“toe”-TWAH-bah] **fish near this river's mouth has decimated the rare vaquita** [vah-KEE-tah] **porpoise. On this river, the historic Lee's Ferry river crossing lies downstream from the Glen Canyon Dam. Runoff from this river accidentally created the Salton Sea. Lake (\*)** Powell and Lake Mead lie on this river, which features the Hoover Dam. For 10 points—name this American river that formed the Grand Canyon.

answer: Colorado River

<GEO, GEO>

15. **The current opposition in this country's parliament is two parties called The Left and The Greens. This country's Christian Social Union party suggested closing its borders in response to the robbery and assault of numerous women in one of its cities on New Year's Eve, a call rejected by this country's (\*)** chancellor. For 10 points—name this nation where Syrian refugees have been taken under the policies of Angela Merkel [AHN-geh-lah MAIR-kul].

answer: (Federal Republic of) Germany (or Bundesrepublik Deutschland)

<CE, CE>

16. **This monarch supported the controversial High Church preacher Henry Sacheverell** [suh-SHEV-rull] **and appointed Robert Harley to replace the Whig Junto. This monarch reinstituted the practice of touching for scrofula** [SKRAH-few-luh] **and appointed the Duke of Marlborough army commander during the War of the (\*)** Spanish Succession. For 10 points—name this Protestant daughter of King James II who signed the 1707 Act of Union creating Great Britain.

answer: (Queen) Anne of Great Britain

<HIST, EURO>

17. **One of this author's stories is narrated by Red Peter, an ape who learns to imitate humans. In another story by this author, the Commandant wishes to subject himself to a machine that will inscribe the words “be just” on his body. This author of “A Report to an Academy” and “In the (\*)** Penal Colony” wrote a novella in which the salesman Gregor Samsa [ZAHM-zah] becomes a ”monstrous vermin.” For 10 points—what author wrote *The Metamorphosis* [met-uh-MOR-fuh-siss]?

answer: Franz Kafka

<LIT, EURO>

18. **This city's central avenue, the Monumental Axis, runs to a distinctive bridge built with diagonally criss-crossing steel arches that is named after president Juscelino Kubitschek** [zhoo-suh-LEE-noo KOO-buh-chek]**. This city's hyperboloid-shaped cathedral was built by Oscar (\*)** Niemeyer [NEE-mye-ur], who began working with Lúcio Costa to design this city in 1956. It replaced Rio de Janeiro as the capital of its country. For 10 points—name this capital city of Brazil.

answer: Brasília

<GEO, GEO>

19. **This leader ordered the death of the priest Janani Luwum** [juh-NAH-nee luh-WOOM]**. Israeli commando Yonatan Netanyahu** [yoh-uh-TAHN net-ahn-YAH-hoo] **was killed during Operation Thunderbolt in this man's country. This man, who overthrew Milton Obote** [oh-BOH-tay]**, was himself deposed in an invasion ordered by Julius Nyerere** [ny-RARE-ay] **of neighboring (\*)** Tanzania. Palestinian hijackers landed at Entebbe [en-TEB-ee] Airport during the rule of—for 10 points—what 20th-century dictator of Uganda?

answer: Idi Amin [EE-dee ah-MEEN] (Dada)

<HIST, WORLD>

21. **In this modern-day country, bizarre fortresses called *nuraghe*** [nu-RAH-geh] **were built by a Bronze Age civilization. The Alexander Mosaic was discovered in the House of the Faun in this country. Stabiae** [“STAB”-ee-“eye”] **and (\*)** Herculaneum [hur-kyoo-LAY-nee-yum] are archaeological sites in this country that are the remains of cities destroyed by a volcano. For 10 points—name this country where ash from Mount Vesuvius preserved the city of Pompeii [pahm-PAY].

answer: Italy (or Italian Republic or Italia or Repubblica Italiana)

<HIST, OTHER>

22. **This poem describes the overturning of a “symbolic ping pong table” during a “humorless protest.” The speaker of this poem imagines that “the heavens of Long Island” will be split by Carl Solomon, who is institutionalized in (\*)** “Rockland.” “Moloch [MOH-lock] the heavy judger of men” is invoked in this poem, which laments that “the best minds” of a generation were “destroyed by madness.” For 10 points—name this poem by Allen Ginsberg.

answer: Howl

<LIT, AMER>

23. **In this city, tensions were raised when the HMS *Romney* seized the smuggling ship *Liberty* and began impressing local sailors into the Royal Navy. After George Washington moved cannons captured from Fort Ticonderoga to this city's Dorchester Heights, the British evacuated it in 1776. In 1774 its (\*)** port was closed down by the Intolerable Acts. The Sons of Liberty destroyed cargo in—for 10 points—what city's “Tea Party”?

