

Bulldog High School Academic Tournament 2014 (XXIII): Tonight I Can Write The Hardest Lines
Written by Yale Student Academic Competitions
Edited by Matt Jackson, with Ashvin Srivatsa and Jacob Wasserman

Packet 11 Tossups

1. The defining equation named for these things is conventionally written " u sub tt equals c times u sub xx ". These things can be bounded by envelopes and may have distinct group and phase velocities. The behavior of these things at a barrier is characterized by transmission and reflection coefficients. When these things are spatially localized, they are called "packets". Those that propagate transversely may possess polarization. De Broglie showed that particles have properties of these things. For 10 points, name these things that are generically oscillatory motions, typically characterized by an amplitude and a frequency.

ANSWER: waves [or waveforms; prompt on "oscillations" or word forms] <AS>

2. Until 2011, Khalilulla Ferozi led a bank named for this city, which was actually a billion-dollar pyramid scheme. Camp Eggers is a foreign military base in this city. In January 2014, Basra Hassan was among three Americans who died when Taverna du Liban, a restaurant in this city, was attacked. Natives of this city include Abdullah Abdullah, who is running in an April 2014 election to lead from it, and it is 25 miles south of Bagram, an air base used by the US. Mullah Omar's government in this city was toppled in late 2001. For 10 points, name this seat of government for Hamid Karzai, a city from which the Taliban once ruled Afghanistan.

ANSWER: Kabul <MJ>

3. Last May, this organization's Twitter was hacked to claim that Assad's chemical weapons were just "Jihadi body odor," an attack by the Syrian Electronic Army. This operator of the T. Herman Zweibel Memorial Foundation issued a rare apology last year to Quvenzhané Wallis. Its "American Voices" series rotates the same stock photos. With Facebook, it is the focus of the site *Literally Unbelievable*. This publisher of *The A.V. Club* ended its print edition in December. It produced the atlas *Our Dumb World*, parodied NYPD's tactics as "Stop and Kiss" in a recent headline, and often lampoons the "area man." For 10 points, name this satirical news website named for a vegetable.

ANSWER: *The* Onion [or Onion, Incorporated] <JW>

4. According to legend, an early ruler with this title cut a horse clean in half using a sword with a bifurcated tip. That early example of these leaders was betrayed by the Kharijites after the Battle of Siffin, turning the tide of the First Fitna. The Ilkhanate of Hulagu Khan replaced one power structure ruled by these people. A ruler with this title gathered scholars at the House of Wisdom and sent Charlemagne an elephant. In the 700s CE, Damascus gave way to Baghdad as the capital city ruled by leaders of this type, such as Harun al-Rashid. For 10 points, give the title of the rulers of the Abbasid and Umayyad dynasties, which means "successor of Muhammad".

ANSWER: caliph [or halifah; or khalifah; or khalifat rasul Allah] <MJ>

5. One of this author's protagonists reads from Byron's "On the Death of a Young Lady" to his wife, but is ignored in favor of his child. This author wrote about a meeting between Gallaher and Little Chandler in "A Little Cloud." He described snow falling across the world at the end of a story in which news of Michael Furey's death is given by Gretta to her husband Gabriel Conroy. This author of "The Dead" reused his character Stephen Dedalus in a novel that ends its account of 24 hours on June 16 with a stream of consciousness from Molly Bloom. For 10 points, name this Irish author of the short story collection *Dubliners*, who put many *Odyssey* references in his novel *Ulysses*.

ANSWER: James Augustine Aloysius Joyce <JR>

6. This tissue is resorbed by cells that secrete protons at their ruffled borders in response to elevated blood levels of PTH. One object formed from this tissue is described by the word "pisiform" and is classified as "sesamoid". This tissue, which is primarily composed of hydroxyapatite, grows at epiphyseal plates, distal to which is found a spongy variety of this tissue. Canaliculi house the processes of a type of cell in this tissue that resides in lacunae; those cells are osteocytes. Inside "long" structures made from this tissue, hematopoiesis occurs in red marrow. For 10 points, name this rigid tissue which constitutes the skeleton.

