LONE STAR

Head Edited by Daniel Ma. Edited by Daniel Ma, Thomas Gioia, Michael Yue, Roman Madoerin, Dr. Eric Mukherjee, Robert Condron, Sean Doyle, and Michael Patison. Written by the editors, Jisoo Yoo, Johnny Vasilyev, Nikita Nair, Aayush Goodapaty, Josh Rubel, Ketan Pamurthy, Ned Tagtmeier, Akshay Shyam, and Michael Artlip. Playtested by Dean Ah Now, Hari Parameswaran, and Rohan Venkateswaran.

Packet 1

TOSSUP 1

A member of this family ran the Arctic Restaurant and Hotel, which partly functioned as a brothel. Another member of this family compared Syrian refugees to poisoned Skittles. A member of this family received backlash for wearing a jacket with the phrase (*) "I really don't care, do u?" The most famous member of this family was criticized for using the Nixonian phrase "when the looting starts, the shooting starts" in a tweet about protests. For 10 points, name this family that includes Donald, the 45th President of the United States.

ANSWER: <u>Trump</u> family [accept <u>Frederick Trump</u>, Donald <u>Trump Jr.</u>, <u>Melania Trump</u>, or <u>the Donald</u> J. Trump] <Tagtmeier>

BONUS

Poland was incorporated into its neighbors in a series of three treaties in 1772, 1793, and 1795. For 10 points each: [10] Name this empire east of Poland under which Polish independence was lost after Tadeusz Kosciuszko's ("ta-DE-ush kosh-CHUSH-ko") failed uprising. At the time, this empire was led by Catherine the Great.

ANSWER: Russian Empire

[10] After seeing the country's political deadlock, this writer drafted a new constitution of Poland in the early 1770s. His other political tracts include one that discusses the differing societal effects of two types of self-love.

ANSWER: Jean-Jacques Rousseau (the latter work is The Social Contract)

[10] The three aforementioned treaties dividing Poland are commonly referred to by this term. Another treaty referred to by this term divided British India.

ANSWER: partitions <Ma>

TOSSUP 2

The Prado attributes this artist to a circular table painting titled *The Seven Deadly Sins and Four Last Things*. Another work by this artist depicts Jesus looking down at sinners surrounding a haywain. The back of a work by this artist depicts the Earth during Creation inside of a crystal sphere. That work by this artist shows exotic animals and nude revelers on the central (*) spherical fountain. Sinners are eaten by monsters and tortured by musical instruments in hell in, for ten points, what early Dutch artist's *The Garden of Earthly Delights*? ANSWER: Hieronymus Bosch <Vasilyev>

In the final act of this play, a character repeatedly yells "SNAP!" while throwing snapdragons at his wife and guests. For 10 points each:

[10] Name this play whose second act, "Walpurgisnacht," features a game of "Get the Guests" in which Honey is accused of faking a pregnancy so that she can marry Nick.

ANSWER: Who's Afraid of Virginia Woolf?

[10] This American playwright of *Zoo Story* wrote about the bickering couple George and Martha in *Who's Afraid of Virginia Woolf?*

ANSWER: Edward Franklin Albee III

[10] In another Albee play, Martin, the youngest man ever to win a Pritzker Prize, falls in love with one of these animals. That play ends with Martin's wife Stevie killing Sylvia, who is one of these animals.

ANSWER: a **goat** [The **Goat**; or Who is Sylvia?] <Yoo>

TOSSUP 3

Sericite is also called mica of this color. Aluminum sulfate used in coagulation is this color before picking up dirt. Most silicates produce this color in a streak test, making it the default streak. Kaolinite ("KAW-lin-ite") is this color before being fired, and pure (*) gypsum plaster is this color. Dolomite and calcite are most often transparent or this color, as seen in karst caves of limestone. Pure hydroxyapatite ("high-drahk-see-AH-pa-tite") is this color and predominates in enamel and bone. For 10 points, what color is shared by minerals like talc and table salt?

