

Berus-Lie Academic Spring Tournament (BLAST)

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Packet 1: **B**  **L**  **A**  **S**  **T** 

Tossups

1. **An analogue of this molecule with a fluorine-18 substitution is the most common radiotracer in PET scans. A phosphorylated derivative of this molecule is released by the action of debranching enzyme and phosphorylase. When high concentrations of this molecule are present, hemoglobin A1c [“A-one-see”] is formed. The first step in a process that breaks down this molecule phosphorylates it at the 6th position. Amylopectin and (*) amylose are formed from repeating units of this molecule. The pancreas secretes insulin in response to high concentrations of this molecule in the blood, and sucrose forms from the condensation of fructose and this molecule. For 10 points, name this molecule that is broken down in glycolysis, a six-carbon sugar.**
ANSWER: D-**glucose** [or **dextrose** or alpha-**glucose**, prompt on $C_6H_{12}O_6$, prompt on **sugar** or monosaccharide]
<KL, Biology> {Science, Biology}

2. **In a collection by this composer, the melody of the last piece, “Remembrances,” is reused from the first, “Arietta.” Another work by this composer includes movements titled “Ingrid’s Lament” and “The Death of Åse.” The soloist enters after a crescendoing timpani roll in a work by this composer inspired by Robert Schumann’s work of the same type and key, his Piano Concerto in A minor. This composer, who included “Wedding Day at Troldhaugen” and “Butterfly” in his (*) *Lyric Pieces* for piano, is best known for a work accompanying scenes from an Ibsen play, including one depicting the lair of a troll. For 10 points, name this Norwegian composer of incidental music to *Peer Gynt*, including “In the Hall of the Mountain King.”**
ANSWER: Edvard Hagerup **Grieg** <ES, Auditory Fine Arts> {Fine Arts, Auditory Fine Arts}

3. **Jeanine Pirro was briefly suspended from her show on Fox in March 2019 after making controversial comments about this politician’s loyalty to the United States. This politician was criticised by Dan Crenshaw after saying “some people did something” with regards to the 9/11 attacks. Crowds at a North Carolina campaign rally chanted (*) “send her back” in response to Donald Trump’s criticism of this politician. This politician was criticised for supposedly antisemitic comments regarding America’s support for Israel, though she was defended by Alexandria Ocasio-Cortez, a fellow member of the “Squad.” For 10 points, name this representative for Minnesota’s 5th congressional district, who is of Somali descent.**
ANSWER: Ilhan Abdullahi **Omar** <GP, Current Events> {Other, Current Events}

4. **One poem of this type states “holy the air, the water, and the fire” and asks the title woman to let the speaker “be thy choir” and “be thy priest”; that poem of this type asks a figure to "hear these tuneless numbers!" and ends with a declaration to “let the warm love in.” The speaker of one poem of this type asks for a “draught of vintage” or a “beaker full of the warm South.” The speaker of that poem of this type has been (*) “half in love with easeful Death” and says that his “heart aches, and a drowsy numbness pains” his sense. Another poem of this type describes a “still unravish'd bride of quietness” and contains the line “beauty is truth, truth beauty.” For 10 points, name this type of poem that John Keats wrote “to Psyche,” “to a Nightingale,” and “on a Grecian Urn.”**

ANSWER: **odes** by John Keats [“**Ode** to a Nightingale,” “**Ode** on a Grecian Urn,” or “**Ode** to Psyche”] <KL, Non-Epic Poetry> {Literature, Non-Epic Poetry}

5. **A replica of a treaty document produced after this battle was presented to the UN on behalf of Turkey and now resides outside the Security Council room. The story told by the original version of that document conflicts with records made by this battle’s victors in the *Poem of Pentaur* and *The Bulletin*. After initial success, one side in this battle stopped to plunder the enemy camp, leaving them vulnerable to the (*) Amun Division’s counterattack, which pushed them back to the Orontes River. The victor of this battle brokered the first recorded peace treaty in history with his defeated foe, Muwatalli II. For 10 points, name this largest chariot battle in history, a victory over the Hittites for Ramesses II.**