ANSWER: bone tissue [prompt on "connective (tissue)"] <HX>

7. One artist from this country painted a sideburned man who tries to hold his mistress back as she rises from his lap. That painting, *The Awakening Conscience*, was derided for vulgarity, as was a painting which showed Jesus as a boy with a hand injury in Joseph's carpentry shop. Another painting from this country depicts a red dove, which carries a poppy to the kneeling, green-clad *Beata Beatrix*. Elizabeth Siddall modeled in this country for a painting in which she clutches flowers and floats down a weedy river.. For 10 points, identify this country which produced *Ophelia* and included artists like John Everett Millais and Dante Gabriel Rossetti in its Pre-Raphaelite Brotherhood.

ANSWER: England [or Britain; prompt "the United Kingdom"] <GL>

8. In a short story by this author, the servant girl Felicité gets more and more obsessed with Loulou, her parrot. This author also wrote a novel in which the dog Djali runs away from a coach driven by Hivert. In that novel by this author of "A Simple Heart," the rival innkeeper of Madame Lefrançois is put out of business by the ruthless merchant Lheureux (luh-RUH), and the Cross of the Legion of Honor is given to the pharmacist Homais. A title character from this novelist has affairs with Léon and Rodolphe, because her marriage to the doctor Charles bores her. For 10 points, name this French realist author who depicted a suicide by arsenic in *Madame Bovary*.

ANSWER: Gustave Flaubert <JR>

9. This city's local activists included a barber named James Armstrong and a reverend named Fred Shuttlesworth. In 2002, Bobby Frank Cherry was convicted shortly after Thomas Blanton, Jr. for a crime they committed in this city. Project C was a campaign in this city, where Denise McNair and three other girls died when this city's 16th Street Baptist Church was bombed by Klansmen. The words "Injustice anywhere is a threat to justice everywhere" were written here after its commissioner of public safety, Bull Connor, set fire hoses and dogs on marching black children. For 10 points, name this Alabama city where Martin Luther King Jr. wrote a letter from jail.

ANSWER: City of Birmingham, Alabama <MJ>

10. Upon entering Athens, Theseus threw two of these creatures higher than a building to prove his manliness. Epaphus's mother became one of these creatures, which were guarded unsuccessfully by the two-headed dog Orthrus, and Thrinacia was home to many of them. A common epithet ascribes the eyes of this creature to Hera. Daedalus built a wooden one of these creatures for Pasiphae. Cadmus followed one of these creatures to the spot of Thebes. The peacock gained tail spots after the thousand-eyed watchman Argos failed to guard another of these mammals, which had previously been Zeus's lover Io. For 10 points, name this frequently-sacrificed herd animal.

ANSWER: cattle [or cows; or heifers; or bovines; or cattle; or oxen; or bulls] <FM/MJ>

11. A feminist lecture in this country argued that "the master's tools will never dismantle the master's house." Another thinker from here tried to dissolve the mind-body problem as a "pseudoproblem" in *Philosophy and the Mirror of Nature*. Audre Lorde and Richard Rorty challenged academic norms in this country, where "live" and "dead" options for belief were discussed in "The Will to Believe." An experimental "lab school" was founded in this country by the author of *Democracy and Education*, John Dewey. For 10 points, name this home country of pragmatism, where William James taught philosophy at Harvard.

ANSWER: United States of America [accept either underlined part; or U.S.A.] <MJ>

12. The field of chemistry that studies modern approaches to the manufacture of this material is called "wet-end" chemistry. The "elemental chlorine free" variety of this material is manufactured using chlorine dioxide in place of dichlorine as a bleaching agent. When using a device named for Büchner to trap filtrates, it is typically moistened and placed in the base of that funnel. One variety of this material is impregnated with a mixture of lichen-derived dyes, turns blue in the presence of base and is called litmus. For 10 points, name this thin material produced from wood pulp which can be used for chromatography, and on which one might record one's lab observations.

ANSWER: paper [accept filter paper; accept litmus paper] <AS>

13. In one of this man's plays, a warrior gets false advice that eating a slain man's brain before the gate of Proetus will heal him. This playwright presented the argument that children only get biological material from their fathers through the character of a god in a trial setting. He wrote about the unrolling of a purple carpet for a king who gets murdered in a trilogy where the Kindly Ones appear after the Furies stop haunting the murderer of Clytemnestra. For 10 points, name this Ancient Greek author who included *The Eumenides* and *Agamemnon* in his *Oresteia* trilogy, whose tragedy *Seven Against Thebes* was written before Sophocles or Euripides.