ANSWER: white <Ma>

BONUS

This man's *Green Book*, written in homage to Mao's *Little Red Book*, describes his political philosophy. For 10 points each:

[10] Name this man who was ousted in 2011 after ruling his country under the Jamahiriya system for nearly four decades. This leader gained power in 1969 after overthrowing King Idris.

ANSWER: Muammar Gaddafi

[10] Gaddafi ruled this country in North Africa. This country, whose former flag was entirely green, is a former Italian colony now governed from its capital of Tripoli.

ANSWER: Libya

[10] During Gaddafi's rule, Libyan nationalist Abdelbaset al-Megrahi bombed Pan Am flight 103 while it flew over Lockerbie in this region. Another African dictator, Idi Amin, proclaimed himself the last king of this region.

ANSWER: Scotland [prompt on UK or Great Britain] < Rubel>

TOSSUP 4

Politically charged lyrics about the Windrush generation leaving this region prompted an artist here to write "London Is the Place for Me." That artist was Lord Kitchener, who, with Harry Belafonte popularized one style from this region. This region's rocksteady music genre grew out of ska ("SKAH"), which featured songs by The Wailers. (*) Rastaman Vibration was written in one of this region's Patois ("PAHT-wa") languages by singer Bob Marley. For 10 points, name this region where calypso and reggae are performed in places like Trinidad and Jamaica.

ANSWER: The <u>Caribbean</u> [accept <u>West Indies</u>; anti-prompt on <u>Trinidad</u> and <u>Jamaica</u> before mentioned by asking "what geographical region is that in?"] <Patison>

In the Stark effect, spectral lines split due to this quantity. For 10 points each:

[10] Name this vector quantity measured in Newtons per coulomb. The differential form of Gauss's law sets the charge density divided by vacuum permittivity equal to the divergence of this quantity.

ANSWER: electric field [accept E field]

[10] Though Gauss's Law is named for Carl Friedrich Gauss, it was originally formulated by this scientist. This scientist's namesake function, the time derivative of the action, is equal to kinetic energy minus potential energy.

ANSWER: Joseph-Louis Lagrange

[10] The Poynting vector, which is proportional to electric field cross magnetic field, measures this quantity per unit area. This quantity represents the amount of work done over a period of time, and its SI unit is the watt.

ANSWER: power < Pamurthy>

TOSSUP 5

After this battle, Susanna Dickinson identified her side's dead for the enemy. Before this battle, Moses Rose was the only man not to cross a "line in the sand." A letter proclaiming "Victory or Death!" was written before this battle by losing commander William (*) Travis. This battle led to the Runaway Scrape, which ended at the Battle of San Jacinto, where "Remember [this battle]" became a rallying cry for Sam Houston's forces. Davy Crockett died during, for 10 points, what Santa Anna victory in San Antonio during the Texan Revolution? ANSWER: Battle of the Alamo < Goodapaty>

BONUS

In the first book of the *Organon*, Aristotle listed ten of these concepts, including substance, quantity, quality, and relation. For 10 points each:

[10] Name these philosophical concepts used to systematically divide knowledge. Gilbert Ryle coined the term for "mistakes" related to this concept, whereby one type of thing or fact is treated as if it were another type.

ANSWER: categories [accept category mistake or category error]

[10] The *Organon* also developed this form of logical argument that contains a major premise, a minor premise, and a conclusion that follows from the two premises.

ANSWER: syllogism

[10] A syllogism is an example of this type of logical reasoning, which applies a general rule to come to a specific conclusion. This type of reasoning is contrasted with inductive reasoning.

ANSWER: <u>deductive</u> reasoning [or <u>deductive</u> logic or <u>deduction</u>] <Tagtmeier>

TOSSUP 6

In this author's only short story, Roberta and Twyla go from being friends at St. Bonny's orphanage to picketing on opposite sides of a street. This author of "Recitatif" wrote of the World War I veteran Shadrack inventing National Suicide Day in a novel set in the Bottom. In another novel by this author, a rusty tobacco tin is opened to reveal (*) Paul D's worst memories from Sweet Home. In that novel by this author, Sethe is haunted by the ghost of the daughter she killed. For 10 points, name this American author of *Sula* and *Beloved*. ANSWER: Toni Morrison [accept Chloe Anthony Wofford Morrison] <Yoo>

A dramatic scene in this film portrays Vincent stabbing Mia with a syringe of epinephrine after she overdoses on heroin by mistaking it for cocaine. For 10 points each:

[10] Name this 1994 film, known for its nonlinear plot and focus on casual conversations. One character in this film reveals during a diner robbery that he's the "tyranny of evil men" but is "tryin' real hard to be the shepherd."