ANSWER: Battle of **Kadesh** <CS, Ancient/Other History> {History, Ancient/Other History}

6. **Sigmund Freud examined these people in the first section of a work titled “The Horror of Incest.” Teeth were sometimes removed as part of an initiation ceremony in these people’s culture called Bora. These people were studied along with Andaman Islanders by Alfred Radcliffe-Brown, and these people’s religious usage of totems was the subject of Emile (*) Durkheim’s *The Elementary Forms of Religious Life*. These people employed the practice of fire-stick farming, and songlines were also a part of their religious practices, which revolved around the Dreamtime. For 10 points, name these people who were the original inhabitants of Australia.**

ANSWER: **Aborigines** [Accept **Aboriginals** or **Aboriginal Australians**] <GP, Social Science> {Thought, Social Science}

7. **A particular solution to a system of differential equations can be found by multiplying a “fundamental” one of these objects by an integral in variation of parameters. These objects are Hermitian when they are equal to their own adjoint. One of these objects containing second partial derivatives that is used in the second derivative test is the Hessian. The solutions to the characteristic (*) polynomials of these objects are their eigenvalues. The trace of these objects is equal to the sum of their main diagonal elements. When these objects are singular, they do not have inverses because the determinant is equal to zero. For 10 points, name these two-dimensional arrays of numbers.**

ANSWER: **matrix** [or **matrices**; prompt on linear operators] <SL, Math> {Science, Mathematics}

8. **In a novel by this author, a note reading "Come fast. She be dead if you tarry," is sent to warn Korean War veteran Frank Money about the condition of his sister Cee. In a novel by this author, a woman named Circe greets the protagonist when he comes to Danville, the home of the Lincoln's Heaven farm. This author described a house as being "full of a baby's venom" and (*) "spiteful" in a novel that includes a character who escapes the Sweet Home plantation, named Paul D. A character who is murdered with a saw comes back to haunt a house at 124 Bluestone Road, where her mother Sethe lives, in that novel by this author. For 10 points, name this author who created Milkman Dead in her novel *Song of Solomon* and wrote *Beloved*.**

ANSWER: Toni **Morrison** [The first clue is from *Home*.] <SW and VS, Long Fiction> {Literature, Long Fiction}

9. **The 25th of April bridge in this country was formerly named after a leader of this country and was changed following a revolution in it. *Retornados* referred to citizens of this country who had to return to it following the downfall of its colonial empire. This country promulgated the doctrine of pluricontinentalism to justify keeping its colonies. A leader of this country failed to stop Operation (*) Vijay, during which India occupied its colony of Goa. Marcello Caetano succeeded that dictator of this country, and was overthrown during the Carnation Revolution. For 10 points, name this country which was ruled by the dictator Antonio Salazar during its Estado Novo.**

ANSWER: **Portugal** <AN, European History> {History, European History}

10. **This artist imitated clouds for both the Acoustic Ceiling for the Central University of Venezuela and the work *Mountains and Clouds* for the Hart Senate Office Building. The first public project funded by the National Endowment of the Arts was a sculpture by this artist in Grand Rapids, Michigan. This artist's many works coated in his namesake shade of red include *Bent Propeller*, which was destroyed in the (*) 9/11 attacks. This artist's sculpture in the Federal Plaza in Chicago has two legs and a "head" touching the ground and is titled *Flamingo*. This artist pioneered attaching aluminum sheets to hanging steel wires to create kinetic sculptures. For 10 points, name this American sculptor of *Lobster Trap and Fish Tail*, one of his many mobiles.**

ANSWER: Alexander **Calder** <WZ, Other Visual Arts> {Fine Arts, Other Fine Arts}

11. **Jack Philby advised one ruler to open up this resource to foreign investment. At the Battle of Phase Line Bullet, fumes from burning this resource helped the Republican Guard win. Ken Saro-Wiwa was executed for protesting the exploitation of this resource from this city of Port Harcourt. Lázaro Cárdenas nationalized this resource in Mexico with the creation of (*) Pemex. To create a *casus belli* for the First Gulf War, Iraq accused Kuwait of stealing this resource through the process of slant drilling. The oligopoly of the "Seven Sisters" over this resource was ended by the creation of OPEC. For 10 points, name this resource which made Middle Eastern countries very rich.**