ANSWER: Aeschylus [or Aiskhylos] <FM>

14. This figure is revered at Lumbini by pilgrims, and repulsed a figure known as Mara while residing in the Deer Park. The Kingdom of Kandy claimed to preserve a tooth of this figure, who once held up a flower wordlessly in lieu of a speech and developed a following called the *sangha*. This member of the Shakya clan first saw an old man, a sick man, and a corpse during his journeys as a prince. The Pali canon, or Tipitaka, was written by followers of this man, who discovered that all life is suffering as he sat under the Bodhi tree. For 10 points, name this being who promoted the Four Noble Truths and the Eightfold Path after achieving nirvana.

ANSWER: The Buddha [or Gautama Buddha; or Siddhartha Gautama; or Gotama; or Shakyamuni] <MJ>

15. One politician with this *first name* was a political rival of Ludwig Windthorst, and tried to quash the ever-growing Centre Party with counterproductive programs. A monarch with this *first name* deposed Berengar of Ivrea in Italy, spared the turncoat Conrad the Red, and defeated an uprising of his son Liudolf before winning the Battle of Lechfeld, halting a Magyar invasion of Europe. A later politician with this first name gave the "iron and blood" speech and modified the Ems telegram to provoke war with France. For 10 points, give this first name shared by a "Great" Holy Roman Emperor of the 960s and a chancellor who helped unify Germany.

ANSWER: Otto [accept Otto the Great, Otto I, or Otto der Grosse; accept Otto von Bismarck or Otto Eduard Leopold] <MJ>

16. In one work by this composer, the soprano asks, "Is this perhaps death," after which the orchestra quotes from a tone poem that this composer wrote some sixty years earlier. Those works are the *Four Last Songs* and *Death and Transfiguration*. He called for twenty horns in his massive *An Alpine Symphony*. A horn and a D clarinet play themes representing the title trickster of his *Till Eulenspiegel's Merry Pranks*. The trumpet motif C-G-C represents a sunrise in one of this man's tone poems, which was used in the "Dawn of Man" sequence in Kubrick's *2001: A Space Odyssey*. For 10 points, name this composer of *Also sprach Zarathustra*.

ANSWER: Richard Georg Strauss <KK>

17. This author's characters include the bouncer Joe Valery. In one book by this author, Lee discusses the meaning of the word "timshel" with a group of rabbis, and Faye is poisoned by Cathy, who takes over a brothel. This man created the narrator Samuel Hamilton, who tells us that Caleb failed to impress his father Adam Trask. In another novel by this author, a violent strike kills the former preacher Jim Casy, and Rose of Sharon breastfeeds a man after her baby is stillborn. For 10 points, name this American author of *East of Eden*, who detailed the Joad family's struggles getting to California from Oklahoma during the Dust Bowl in *The Grapes of Wrath*.

ANSWER: John Ernst Steinbeck, Junior <NW>

18. This crime was committed by the women Perpetua and Felicitas, leading to their execution during Septimius Severus's reign. Pliny the Younger expressed unease at prosecuting this crime in the 96th letter between him and Trajan. It's not tax evasion, but Diocletian ramped up enforcement against this crime. Tacitus and Suetonius first mention criminals of this type when writing about Nero's lash-out at them after the Great Fire of Rome. Catacombs were tunnels built by committers of this offense, which was decriminalized by the 313 Edict of Milan. For 10 points, name this offense in the Roman Empire, for which Ignatius of Antioch and many future saints were martyred.
ANSWER: being a **Christian** [or practicing **Christianity**; or admitting that one is **Christian**; or refusing to deny **Jesus**; prompt on "heresy" or "not believing in the Greco-Roman gods" or similar] <MJ>

19. The conjugate gradient method is used to approximately find these locations, as are linear programming and other techniques in mathematical optimization. A critical point is definitely one of these locations if the second derivative at the point is nonzero. A real-valued function must attain each of these values at least once on a closed and bounded interval according to the extreme value theorem. In statistics, these values are found at the ends of the whiskers of a box plot. Integer multiples of π are both "global" and "local" versions of these locations for the cosine function. For 10 points, name these locations at which a function attains its largest and smallest values.
ANSWER: **maximum** and **minimum** [or **maxima** and **minima**; accept **maximum** alone; accept **minimum** alone; or word forms; accept **extremum** or **extreme value** or word forms before "extreme value theorem" is read and prompt afterwards; accept any of those answers with the word "local," "global," "absolute," or "relative" in front] <AS>