ANSWER: Pulp Fiction

[10] Quentin Tarantino's *Pulp Fiction* stars this actor as Jules Winnfield, a hitman who's memorized the passage Ezekiel 25:17. In another film series, this actor plays the purple lightsaber-wielding Jedi Mace Windu.

ANSWER: Samuel L. Jackson

[10] Jackson's highest-grossing film is this 2019 blockbuster movie. His sole appearance in this movie is during a funeral scene towards its end, which also includes a shot of an outdated arc reactor floating on a lake.

ANSWER: <u>Avengers: Endgame</u> [prompt on <u>Endgame</u>; do not accept or prompt on "Avengers," "Age of Ultron," or "Infinity War"] <Shyam>

TOSSUP 7

The effect of entrainment velocity on this force is depicted in the Stribeck curve. Sixty-four over the Reynolds number gives a factor named for Darcy and this force. For a stationary block on an inclined plane, this force's magnitude is equal to the product of a constant, g, the mass of the block, and the cosine of the angle of incline. The (*) arctangent of the angle of repose is equal to a value related to this force. This force can be reduced by ball bearings and comes in "kinetic" and "static" forms. For 10 points, name this force between two contacting bodies that opposes motion.

ANSWER: friction [accept kinetic friction or static friction] <Shyam>

BONUS

This prize was awarded to Bob Dylan in 2016 "for having created new poetic expressions within the great American song tradition." For 10 points each:

[10] Name this prize whose recipient is decided every year by the Swedish Academy. The most recent recipient of this prize was the American poet and essayist Louise Glück.

ANSWER: The **Nobel** Prize in **Literature** [prompt on Nobel Prize]

[10] Under pressure from the Soviet government, this author declined the Nobel Prize in Literature in 1958. The CIA played a part in the smuggling of this author's novel *Doctor Zhivago* into the Soviet Union for propagandistic purposes.

ANSWER: Boris Pasternak

[10] This author was the second ever to decline the Nobel Prize in Literature in 1964, claiming that the prize would limit the impact of his writing. This author wrote stories such as "Erostratus" and "The Wall."

ANSWER: Jean-Paul Sartre < Yoo>

TOSSUP 8

This emperor engaged Locusta to poison cold water for Britannicus's drink. This emperor's general Suctonius Paulinus won the Battle of Watling Street over the Iceni. This emperor remarked that he had "begun to live like a human being" after his (*) Domus Aurea was finished. Although this emperor defeated Vindex's rebellion, Galba's subsequent popularity caused this emperor to commit suicide, ushering in the Year of the Four Emperors. For 10 points, name this emperor who supposedly fiddled during the Great Fire of Rome. ANSWER: Nero <Goodapaty>

This politician was criticized for failing to prosecute cases of police misconduct while she was the Hennepin County District Attorney. For 10 points each:

[10] Name this Minnesota senator. Her campaign for the Democratic presidential nomination stalled after failing to win over non-white voters.

ANSWER: Amy Klobuchar ("KLOH-buh-shar")

[10] One case Klobuchar failed to prosecute while serving as District Attorney involved this man's killer. This man's death in May of 2020 prompted international protests and reinvigorated the Black Lives Matter movement.

ANSWER: George Floyd

[10] Floyd's killer was this Minneapolis police officer. This man, who knelt on Floyd's back for 7:46 ("7 minutes 46 seconds") had several prior complaints on his record for excessive force.