answer: Boston, Massachusetts (accept Boston Tea Party after “Tea Party”)

<HIST, AMER>

24. **In the early 20th century, Jacobus Kapteyn** [KAP-tyne] **theorized that this object's shape was a flattened disc with a radius of approximately 8,500 parsecs** [PAR-seks]**. This object, the second largest member of the Local Group, is orbited by both the Large and Small Magellanic Clouds. (\*)** Andromeda [ann-DRAH-meh-duh] is on a collision course with—for 10 points—what barred spiral galaxy whose stars include Rigel [RYE-jel] and the Sun?

answer: Milky Way

<SCI, OTHER>

Bonuses

1. For 10 points each—answer the following about the 1974 heavyweight championship fight known as the Rumble in the Jungle:

A. This boxer born Cassius Clay, who styled himself “The Greatest,” defeated George Foreman with an eighth-round knockout.

answer: Muhammad Ali

B. The fight was produced by this infamous boxing promoter, who has been sued for nonpayment or fraud by Ali, Mike Tyson, and Lennox Lewis, among others.

answer: Don(ald) King

C. Ali's tactic of leaning against the ring and letting Foreman waste his energy with ineffective punches was given this rhyming, hyphenated name.

answer: rope-a-dope

<TRASH, SPORTS>

2. Pencil and paper ready. For 10 points each—answer these trigonometry questions:

A. If *x* is an angle between zero and 360 degrees, inclusive, then for how many values of *x* does the sine [“sign”] of *x* equal one-half?

answer: 2 values [Within the range of angle values, arcsin(1/2) = 30 degrees or 150 degrees.]

B. What is the smallest *positive* value of *x* for which the cosecant [koh-SEE-kant] of *x* is undefined?

answer: x = 180 degrees (or x = 1 pi radians; do not accept or prompt on “1”) [csc(*x*) = 1/sin(*x*), and is thus undefined whenever sin(*x*) = 0, a situation that occurs at integer multiples of pi.]

C. Using a positive radial value and an angle between zero and 360 degrees, inclusive, what are the polar coordinates of the point whose Cartesian [kar-TEE-zhun] coordinates are (-1, negative square root of 3) [“negative one comma negative square root of 3”]? You have 10 seconds.

answer: (2, 240 degrees) or (2, 4 pi/3 radians) or (2, 4/3 pi radians) or (2, 1 1/3 pi radians) [*r* = sqrt(*x*2 + *y*2) = sqrt((-1)2 + (-sqrt(3))2) = sqrt(1 + 3) = sqrt(4) = 2; theta = arctan(*y*/*x*) = arctan(-sqrt(3)/-1) = arctan(sqrt(3)) = 240 degrees since it must be a 3rd-quadrant angle.]

<SCI, OTHER>

3. This city lies north of the San Ysidro [yuh-SID-roh] border crossing, which is often considered the busiest in the world. For 10 points each—

A. Name this major port city to the south of Los Angeles.

answer: San Diego, California

B. The San Ysidro border crossing separates San Diego from this city on Mexico's northern border, a popular weekend destination for American tourists.

answer: Tijuana [tee-HWAN-ah]

C. San Diego contains a large base for this branch of the armed forces, which is the largest single employer in the city.

answer: United States Navy

<GEO, GEO>

4. For 10 points each—name these 19th-century Russian nationalists who included historical events in their creative works:

A. This author described Napoleon's 1812 invasion of Russia in his novel *War and Peace*.

answer: Leo Tolstoy [“TOLL”-stoy] (or Lev Nikolayevich Tolstoy)

B. This composer and member of the “Mighty Five” left his historical opera *Khovanshchina* [KOH-vahn-SHEE-nuh] unfinished at his death; he *did* finish his opera set during the Time of Troubles, *Boris Godunov* [GOH-doo-noff].

answer: Modest (Petrovich) Mussorgsky [moh-DEST muss-ORG-skee]

C. This realist painter, whose historical works include *Reply of the Zaporozhian* [ZAH-por-OH-zhee-ahn] *Cossacks*, also painted *Barge Haulers on the Volga*.

answer: Ilya (Yefimovich) Repin

<MISC., MISC.>

5. For 10 points each—answer the following about 20th-century Japan-Korea relations:

A. The 1910 Japanese annexation of Korea ended this final Korean dynasty.

answer: Joseon Dynasty (or Choson Dynasty or Kingdom of Joseon or Chosun or Great Joseon State or Choson'gul)