ANSWER: **oil** [accept **petroleum**] <HP, World History> {History, World History}

12. **The town of Paradise is a popular tourist destination to visit one of these features. William Shipman and Lorrin Thurston were two of the main proponents of a national park dedicated to these features. Jimmy Carter compared the moon's surface to a golf course after visiting the area surrounding one of these features in Washington. The (*) Keck Observatory is located atop one of these features, and Crater Lake was created from the *caldera* from one of these features in Oregon. For 10 points, name these features which include Mt. St. Helens and Kilauea, whose lava flows have killed hundreds of U.S. citizens.**

ANSWER: **volcanoes** [prompt on mountains; accept shield **volcanoes** or stratov**olcanoes**; accept Hawai'i **Volcanoes National Park**] <HP, Geography> {Other, Geography}

13. **In one dimension, the equation governing these entities sets a mixed partial derivative to zero after changing variables to x plus or minus ct . The equation describing these entities sets the d'Alembertian [**"dal-em-BER-shin"**] to zero, or equivalently the second time derivative proportional to the Laplacian. Envelopes surround "packets" of these entities and travel at their (*) group velocity, which can differ from their phase velocity. Destructive interference occurs when the troughs [**"troffs"**] of one of these entities coincides with the crests of another, and standing ones have one more node than antinode. These entities can be described by their amplitude and frequency. For 10 points, name these traveling oscillations which include sound.**

ANSWER: **waves** <SL, Physics> {Science, Physics}

14. This short story was based on an essay by its author in which mankind “has invented hell, and... predestination to hell.” This story, whose narrator dreams “that burnished surfaces are a figuration and promise of the infinite,” opens with an epigraph from *The Anatomy of Melancholy*. Characters in this story go insane looking for a set of Vindications that describe their lives. The narrator of this story ranks (*) *The Plaster Cramp* and *The Combed Thunderclap* among the finest volumes of the title location, which is made up of an infinite number of hexagonal rooms. For 10 points, name this short story in which every combination of a set of 25 symbols is held in the title structure, by Jorge Luis Borges.

ANSWER: “**Library of Babel**” [The unnamed essay is “The Total Library.”] <HP, Short Fiction> {Literature, Short Fiction/Other}

15. In one type of this event, participants recite the Yatha Ahu Vairo while a sedreh and kushti is given to them. That event is the Zoroastrian Navjote [“**nuv-joe-t**”] ceremony. In another type of this event, participants recite the Mul Mantra. That event concludes with the Amrit Sanchar. Holocaust victims such as Anne Frank have controversially been the targets of a (*) Mormon variety of this action, while another religion requires participants to assert the validity of the Prophet Muhammad. Saying the Shahada can be used to perform this event in Islam, while in many types of Christianity a form of ritual bathing is used. For 10 points, name these events, such as baptism, by which people enter into a religion.

ANSWER: **initiation** [accept **conversion** or **confirmation** or any answer detailing **joining** a **religion**; accept **Navjote**, **Amrit Sanchar**, **baptism**, or reciting the **Shahada** before mention] <AN, Religion> {Beliefs, Religion}

16. The first excimer laser used a dimer of an element in this group. An element in this group has a property whose name derives from the characteristic shape of plotting its heat capacity against temperature; that is the lambda point. Noticing the similar ionization energies of O₂ and an element in this group led to the synthesis of its hexafluoroplatinate [“**hexa-flu-rho-platin-ate**”]. The Watras incident occurred due to a radioactive element in this group that is known to build up in (*) basements. The breathing gas trimix contains oxygen, nitrogen, and an element from this group, whose nucleus is an alpha particle. For 10 points, name this group of elements that includes xenon, argon, and helium, named for their unreactivity.