ANSWER: Derek Chauvin < Patison>

TOSSUP 9

Upon this object's presentation to its owner, one figure avoids beheading by getting his mouth sewn shut. This object was created to complete a challenge following the creation of three objects, including a boat that could fold like a cloth and a new head of hair. Part of this object is too (*) short because a fly bit Brokkr in the eyelid during its forging. According to the *Prose Edda*, this weapon flies back to its user's hand when thrown. For 10 points, name this mythical hammer from Norse mythology wielded by Thor.

ANSWER: Mjölnir (MYOL-nir") [prompt on Thor's hammer before "Thor"] < Yoo>

BONUS

In the process of saltatory conduction, an action potential jumps between the nodes of Ranvier of these cells. For 10 points each:

[10] Name these cells found in the brain that have axons and dendrites. The myelin sheath insulates these cells. ANSWER: **neurons** [prompt on nerve cells]

[10] During depolarization of a neuron, channels for the +1 cation of this element open and allow this element to diffuse into the cell. The CDC recommends that daily intake of this element should not exceed 2,300 milligrams.

ANSWER: **sodium** [accept **Na**⁺]

[10] This element's ion is the only anion found in the GHK equation. This ion's equilibrium potential is very close to the resting potential of most neurons, and this ion exchanges with bicarbonate in red blood cells.

ANSWER: chlorine [accept Cl or chloride] < Shyam>

TOSSUP 10

A poem by this author describes a "seashore of endless worlds" on which children meet and repeats that "they know not how to cast nets." In another poem, this author describes a place where "the head is held high," "knowledge is free," and "the mind is without fear." This poet's most well-known collection begins, (*) "Thou hast made me endless, such is thy pleasure," and contains an introduction written by William Butler Yeats. The lyrics to the Indian national anthem, "Jana Gana Mana," were written by, for 10 points, what Nobel Prize winning Bengali poet of *Gitanjali*?

ANSWER: Rabindranath <u>Tagore</u> [accept Rabindranatha <u>Thakur</u>] <Nair>

"Dynamism" was a term used during this art movement to describe an object's motion. For 10 points each:

[10] Name this art movement originating from Italy that emphasized technology and industry, glorifying modernity.

ANSWER: **Futurism** [or **Futurismo**]

[10] In *The Manifesto of Futurism*, Filippo Marinetti wrote "a racing car is more beautiful than" this Hellenistic sculpture. This sculpture was likely part of a ship's prow and thus had robes flowing back as if the wind was blowing them.

ANSWER: Winged Victory of Samothrace [or Nike of Samothrace; prompt on Nike]

[10] Umberto Boccioni, a prominent Futurist, painted "*Riot in* [one of these places]." Boccioni's sculptures are exhibited at the Modern Art one of these places in New York City.

ANSWER: an art gallery [or art museum] <Vasilyev>

TOSSUP 11

In this play's final scene, a character asserts that she will die of eating unwashed grapes on the sea after Eunice buys her some of them. In this play, a man is said to have committed suicide with a revolver outside of Moon Lake Casino after his wife discovered his homosexuality. This play ends with a hand of (*) poker being dealt as the asylum-bound protagonist claims that "I have always depended on the kindness of strangers." Blanche Dubois moves in with the Kowalskis in, for 10 points, what play set in New Orleans by Tennessee Williams? ANSWER: A Streetcar Named Desire < Yoo>

BONUS

After the Iberian War in 532, this empire signed the Perpetual Peace with a neighbor to its west. For 10 points each: [10] Name this empire whose leader Khosrow I signed that treaty. Procopius, a neighboring empire's most famous historian, recorded that the treaty was broken within a decade in the Lazic War.

ANSWER: Sassanid Empire

[10] This Emperor signed the Perpetual Peace. His rulership with his wife Theodora nearly fell during the Nika Riots, sparked by a feud between chariot-racing fans of opposing teams.

ANSWER: **Justinian** the Great

[10] Justinian ruled this empire, which is also known as the Eastern Roman Empire. Due to its location, this empire with capital at Constantinople began using Greek over Latin as its official language.