B. Many Koreans died after being drafted by the Japanese to work in Hiroshima and this other Japanese city on which the U.S. dropped an atomic bomb.

answer: Nagasaki(-shi)

C. The occupation of Korea ended during the rule of this longtime emperor of Japan, who gave the Jewel Voice Broadcast announcing Japanese surrender in 1945.

answer: Hirohito [hee-roh-hee-toh] (or Showa tenno or the Showa emperor)

<HIST, WORLD>

6. In January 2016 Texas governor Greg Abbott proposed nine of these things and called for states to demand a convention to enact them. For 10 points each—

A. Name these things, of which only 27 have ever been ratified.

answer: amendments to the U.S. Constitution or U.S. Constitutional amendments (prompt on “amendment(s)”)

B. Abbott's nine proposed amendments included one to “allow a two-thirds majority of the States to override” this body's decisions.

answer: Supreme Court of the United States (accept equivalents such as U.S. Supreme Court; accept SCOTUS)

C. That proposal, and another requiring the votes of seven justices to “invalidate a democratically enacted law,” were widely perceived as backlash against this 2015 case that legalized same-sex marriage.

answer: Obergefell v. Hodges

<MISC., MISC.>

7. For 10 points each—answer the following about Eridanus [eer-RIH-duh-nus], a feature of the sky named for the Po River:

A. It is one of these collections of stars that forms a recognizable pattern. The International Astronomical Union recognizes 88 of them.

answer: constellations

B. In 2012 a new one of these events originating in the direction of Eridanus was discovered. The Leonids [LEE-uh-nids] and Perseids [PUR-see-ids] are other examples of these events.

answer: meteor showers (do not accept or prompt on “meteor”)

C. The second-largest known one of these regions—which are defined as areas of the universe with very few galaxies—is in the direction of Eridanus.

answer: voids (accept supervoids)

<SCI, OTHER>

8. Richard Nixon's speeches had an important influence on his career. For 10 points each—

A. In 1952 he defended himself against accusations that he had a secret slush fund by saying that he intended to keep this family dog.

answer: Checkers

B. In a November 1969 speech asking for support for his Vietnam policy, Nixon used this two-word phrase to describe his supporters who did not express themselves loudly.

answer: silent majority

C. In a 1973 speech in Orlando, Nixon acknowledged that people have “got to know whether or not their president” is one of these, before stating that he was not one.

answer: (a) crook (accept I am not a crook)

<HIST, AMER>

9. For 10 points each—name these novels that depict New Orleans:

A. Simon Legree [leh-GREE] buys the title character of this Harriet Beecher Stowe novel at a New Orleans ”slave warehouse.”

answer: Uncle Tom's Cabin(; or, Life Among the Lowly)

B. Edna has an affair with the New Orleans resident Alcée Arobin [al-say aa-roh-ban] in this feminist novel by Kate Chopin [SHOH-pan].

answer: The Awakening

C. Ignatius J. Reilly believes that his unpredictable pyloric valve prevents him from leaving New Orleans in this John Kennedy Toole novel.

answer: A Confederacy of Dunces

<LIT, AMER>

10. One of the old names for these molecules comes from the fact that some of the first ones prepared were oily. For 10 points each—

A. Name these hydrocarbons with carbon-carbon double bonds.

answer: alkenes [AL-keenz; second vowel must be exact] (accept olefins)

B. This is the IUPAC [“EYE-yoo-pack”] name for the simplest alkene, whose chemical formula is C2H4 [“C two, H four”].

answer: ethene [EH-theen] (do not accept or prompt on “ethylene”)

C. The creation of a pi bond always involves the creation of one of these empty molecular orbitals that, when filled, reduce bond strength.

answer: antibonding (molecular) orbitals (accept pi star orbitals)

<SCI, CHEM>

11. Joan Miró [zhoh-AHN mee-ROH] placed a red spiral on top of two circles to depict the head of a peasant from this region. For 10 points each—

A. Name this Spanish territory whose cliffs are featured in Salvador Dalí's *The Persistence of Memory*.

answer: Catalonia

B. This architect designed the unfinished Sagrada Familia, which is in Catalonia's capital of Barcelona.

answer: Antonio Gaudi y Cornet (or Antoni Gaudí i Cornet)

C. In 1934, the Catalan artist Josep Maria Sert was commissioned to paint a mural replacing *Man at the Crossroads*, a work by this Mexican muralist and husband of Frida Kahlo [FREE-dah KAH-loh].

answer: Diego Rivera [ree-VAYR-ah] (or Diego (María de la Concepción Juan Nepomuceno Estanislao de la) Rivera y Barrientos Acosta y Rodríguez)