20. The original plan for this art collection involved surrounding it with a hundred rivers of simulated mercury. One work in this collection features a man who sits beneath an umbrella and holds the reins of four horses. Elements in this art collection were surrounded by bronze cranes and ducks, and faced towards conquered Eastern states in four pits. The belly size and height of people in this collection indicates their role. This collection was found by farmers drilling for a well in Xian ("SHEE-ahn") in 1974. For 10 points, identify this group of more than eight thousand unique sculpted men and horses which protects the tomb of China's Qin Shihuang.
ANSWER: The **Terracotta Army** of Qin Shi Huangdi [or the **Terracotta Warriors and Horses**; or **Terracotta Soldiers**; or **Terracotta warriors**; or **Bing Ma Yong**; accept "Qin **Shihuangdi**'s **tomb** mound" or "**funerary** monument of Qin **Shihuangdi**" before mention] <GL>

21. One character in this movie is murdered after "tak[ing] a leak" near a patch of reeds. This movie's effects team pushed a BB out through the lens of an actor's glasses to mimic the effect of him being shot *in* the eye on a massage table. The namesake of this film puts an orange in his mouth before he collapses in his tomato garden and dies. Khartoum is a horse in this movie whose head is cut off after the threat "I'll make him an offer he can't refuse." For 10 points, name this 1972 film by Francis Ford Coppola, starring Marlon Brando and Al Pacino as heads of the Corleone crime family.
ANSWER: *The* **Godfather** <ATo>

Bonus

1. Literary characters in this profession include the unnamed boss of Miguel Angel Face in an Asturias novel and the unnamed father of 5000 children in García Marquez's *The Autumn of the Patriarch*. For 10 points each:

[10] Name this profession, which names a subgenre of Latin American novels reflecting on the nature of power.

ANSWER: dictators [or caudillos]

[10] In this novel, Blanca Trueba flees to Canada with Pedro Tercero as a new dictator takes over Chile. This breakout novel of Isabel Allende focuses on the Las Tres Marías estate.

ANSWER: *The House of the Spirits* [or *La casa de los espíritus*]

[10] This Nobel-winning Peruvian author of *Aunt Julia and the Scriptwriter* wrote about Urania Cabral, who confronts her memories of dictator Rafael Trujillo, in *The Feast of the Goat*.

ANSWER: Mario Vargas Llosa <MJ>

2. In some traditions, this object is paraded around the synagogue twice during a service that includes eight calls to read from it called *aliyot*. For 10 points each:

[10] Name this object found in synagogues, a scroll containing the first five books of the Bible.

ANSWER: the Torah scroll [or Etz Chayim]

[10] The carrier of the Torah chants this prayer, the holiest in Judaism. Normally followed by the V'ahavta, it means "Hear, O Israel: the Lord is our God, the Lord is One."

ANSWER: the Shema [or Sh'ma; the full prayer is "Shema Yisrael: Adonai Eloheinu, Adonai echad"]

[10] During this month of the Jewish calendar, the yearly cycle of Torah readings is restarted on the joyous holiday of Simchat Torah a few days after Sukkot.

ANSWER: Tishrei [or Tishri] <MJ>

3. Dragoons were makeshift offensive units of this type, which included the heavily-armored cataphracts of the ancient Near East. For 10 points each:

[10] Give the military term for this type of unit, exemplified by lance-wielding knights in the High Middle Ages, which often had an advantage over infantry.

ANSWER: cavalry [prompt on "horseback" or "horsemen"]

[10] These easterly enemies of the Romans used cavalry units armed with bows, who feigned retreat before shooting. These people defeated Crassus at Carrhae.

ANSWER: Parthians [or Arsacid Dynasty]

[10] This Hungarian title was given to post-Renaissance light cavalry units in Eastern Europe, which used ultra-long lances. The Polish "winged" variant on these cavalry wore much heavier armor.

ANSWER: hussars <MJ>

4. You probably encounter this thing every time you see your physician. For 10 points each:

[10] This medical device is used to listen to internal sounds, like blood flow and heartbeat.