ANSWER: **Byzantine** Empire <Ma>

TOSSUP 12

As part of this practice, the Trinitarian formula is recited by the celebrant. It's not marriage, but vows associated with this practice, including to "reject Satan and all his works," are frequently renewed. During one instance of this practice, the Holy Spirit descended in the form of a (*) dove. A man nicknamed for performing this practice performed it on Jesus in the Jordan River. For 10 points, name this Roman Catholic Sacrament of Initiation in which spiritual rebirth is symbolized by lowering into and raising from water.

ANSWER: **Baptism** [accept **Baptism** of Jesus Christ; accept John the **Baptist**] < Tagtmeier>

The largest of these structures include the Ronne and Ross ones. For 10 points each:

[10] Name these structures that cross the land-sea boundary. Examples of these structures include Larsen A, B, and C, which have disintegrated rapidly and dramatically in the past three decades due to calving.

ANSWER: ice shelves

[10] During an expedition, this explorer set up camp on Ross Island and later led the second group to reach the South Pole. This explorer was outraced by Roald Amundsen, who set up camp on the ice shelf itself and died on the return journey.

ANSWER: Sir Robert Falcon Scott

[10] The aforementioned ice shelves and the South Pole are on this coldest and southernmost continent.

ANSWER: Antarctica < Ma>

TOSSUP 13

When dissolved in water, this element forms the aquo-complex that demonstrates the fastest water exchange rate. A red oxide of this element precipitates when mixing glucose with Benedict's reagent. Iron uses a "single metal reaction" to replace this element when submerged in a solution of this metal's sulfate, which is (*) blue in color. In a galvanic cell, this element is often used as a cathode with a zinc anode. This element can be alloyed with tin to make bronze. For 10 points, name this brownish-orange transition metal with atomic symbol Cu. ANSWER: copper [accept Cu before mention] <Madoerin>

BONUS

The Pointe technique is a classical technique for this type of performance dance. For 10 points each:

[10] Name this performance dance with namesake companies that sometimes promote their own techniques, such as one using the concepts of falls and spirals. *Swan Lake* is a stage work for this French dance.

ANSWER: ballet

[10] This choreographer created her own namesake ballet technique based on a breathing cycle. She is the founder and namesake of the oldest American dance company and frequently worked with composer Aaron Copland.

ANSWER: Martha Graham

[10] The fundamental movement of the Graham technique is a cycle between these two states. These two terms refer to the elongation of the spine and then a consequent return to a normal position.

ANSWER: contraction and release [accept in either order] <Vasilyev>

TOSSUP 14

One of these people legendarily toppled the King of France by lifting his foot to kiss it; that man received these people's namesake land around Rouen and was named Rollo. These people were called the Rus in Eastern Europe, in which they formed the Varangian Guard. A French group of these people won a battle after an (*) arrow to the eye killed Harold Godwinsson at Hastings, thus conquering England under William the Conqueror. The Normans descended from, for 10 points, what Medieval raiders who used longboats and came from Scandinavia?

ANSWER: <u>viking</u>s [accept <u>Norse</u>men; accept <u>Norman</u>s or <u>Rus</u> or <u>Varangian</u>s before mention; prompt on <u>Dane</u>s or <u>Norwegian</u>s] < Ma>

This character's mother faints after seeing him clutching a picture of a woman in furs. For 10 points each:

[10] Name this protagonist of a story whose transformation into a "monstrous vermin" ruins his family financially. The story in which this character appears ends with his family thinking about finding a husband for his sister Grete.

ANSWER: Gregor Samsa [prompt on just Samsa]

[10] Gregor turns into a "monstrous vermin" in this author's story "The Metamorphosis." This author described an execution machine that writes the victim's sentence on their skin in his story "In the Penal Colony."

ANSWER: Franz Kafka

[10] This story by Kafka begins with the main character addressing the "Honored members" of the title institution. The protagonist of this story, whose name is Red Peter, describes getting shot twice as an ape on the Gold Coast.