ANSWER: **noble gases** [or group **18** or group **8A**] <KL, Chemistry> {Science, Chemistry}

17. In a play by this author, a character is told “folk falling all around and there’s not a look from you!” by a choir of the Black Straw Hats. One of this author’s plays ends with the title character singing, “Wherever life has not died out / It staggers to its feet again.” This author created a character who sings a lullaby after her daughter is killed while beating a drum to warn about the arrival of the Catholics. This Marxist author of (*) *St. Joan of the Stockyards* tried to make people conscious critics of plays in what he termed the “distancing effect.” In a play by this author, Eilif dies because of his “bravery” as his carriage-driving parent forebodes. For 10 points, name this author, who used the Thirty Years War as a backdrop for his play *Mother Courage and Her Children*.

ANSWER: Bertolt **Brecht** <DP, Drama> {Literature, Drama}

18. An artist from this city was commissioned to paint a 25-meter long painting of *Paradise* that is now housed in one of this city’s palaces. A woman holds onto a bull crowned with flowers in a painting by an artist from this city who was a student of Giorgione. Transparent angels float around the illuminated head of the central figure in a (*) diagonal version of the Last Supper by an artist from this city. Another artist from this city’s namesake school of painting was inspired by his teacher’s *Sleeping Venus* to show a nude woman resting on a white bed next to a dog. For 10 points, name this city home to Tintoretto, Titian, and Canaletto, the latter of whom was known for painting its canals.

ANSWER: **Venice** <HP, Visual Fine Arts> {Fine Arts, Visual Fine Arts}

19. Grace Raymond Hebard's accounts of this figure and her burial location has since been called into question, but she was nonetheless given the name of "the woman with one tongue" for her efforts. This figure's son, nicknamed "Pompey," acted as a fur trapper later in life. After a group of explorers identified Cameahwait ["**kuh-may-ah-wait**"] as this figure's long-lost brother, he gifted horses to those explorers. (*) Toussaint Charbonneau married this figure, who aided a group of explorers stationed at Fort Clatsop with her skill in the Shoshone language. For 10 points, name this Native American woman who served as the main native guide to the Lewis and Clark expedition.

ANSWER: **Sacagawea** [accept **Sakakawea**] <AN, American History> {History, American History}

20. A work titled for one of these locations discusses its author's concept of "absolute historicism" and describes Marxism as a "philosophy of praxis." That work titled for these locations was translated by Joseph Buttigieg. Another book categorizes the effects of these locations into cellular, organic, genetic, and combinatory, suggesting their intended effect is to create "docile bodies". These locations are the subject of namesake (*) notebooks by Antonio Gramsci. A work focusing on these locations begins with a description of the public torture of Robert-Francois Damiens and often discusses Bentham's ideal version of this type of location known as the Panopticon. For 10 points, name these locations which are the basis of Michel Foucault's *Discipline and Punish*.

ANSWER: **prisons** [accept **Panopticon** before mention; accept equivalents such as **jails**] <AN, Philosophy> {Thought, Philosophy}

Bonuses

1. This concept has one axis of “cultural” versus “natural” and the other of “changed” versus “unchanged.” For 10 points each:

[10] Name this anthropological concept that classifies boiling, smoking, and roasting.

ANSWER: **culinary triangle**

[10] The culinary triangle was posited by this French anthropologist who included his *The Raw and the Cooked* in his *Mythologiques*.

ANSWER: Claude **Lévi-Strauss**

[10] Lévi-Strauss created a branch of anthropology described by this adjective that posits underlying similarities between cultures. He based his work on a branch of linguistics named for this adjective developed by Saussure.

ANSWER: **structural** [accept **structural** anthropology or **structural** linguistics] <AMB, Social Science> {Thought, Social Science}

2. Mr. Beebe describes how playing the piano offers this character an escape from “the kingdom of this world.” For 10 points each:

[10] Name this character, who abandons a trip to Greece in order to proclaim her love to George Emerson. This character argues about taking up the title residence from the Emersons in the novel which she appears in.

ANSWER: **Lucy Honeychurch** [accept either underlined answer]

[10] In *A Room with a View*, Lucy Honeychurch meets her first fiance, Cecil Vyse, in this city. A character from a different novella experiences this city’s namesake “fever” after being caught by Frederick Winterbourne in an affair.