<FA, VISUAL>

12. A word used by George Orwell in *1984* inspired Irving Janis to use this word as a psychological term. For 10 points each—

A. Name this term which refers to the irrational decision making process of sets of people at the same time.

answer: groupthink (accept groupthinking)

B. Individuals in groupthink tend to exhibit this phenomenon, in which they match their own opinion to that of the group. Solomon Asch [ash] ran a series of experiments testing it.

answer: conformity

C. The term groupthink was first used by this sociologist who wrote about corporate culture in *The Organization Man*.

answer: William Hollingsworth Whyte

<RMPSS, SOC SCI>

13. For 10 points each—answer the following about electric and magnetic fields:

A. The magnitude of the electric field divided by the magnetic field is equal to this physical constant. It equals approximately 3 times 10 to the 8 meters per second.

answer: speed of light (in the relevant medium, or in a vacuum) (prompt on “c” or “c0” [“c naught”])

B. A particle's charge times the quantity electric field plus the cross product of velocity and magnetic field gives this quantity for a point charge, according a law named after Lorentz [luh-RENTZ].

answer: force (or Lorentz force)

C. One over the permeability times the cross product of the electric and magnetic fields gives this vector indicating the electromagnetic energy flux.

answer: Poynting vector

<SCI, PHYS>

14. In one poem, this author tells his father ”curse, bless me now with your fierce tears.” For 10 points each—

A. Name this writer of the poem “Do not go gentle into that good night.”

answer: Dylan (Marlais) Thomas

B. In “Do not go gentle into that good night,” Thomas urged his father to “rage, rage” against the “dying” of this phenomenon.

answer: (the) light (accept Rage, rage, against the dying of the light)

C. Thomas was born in Swansea, a city in this constituent country of the United Kingdom.

answer: Wales (or Cymru [“COME”-ree])

<LIT, BRIT>

15. For 10 points each—answer the following about conquistador Pedro de Alvarado [PAY-droh day ahl-vah-RAH-doh]:

A. Alvarado served as a subordinate of this other conquistador during this man's campaign to conquer and plunder the Aztecs.

answer: Hernán(do) Cortés [“air”-NAHN kor-TEZ]

B. Alvarado played a key role in the temporary Spanish retreat from the city of Tenochtitlán [tay-NOHCH-teet-LAHN] in 1520, known by this Spanish term meaning “sad night.”

answer: (la) noche triste [NOH-chay TREE-stay]

C. Alvarado twice served as governor of the Spanish colony that become this Central American country; he founded its first capital, Santiago de los Caballeros [kah-bye-YAIR-ohs], which was devastated by a 1541 eruption of Volcán de Agua [vohl-KAHN day AH-gwah].

answer: (Republic of) Guatemala (or República de Guatemala)

<HIST, WORLD>

16. For 10 points each—answer the following about songs whose titles share a word:

A. A certain “discotheque [DIS-koh-tek] Juliet teenage dream” is the subject of this 2014 hit single by Walk the Moon.

answer: Shut Up and Dance (accept SHUT UP + DANCE)

B. Colby O'Donis was featured on this 2008 debut single by Lady Gaga, in which she implores someone to “spin that record, baby.”

answer: Just Dance

C. “Stars Dance” was the name of a song on this singer's third album with her band The Scene. Other songs on the album included “Forget Forever” and “Come & Get It.”

answer: Selena (Marie) Gomez (accept Selena Gomez & the Scene)

<TRASH, POP CULT>

17. This country surrounds the Sulu Sea, where the Muslim Moro people conducted piracy against the Spanish during the colonial era. For 10 points each—

A. Name this Asian country, whose capital was the site of the 1898 Battle of Manila Bay.

answer: (Republic of the) Philippines (or Republika ng Pilipinas)

B. This other sea west of the Sulu has been the site of many territorial disputes involving China, which claims a majority of this sea via the so-called ”nine-dotted line.”

answer: South China Sea

C. This gulf in the eastern Philippines was the site of World War II's largest naval battle, in which Admiral “Bull” Halsey crippled Japan's naval capabilities for the remainder of the war.

answer: Leyte Gulf (accept Battle of Leyte Gulf)

<GEO, GEO>

18. An urban legend holds this food item has a shelf life of dozens of years; in reality, they last a little over a week. For 10 points each—

A. Name these cream-filled sponge cakes sold by Hostess.

answer: Twinkies

B. The infamous ”Twinkie defense” arose from Dan White's claim that his consumption of Twinkies was a symptom of depression; he made that claim while on trial for killing this openly-gay San Francisco city supervisor.