ANSWER: stethoscope

[10] Doctors can determine a patient's blood pressure by using this device, which has a cuff that inflates to squeeze a patient's arm. It is used in conjunction with a stethoscope to listen for Korotkoff sounds.

ANSWER: sphygmomanometer [or sphygmometer; prompt on "blood pressure meter"]

[10] This is the blood pressure recorded when the Korotkoff sounds first can be heard. The sphygmomanometer continues to release pressure in the cuff until the sounds stop at a lower pressure.

ANSWER: systolic pressure <HX>

5. This instrument plays chromatic scales at the end of the first movement of Shostakovich's 5th Symphony. For 10 points each:

[10] Name this keyboard percussion instrument with a soft timbre similar to that of a glockenspiel, which produces sound by hitting metal bars.

ANSWER: celesta [or celeste]

[10] This Hungarian composer wrote *Music for Strings, Percussion, and Celesta* and included movements like "Game of the Couples" in his *Concerto for Orchestra*.

ANSWER: Béla Viktor János Bartók

[10] One of the earliest uses of the celesta was in the "Dance of the Sugar-Plum Fairy" from this Tchaikovsky ballet that also includes numbers like "Trepak" and "Waltz of the Flowers."

ANSWER: *The* Nutcracker [or Shchelkunchik; or Casse-Noisette] <JR>

6. The Wheelchair Assassins are a separatist group in this novel. For 10 points each:

[10] Name this thousand-plus page novel which mostly takes place during the Year of the Depend Adult Undergarments. Its title refers to a movie so good that its viewers lose interest in doing anything else.

ANSWER: Infinite Jest

[10] This American author of *Infinite Jest* left his novel *The Pale King* unfinished at his suicide.

ANSWER: David Foster Wallace

[10] This Wallace essay collection includes one discussing the campaign strategy of John McCain, "Up, Simba." Its namesake essay discusses the ethics of eating the title animal at a Maine food festival.

ANSWER: Consider the Lobster <HX>

7. A female member of this race named Angrboda bore the wolf Fenrir. For 10 points each:

[10] Name this race which often battles the gods in Norse mythology. Their "frost" subtype lives in Jotunheim.

ANSWER: giants [hrimgiants; or fire giants]

[10] Thor disguised as this divine being to retrieve his stolen hammer Mjolnir. He resembled this member of the Vanir just enough to kill Thrym and get the hammer back.

ANSWER: Freyja [or Frevja; prompt on "a woman" or "a bride"]

[10] This giant will burn the Vigrid plain and lead the fire giants of Muspellheim into battle at Ragnarok.

ANSWER: Surtr <MJ>

8. This region was ruled by Puyi during a Japanese occupation which started in 1931. For 10 points each:

[10] Name this region of China.

ANSWER: Manchuria [or Manchukuo; or Manzhou]

[10] The invasion was set off by this incident, in which Japanese military personnel framed China for plotting to blow up railroad lines owned by Japan.

ANSWER: Mukden Incident [or September 18th incident; or Liutiaohu Incident; prompt on "Manchurian Incident"]

[10] Japan was ruled by this Emperor during the Mukden Incident. He downplayed his divinity after Japan lost World War II on his watch.

ANSWER: Hirohito [or Emperor Showa] <LL>

9. One character in this poem falls in a jet-black river while trying to capture a precious bird, forcing his mother to revive him by pushing his pieces back together with a rake. For 10 points each:

[10] Name this trochaic tetrameter poem in fifty runes. Inhabitants of Pohjola in this poem include the Bride of Beauty and a witch who seals the sun and moon in a mountain.

ANSWER: The Kalevala

[10] This composer was inspired by *The Kalevala* to compose works such as *Kullervo* and *The Swan of Tuonela*. He included a "song of peace" in *Finlandia*.

ANSWER: Jean Sibelius

[10] This Finnish architect designed the Tulip and Grasshopper chairs, the Morse and Ezra Stiles residential colleges at Yale, and a 630-foot catenary arch in St. Louis.

ANSWER: Eero Saarinen <HX>

10. These things are studied and created by cartographers. For 10 points each:

[10] Name these two-dimensional pictures that indicate where some things are relative to other things. Those that depict the Earth might use the Mercator projection or the much cooler Dymaxion projection.