ANSWER: **Rome** [accept **Roman** fever, which is from Henry James' *Daisy Miller*]

[10] *A Room With a View* was written by this English author. In this author’s novel *A Passage to India*, Aziz is arrested for assaulting Adela Quested in the Marabar Caves.

ANSWER: Edward Morgan **Forster** <HP, Long Fiction> {Literature, Long Fiction}

3. In a photo by Alice Seeley Harris, a man stares at one of these objects on the floor. For 10 points each:

[10] Name these objects. These objects were collected by a certain paramilitary organization operating under the “Red Rubber” system as proof that they had been conserving bullets.

ANSWER: **hands**

[10] The brutalization of native Congolese under the Force Publique took place under this empire, which at the time was ruled by Leopold II. This empire was also responsible for the creation of an artificial caste system in Rwanda.

ANSWER: **Belgium**

[10] Leopold II had called for the help of this Welsh journalist to help explore and claim the Congo River Basin for himself. On an earlier expedition, this man notably said “Dr. Livingstone, I presume?” after discovering him.

ANSWER: Henry Morton **Stanley** <HP, World History> {History, World History}

4. In stars, this element is primarily formed through the triple-alpha process. For 10 points each:

[10] Name this element whose detonations or deflagrations occur when white dwarfs exceed the Chandrasekhar limit.

ANSWER: **carbon** [accept **C**]

[10] Carbon detonations result in these events, whose consistent brightness allows them to be used as standard candles. White dwarfs collapse into neutron stars in these events.

ANSWER: type **Ia supernovae** [prompt on **supernovae** or type **I supernovae**; do not accept “type II supernovae”]

[10] The triple-alpha process is an example of this kind of process. In the CNO [**“C-N-O”**] cycle, carbon catalyzes this process in which hydrogen atoms are combined to form helium atoms in stars.

ANSWER: nuclear **fusion** [accept stellar **nucleosynthesis**; do not accept “nuclear fission”] <SL, Astronomy> {Science, Other Science}

5. An album from this country combines the name of a “new” form of a dance from this country with the Spanish word for “liberty.” For 10 points each:

[10] Name this country of Astor Piazzolla, the composer of *Libertango*. His teacher, Alberto Ginastera [“he-na-stare-ah”], wrote a set of “Danzas” titled for this country.

ANSWER: **Argentina** [accept *Danzas argentinas*]

[10] Piazzolla was a prominent player of the bandoneón [“bahn-doh-nay-ON”], a squeezebox similar to this instrument that uses a bellows and keys on its sides to produce notes.

ANSWER: **accordion**

[10] Ginastera’s [“he-na-stare-ahs”] Opus 25 is one of the most notable concertos for this instrument. Two of these stringed instruments play in the *Un bal* movement of Hector Berlioz’s *Symphonie fantastique*, and a variety of this instrument is the national instrument of Paraguay.

ANSWER: **harp** <WZ, Other Fine Arts> {Fine Arts, Other Fine Arts}

6. In the final act of this play, a woman gives birth to a stillborn and hallucinates that she’s walking through the woods with her husband. For 10 points each:

[10] Jack Clitheroe is killed in what play, the final in a trilogy? In this play, the Unionist Bessie is shot after being mistaken for an enemy sniper.

ANSWER: *The **Plough and the Stars***

[10] Sean O’Casey’s *The Plough and the Stars*, like *The Shadow of a Gunman* and *Juno and the Paycock*, is part of his *Dublin Trilogy*, which chronicles this country’s Easter Rising.

ANSWER: Republic of **Ireland** [accept **Airlann** or **Eire**]

[10] Jack Clitheroe’s wife has this first name. Another character with this first name dances the tarantella to distract her husband from reading Krogstad’s letter.

ANSWER: **Nora** [accept **Nora** Clitheroe or **Nora** Helmer; the second clue is from *A Doll’s House*] <DP, Drama> {Literature, Drama}

7. This principle is generally applied alongside the Madelung [“MAH-de-lung”] rule. For 10 points each:

[10] Name this principle, which states that, in the ground-state, electrons will fill lower-energy orbitals before entering higher-energy ones.