ANSWER: "A Report to an Academy" [accept "A Report for an Academy" or "Ein Bericht für eine Akademie"] < Yoo>

TOSSUP 15

This character mourns with the corpse of his closest friend until a maggot crawls out of its nose. This character smashes a ferryman's Stone Things that would allow him to safely cross the Waters of Death and is unable to stay awake for seven nights when challenged to do so by the survivor of a (*) great flood. With Enkidu, this character slays Humbaba in the Cedar Forest and also slays the Bull of Heaven that was sent by Ishtar in her fury at being rejected by this character. For 10 points, name this king of Uruk and hero of a namesake Mesopotamian epic.

ANSWER: Gilgamesh [accept Bilgamesh] < Yoo>

BONUS

Due to its lack of zero-point energy, this element has no melting point. For 10 points each:

[10] Name this element with atomic number two, the only in its group with two valence electrons. The most common nucleus of this element is an alpha particle.

ANSWER: **helium** [accept **He**]

[10] When liquid helium is cooled past the lambda point, it obtains this property. Substances with this property have zero viscosity.

ANSWER: **superfluid**ity [do not accept or prompt on "fluidity"]

[10] In the Fraunhofer absorption lines, helium's D3 line has this color. Potassium chromate and lead (II) iodide are both this color.

ANSWER: vellow <Shyam>

TOSSUP 16

A symphony by this composer begins with forte strings playing C followed by triplets from G back up to C. That symphony ends with the main theme of C-D-F-E ushering in a five-voice, five-theme fugato. The Prague Symphony preceded this composer's final set of three symphonies, which included one of his only (*) two symphonies in a minor key. Along with the "Great G minor" and "Jupiter" symphonies, this composer also wrote a "little serenade" for chamber ensemble. For 10 points, name this Classical-era composer of 41 symphonies and *Eine Kleine Nachtmusik*.

ANSWER: Wolfgang Amadeus Mozart < Vasilyev>

Among the things praised in this poem are "skies of couple-colour as a brinded cow" and "Landscape plotted and pieced – fold, fallow, and plough." For 10 points each:

[10] Name this poem that opens, "Glory be to God for dappled things." Its second stanza ends with a command of "Praise him" and includes, "All things counter, original, spare, strange," in its description of the title concept.

ANSWER: "Pied Beauty" (The author of "Pied Beauty" is Gerard Manley Hopkins.)

[10] It's not Hopkins, but this poet wrote about "The awful shadow of some unseen Power" in "Hymn to Intellectual Beauty." He described a "traveller from an antique land" in a poem about "Two vast and trunkless legs of stone."

ANSWER: Percy Shelley (The latter quotes are from Shelley's poem "Ozymandias.")

[10] This other poet stated that "Beauty is truth, truth beauty" in his "Ode on a Grecian Urn." He opened his "Ode to a Nightingale" by describing a "drowsy numbness" that "pains [his] sense."

ANSWER: John Keats < Yoo>

TOSSUP 17

This country is home to "Confederados" who founded Americana after fleeing the South. The Xingu river in this country is home to the large Belo Monte Dam. This country's Pantanal wetlands are in its state of Mato Grosso. A river (*) dolphin lives in this country's largest river, upon which lies this country's city of Manaus. This country's Maracanã stadium hosted the 2014 World Cup and the 2016 Olympics. The Christ the Redeemer Statue is in, for 10 points, what country home to the city of Rio de Janeiro and the Amazon rainforest?

ANSWER: Federative Republic of **Brazil** < Rubel>

BONUS

Francois Couperin published a book titled for "The Art of Playing" this instrument. For 10 points each:

[10] Name this historical instrument which commonly plays in basso continuo parts alongside a cello or double bass. This keyboard instrument uses plucked strings.

ANSWER: <u>harpsichord</u> [accept <u>clavecin</u> or <u>cembalo</u>]

[10] Basso continuo and harpsichord were fundamental aspects of this era of music. This era precedes the Classical and is epitomized by the intricate polyphony that J. S. Bach wrote for the harpsichord.

ANSWER: Baroque

[10] This Italian Baroque composer wrote 555 sonatas for harpsichord. This composer also published a collection of 30 *Essercizi* while employed under the Spanish royal family.