ANSWER: maps

[10] Topographic maps typically indicate elevation using these lines, which are drawn to connect locations of equal altitude.

ANSWER: contour lines [or isolines; or isopleths; or isarithms]

[10] This field of study subsumes cartography and generally uses computers to study and represent geographic data. Practitioners in this field operate under the guidance of the Open Geospatial Consortium.

ANSWER: geographical information science [or GIS; or any answer where the first word is geospatial or geographic or geographical, the second word is information, and the third word is science or studies or systems; accept geoinformatics; prompt generously on any partial answer] <AS>

11. To ensure a more conforming look from outside, the window blinds in this building have only three settings: fully open, half-shut, or fully shut. For 10 points each:

[10] Name this 38-story steel skyscraper, whose black, rectangular shape exemplifies the "International Style" of its designers, Philip Johnson and Ludwig Mies van der Rohe.

ANSWER: Seagram Building

[10] The Seagram Building is located in this city on Park Avenue. Its other pioneering skyscrapers include the art deco Chrysler Building.

ANSWER: New York City

[10] This artist aimed to paint appetite-ruining red murals with black stripes for the Four Seasons restaurant in the Seagram Building, though they were never hung. He later killed himself.

ANSWER: Mark Rothko <MJ>

12. Because of sexist laws, the central woman in this play had to forge her father's signature to get a loan from Krogstad, causing trouble once she gets found out. For 10 points each:

[10] Name this play. At its end, Nora Helmer walks out on her husband Torvald and slams the door.

ANSWER: A Doll's House [or *En dukkehjem*]

[10] This 19th-century Norwegian realist, whose other plays include *The Master Builder* and *Hedda Gabler* wrote *A Doll's House*.

ANSWER: Henrik Ibsen

[10] A porter brings one of these items into the Helmer household at the beginning of *A Doll's House*. Nora tells her maid Helen to hide this object so the children will be surprised.

ANSWER: a Christmas tree [prompt on "tree"] <MJ>

13. Answer these questions about pasta sauce, for 10 points each.

[10] Fettucine is often served in this manner, with a very cheesy, buttery sauce.

ANSWER: fettucine **alfredo** [or **alfredo** sauce]

[10] This cooked, cured meat product has overtaken guanciale as an ingredient in carbonara sauce. Pancetta is often called the "Italian" form of this meat product.

ANSWER: **bacon** [prompt on "ham"; prompt on "pork"]

[10] This incredibly salty spaghetti dish uses a tomato sauce with olives, anchovies, capers, and garlic. Its name literally means "in the style of a prostitute."

ANSWER: spaghetti alla **puttanesca** <JR>

14. This law looks a lot like Newton's law of gravitation. For 10 points each:

[10] Name this inverse-square law that describes the electrostatic force between charged particles.

ANSWER: **Coulomb's** law

[10] In SI units, the Coulomb law constant equals "one over the quantity four pi times" this constant. This quantity times "mu nought" equals one over the speed of light squared.

ANSWER: **permittivity of free space** [or **vacuum permittivity**; or **epsilon nought**; or **epsilon zero**; prompt on "permittivity"; prompt on "electric constant"]

[10] For simple materials, this quantity equals permittivity times the electric field. The divergence of this quantity equals the free charge density, and its time derivative appears in the correct formulation of Ampere's law.

ANSWER: electric **displacement** field [prompt on "D-field"; do not accept "displacement current"] <AS>

15. The Troubles was a period of civil strife in this region. For 10 points each:

[10] Name this region, a component of a larger landmass where British police shot protesters in Derry on Bloody Sunday in 1972. The Provisional IRA rejected the legitimacy of its government in Belfast.

ANSWER: **Northern Ireland** [do not accept or prompt on "Ireland"]

[10] An agreement drafted in Belfast on this holiday was ratified by referendum in Northern Ireland and Ireland to end the Troubles and normalize relations.

ANSWER: **Good Friday** Agreement

[10] This British Prime Minister helped negotiate the Good Friday Agreement. He brought the Labour Party further to the center after succeeding John Major.

ANSWER: Anthony Charles Lynton "Tony" **Blair** <LL>

16. This island country is separated from the mainland by the Straits of Johor. For 10 points each:

[10] Name this prosperous Asian city-state that lies off the southern tip of the Malay Peninsula.