ANSWER: **aufbau** [“off-bau”] principle

[10] Because of the aufbau principle, these molecular orbitals are filled after their lower-energy counterparts are filled. They are denoted with an asterisk.

ANSWER: **antibonding** molecular orbitals

[10] Electrons in coordination complexes can violate the aufbau principle because of this quantity’s namesake pairing energy. This intrinsic angular momentum allows two electrons to occupy the same orbital.

ANSWER: **spin** <SL, Chemistry> {Science, Chemistry}

8. This god possesses the *vajra* and rides his mount Airavata. For 10 points each:

[10] Name this Vedic god, the ruler of the highest heaven and king of the Devas. This god is the most referred-to deity in the Rigveda, which describes his killing of the evil dragon Vritra and freeing of the rivers for humanity.

ANSWER: **Indra**

[10] The *vajra* is one of these weapons made from the spine of the sage Dadhichi. Zeus commonly uses this kind of weapon which is forged for him by the Cyclopes.

ANSWER: **lightning** bolts [accept **thunderbolts**]

[10] Airavata is a white one of these animals. One body part of these animals was used to write the *Mahabharata*, and it is said that these animals support and guard the Earth at the compass points of the cardinal directions.

ANSWER: **elephants** <SZ, Mythology> {Beliefs, Mythology}

9. These people defeated the Bavarians to establish a territory in the Carpathian basin. For 10 points each:

[10] Name this ethnic group whose people were united by Almos. Almos's son Arpad would name a dynasty that ruled these people.

ANSWER: **Magyars** [accept but do NOT reveal the alternate answerline of **Hungarians**]

[10] The Magyars are an ethnic group from this European country. A later king of this nation, Bela IV, would build a palace in Buda, which is now united with Pest by the Chain Bridge.

ANSWER: **Hungary**

[10] This member of the Arpad Dynasty served as the first King of the Hungarians. This husband of Gisela of Bavaria would later be canonized by Pope Gregory VII.

ANSWER: King **Stephen I** [accept **Saint Stephen** and **Stefan I**, prompt on **Stephen**] <AN, European History> {History, European History}

10. The "positive" and "negative" forms of this concept are distinguished by the absence of either internal or external restraint. For 10 points each:

[10] Name this subject. Isaiah Berlin defined its positive form as the ability to perform one's own acts of will in a lecture titled "Two Concepts" of this subject.

ANSWER: **liberty** [prompt on **freedom** but do not accept or prompt on other synonyms]

[10] Berlin drew on the work of this philosopher, who developed the harm principle in his essay *On Liberty*. This man formulated utilitarianism along with Jeremy Bentham.

ANSWER: John Stuart **Mill**

[10] Berlin also wrote this essay that attempts to place Leo Tolstoy into one of the two title groups, members of which either focus on "one big idea" or are pluralistic.

ANSWER: *The **Hedgehog and the Fox*** <WZ, Philosophy> {Thought, Philosophy}

11. In the beginning of the novel in which he appears, this character remarks on the "conscientious sultans" of students arriving at the College-On-The-Hill, for 10 points each:

[10] Name this character, whose son Heinrich plays chess by correspondence with a convicted murderer. This character's wife has an affair with Willie Mink in order to obtain a drug that lessens the fear of death.

ANSWER: **Jack Gladney** [accept either underlined portion]

[10] The Hitler Studies professor Jack Gladney is the protagonist of *White Noise*, a novel by this contemporary American author of *Mao II* and *Underworld*.

ANSWER: Don **DeLillo**

[10] The "Airborne Toxic Event" of *White Noise* is caused by a spill from one of these vehicles. One of these vehicles is the setting of Agatha Christie's *Murder on the Orient Express*.

ANSWER: a **train** <KM, Long Fiction> {Literature, Long Fiction}

12. Juan Crisostomo Arriaga, often known as the “Spanish Mozart,” wrote three works of this type at age 16. For 10 points each:

[10] Name this type of piece including works by Wolfgang Amadeus Mozart such as “Spring” and “Dissonance.” A group named after Emerson is notable for performing these types of pieces.