answer: Harvey (Bernard) Milk

C. A “Twinkie wiener sandwich”—which uses a sliced-open Twinkie as a hot dog bun—was introduced in *UHF*, a film written by and starring this comedy musician.

answer: Weird Al Yankovic (or Alfred Matthew Yankovic; accept any underlined portion)

<MISC., MISC.>

19. This novel's protagonist impresses her former fiancé by remaining calm after Louisa Musgrove suffers a bad fall. For 10 points each—

A. Name this novel that takes place eight years after Anne Elliot was convinced to break off her engagement to the naval officer Frederick Wentworth.

answer: Persuasion

B. *Persuasion* was the last novel to be completed by this author, who described an entailment's effect on the Dashwood sisters in *Sense and Sensibility*.

answer: Jane Austen

C. *Persuasion* was originally published alongside this novel, in which the Gothic fiction enthusiast Catherine Morland visits the town of Bath.

answer: Northanger Abbey

<LIT, BRIT>

20. For 10 points each—name these topics of books by Charles Darwin:

A. Darwin's *On the Origin of Species* introduced his theory regarding this biological process that occurs through natural selection.

answer: evolution (or evolving)

B. Another Darwin work focused on “The Structure and Distribution” of these diverse marine habitats that feature such organisms as parrotfish and anemonefish [uh-NEM-uh-nee-“fish”].

answer: coral reefs (or coral atoll; accept The Structure and Distribution of Coral Reefs; prompt on “coral(s)”)

C. Darwin's last work centers on the “formation of vegetable mould” [“mold”] by this phylum of invertebrates that are the main prey of the invasive broadhead planarian [pluh-NAIR-ee-in].

answer: earthworms or Annelida or annelids (prompt on “worm(s)”)

<SCI, BIO>

21. The Patriarch Filaret held much of the power during the first two decades of this man's reign. For 10 points each—

A. Name this Russian ruler succeeded by his son, Alexis I, in 1645.

answer: Michael I of Russia (or Michael I; accept Mikhail in place of “Michael”; accept, but DO NOT OTHERWISE REVEAL, Michael (Fyodorovich) Romanov; prompt on “Romanov”)

B. Michael was the first ruler of this Russian dynasty; it held power from 1613 until the Russian Revolution in 1917.

answer: Romanov dynasty (or Romanovs or House of Romanov)

C. This was the Patriarch Filaret's familial relationship to Michael Romanov.

answer: father (accept father-son or paternal; accept similar answers that indicate Filaret was Michael's father)

<HIST, EURO>

22. In 2016 Chinese artist Ai Weiwei [“eye way-way”] withdrew all exhibitions of his works in this nation in protest of a new law allowing it to seize the valuables of asylum seekers. For 10 points each—

A. Name this European nation led by Lars Rasmussen. Its capital is Copenhagen.

answer: Denmark (or Kingdom of Denmark or Kongeriget Danmark)

B. In late January the refugee crisis led the E.U. to consider a two-year suspension of this “area” of mostly-free internal border crossings, named for a 1985 agreement.

answer: Schengen area (accept Schengen Agreement)

C. The Danish town of Randers passed a law to protect “Danish food culture” by requiring public institutions to serve this food even though it is forbidden under both Islamic and Jewish dietary laws.

answer: pork (accept specific pork products such as ham or bacon)

<CE, CE>

23. This mathematical operation's generalization is called the inner product. For 10 points each—

A. Name this vector product, the sum of the products of corresponding entries, resulting in a scalar.

answer: dot product or scalar product

B. Given two vectors of fixed magnitudes, the dot product is largest if the vectors' directions have this property.

answer: parallel (accept the same)

C. That fact is because the dot product of two vectors can be calculated as the magnitude of one vector, times the magnitude of the other, times this function of the angle between them, and this trig function is largest when for an angle measuring zero.

answer: cosine function (accept answers that additionally mention a variable)

<SCI, OTHER>

24. A servant in this novel named Cacambo [kuh-KAHM-boh] describes the “admirable government” that Jesuit priests have established in Paraguay. For 10 points each—

A. Name this novel, whose title character is shocked to find that the Jesuit commandant is the son of a Westphalian baron.

answer: Candide(; or, Optimism) [kan-DEED] (or Candide, ou l'Optimisme)

B. Candide and the baron's son were both educated by this idealistic ”doctor,” who contracts syphilis [SIH-fuh-liss] from the maid Paquette [pah-KET].

answer: Doctor (or Professor) Pangloss

C. At the end of the novel, Candide suggests that he and Pangloss should “cultivate” this type of area.

answer: gardens (or jardins; accept let us cultivate our garden or il faut cultiver notre jardin)

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