ANSWER: Republic of **Singapore**

[10] West of Singapore is this strait, which separates the Malay Peninsula from the Indonesian island of Sumatra. Piracy has affected vital shipping in this strait.

ANSWER: Strait of **Malacca** [or Selat **Melaka**]

[10] This isthmus, the narrowest part of the Malay Peninsula, separates the Gulf of Thailand from the Andaman Sea. It is shared by Thailand and Burma.

ANSWER: Isthmus of **Kra** <ATo>

17. This property can be defined as half the distance between the nuclei of adjacent atoms in a lattice. For 10 points each:

[10] Name this measure of the size of an atom. This measure is typically on the order of one angstrom.

ANSWER: atomic **radius** [accept **van der Waals radius**; accept **ionic radius**]

[10] On the periodic table, atomic radius increases towards this corner of the table.

ANSWER: **bottom left** [or obvious equivalents like **downwards to the left**; or things like towards **period 7 and group 1**]

[10] The lanthanides have anomalously low atomic radii because their electrons experience less of this phenomenon. This phenomenon is responsible for the difference between actual and effective nuclear charge.

ANSWER: electron **shielding** [or **screening**] <AS>

18. A Romantic poet of this surname wrote "Hail to thee, blithe spirit!" in "To a Skylark," and asked "If Winter comes, can Spring be far behind?" in "Ode to the West Wind." For 10 points each:

[10] Give this family name, also the married name of a woman who described Victor's reanimation of a "wretch" from dead body parts in *Frankenstein*.

ANSWER: **Shelley** [accept Percy Bysshe **Shelley** or Mary **Shelley**]

[10] This emotional reaction is demanded of onlookers by a desert inscription under a ruined statue in Percy Shelley's poem "Ozymandias."

ANSWER: "Look on my works, ye mighty, and **despair**!"

[10] This Percy Shelley poem compares life to a "dome of many-colored glass" which "Stains the white radiance of Eternity." It is an elegy for John Keats.

ANSWER: **"Adonais"** <MJ>

19. This nation won the battle of San Jacinto in under twenty minutes. For 10 points each:

[10] Name this short-lived country which was eventually annexed as a U.S. state. It used the battle cry "Remember the Alamo!" while breaking free of Mexico.

ANSWER: Republic of **Texas**

[10] This powerful Indian nation threatened Texas from the north with raids on horseback. Buffalo Hump and Quanah Parker led bands of this tribe, which allied with the Apache.

ANSWER: **Comanche** Nation [or **Comanche** Tribe; or **Comanche** Empire; or the **Comanches**; or **Comanchería**; or **Nermernuh**]

[10] Comanche raiders also attacked people on this journey, who headed to the area around Sutter's Mill.

ANSWER: **California Gold Rush** of 1849 [prompt on partial answers] <MJ>

20. This field's pioneers include Ferdinand de Saussure, whose structuralist approach based on signifiers and signifieds is now obsolete. For 10 points each:

[10] Name this discipline, the scientific study of language. Subfields of this field include morphology, phonology, and semantics.

ANSWER: **linguistics**

[10] This MIT linguistics professor and author of *Syntactic Structures* pioneered the theory of generative grammar, which took the discipline by storm in the 1950s.

ANSWER: Avram Noam **Chomsky**

[10] This theoretical set of properties, which Chomsky posited, interacts with the "language acquisition device" to produce constraints on the structure of all human languages.

ANSWER: **universal grammar** <MW>

21. This painting's title figure wears a black ribbon tied around her neck. For 10 points each:

[10] Name this painting, in which an arched cat and an attending black maid appear next to the central reclining nude, who provocatively gazes at the viewer from atop a white-sheeted bed.

ANSWER: **Olympia**

[10] *Olympia* is a work of this French painter, who also painted two gentlemen picnicking with a nude woman in *The Luncheon on the Grass*.

ANSWER: Édouard **Manet** [do NOT accept "Monet"]

[10] An 1865 Manet painting set at Cherbourg shows one of these events. His earlier *The Kearsarge at Boulogne* depicts a vehicle from one of these events in its aftermath.

ANSWER: **naval battles** [or **sea battles**; or **ship combat**; accept equivalents involving war at sea or with boats; prompt on "battles" or equivalents not explicitly involving the sea or seacraft] <JW>