ANSWER: Giuseppe Domenico Scarlatti < Vasilyev>

TOSSUP 18

This thinker argued that the most important equality among mankind is our equal ability to kill each other. According to this thinker, all political duties are subordinate to the individual's right to self-preservation. This thinker listed monarchy, democracy, and aristocracy as the three types of (*) commonwealth. This thinker described how a sovereign is created to end a war of all against all, in which life is solitary, poor, nasty, brutish, and short. For 10 points, name this social contract theorist and author of the absolutist treatise *Leviathan*.

ANSWER: Thomas Hobbes < Ma>

Answer the following about the Second Red Scare. For 10 points each:

[10] Name this senator who was asked by Joseph Welch if he "had any decency" in hearings between this senator and the army about Communist infiltrators.

ANSWER: Joseph R. McCarthy [do not accept or prompt on "Eugene McCarthy"]

[10] During the Red Scare, the House Un-American Activities Committee, or HUAC, blacklisted "Ten" members of this industry named for a California city. One member of this industry was Dalton Trumbo, who made movies such as *Spartacus*.

ANSWER: Hollywood

[10] This American government official was accused by Whittaker Chambers and subsequently convicted by the HUAC of being a Soviet spy. The "Pumpkin Papers" were used to incriminate this official.

ANSWER: Alger Hiss < Rubel>

TOSSUP 19

The cells that produce this compound are killed by streptozocin. By closing an ATP-sensitive potassium channel, sulfonylureas trigger release of this compound, which then upregulates GLUT4 receptors. Blood levels of this compound directly correlate with levels of C-peptide, which is cleaved in this hormone's production, leaving (*) disulfide-bonded A and B chains. This hormone is produced by pancreatic beta cells and opposes the activity of glucagon. For 10 points, name this hormone that reduces blood sugar levels.

ANSWER: insulin <Shyam>

BONUS

In Buddhism, these things are known as Sarira and are preserved in stupas and pagodas. For 10 points each:

[10] Name these religious items. In Christianity, "first-class" examples of these things include blood, skin, and bone fragments said to belong to a saint.

ANSWER: relics

[10] In this branch of Buddhism, relics are housed in buildings called chortens. The spiritual leader of this branch of Buddhism is the Dalai Lama.

ANSWER: <u>Tibetan</u> Buddhism [accept <u>Gelug</u> or <u>Gelugpa</u> or <u>Yellow Hat</u> Buddhism; prompt on <u>Mahayana</u> Buddhism; prompt on <u>Tantric</u> Buddhism]

[10] A relic known as the Shroud of Turin supposedly shows an image of this man's body. Believers claim that the image on the Shroud appeared after touching it when he came down from the cross.

ANSWER: <u>Jesus Christ</u> [accept either part; prompt on <u>God</u>; prompt on <u>Son of God</u>] <Condron>

TOSSUP 20

This plan's creator visited tenant farmer William Marlow to promote it. This plan created the Office of Economic Opportunity, which administered its Head Start program. This plan was depicted as an improvement on being just "rich" or "powerful" in a speech at the (*) University of Michigan in 1964. Programs in this plan help low-income and elderly people pay healthcare costs and are Medicaid and Medicare, respectively. For 10 points, name this social reform plan that fought the "War on Poverty," led by Lyndon B. Johnson.

ANSWER: Great Society [antiprompt on War on Poverty by asking "what plan is that part of?"] <Nair>

The double-ended variety of this data type allows addition or removal from either the head or the tail. For 10 points each:

[10] Name this FIFO, or first-in-first-out, data type. The "priority" version of this data type assigns a priority value to each element so that the highest priority elements are removed first.

ANSWER: queue

[10] Priority queues are often implemented with these other data structures. These data structures' "min" type has the smallest element at the top, with each element being greater than the one in the node above it.

ANSWER: <u>heap</u> [accept <u>min heap</u>; prompt on but do not otherwise reveal <u>tree</u>]

[10] Heaps are based on a type of this data structure. This data structure consists of a root node with branches going down to its leaves, and these data structures' binary variety only allows two children per node.

ANSWER: tree < Pamurthy>