ANSWER: **string quartets** [prompt on **quartet**]

[10] Joseph Martin Kraus, known as the “Swedish Mozart,” wrote much music that evokes this German movement. Mozart’s Symphony No. 25 is representative of this proto-Romantic style, which can also be seen in Haydn’s “Mourning” and “Farewell” Symphonies.

ANSWER: **Sturm und Drang** [accept **Storm and Drive** or **Storm and Stress**]

[10] The “Black Mozart,” Chevalier de Saint-Georges, was a composer from this European country. Another composer from this country, Jacques Offenbach, was called “the Mozart of Champ-Elysees [“SHAWN-el-lee-ZAY”]” by the Italian composer Rossini.

ANSWER: **France** <AN, Auditory Fine Arts> {Fine Arts, Auditory Fine Arts}

13. A lidded bowl called “gaiwan” or “gaibe” is used in a “kung fu ceremony” for preparing this beverage. For 10 points each:

[10] Name this drink made by pouring boiling water over leaves, which has oolong and green varieties.

ANSWER: **tea**

[10] In Japanese tea ceremonies, this foodstuff is added to tea as a flavorant and is often stored in a *chaki*. This foodstuff is prepared by grinding specially-grown green tea leaves.

ANSWER: **matcha**

[10] The popular bubble tea is made by adding milk and this starch made from the cassava root, which are shaped into the namesake bubbles, to a base black or green tea.

ANSWER: **tapioca** <WZ, Other> {Other, Miscellaneous/Other Academic}

14. A functional group containing this element on most glycosaminoglycans [“glycose-amino-glycans”], or GAGs, causes them to retain a rod-like form due to high negative charge density. For 10 points each:

[10] Name this element found in thiol [“THY-ole”] groups. It’s also present in methionine [“muh-THI-uh-noon”] and cysteine [“SIS-teen”], and in elemental form it’s solid and yellow.

ANSWER: **sulfur** [accept **S**]

[10] Hyaluronan [“hy-ul-your-oh-nen”], a non-sulfated GAG, is found in this substance, which also contains lubricin. This substance reduces friction between cartilage in joints.

ANSWER: **synovial** fluid

[10] Another GAG, heparin, can prevent this process in the treatment of deep vein thrombosis. Warfarin also prevents this process by blocking vitamin K epoxide reductase, which reduces factor X [“ten”] synthesis.

ANSWER: blood **clotting** [or **coagulation**] <KL, Biology> {Science, Biology}

15. A reaction to this court case was the passage of the Hyde Amendment, which bars the use of federal funds to pay for abortions except for certain exceptions. For 10 points each:

[10] Name this momentous 1973 court case which stated that the decision over whether to have an abortion or not was protected by the “right to privacy”. Its plaintiff, Norma McCorvey, would later regret her role in the case.

ANSWER: **Roe v. Wade**

[10] The case of *Roe v. Wade* occurred in this Chief Justice’s court, which also saw the case of *US v. Nixon*. He was noted for being far more conservative than his predecessor, Earl Warren.

ANSWER: Warren Earl **Burger**

[10] Before *Roe v. Wade*, this case held that a ban on contraception also violated the right to privacy. Justice Douglas’s opinion in this case famously mentions “penumbras” and “emanations” in the Constitution.

ANSWER: **Griswold v. Connecticut** <AN, American History> {History, American History}

16. Answer the following about Israel's geography. For 10 points each:

[10] The south of Israel is dominated by this desert, which is also home to many kibbutz collectives. Cities in this desert include Beersheba and Eilat.

ANSWER: **Negev** Desert

[10] Many Bauhaus buildings are located in the White City, a part of this second-largest city of Israel. This city is governed along with Jaffa as part of the same municipality.

ANSWER: **Tel Aviv**-Jaffa [or **Tel-Aviv**-Yafo]

[10] Israel controls the Golan Heights, which are disputed with this other country. Sites in this country include the Krak des Chevaliers ["**crack-day-che-vah-lee-air**"], and the Umayyad Mosque in its capital of Damascus.

ANSWER: **Syria** <GP, Geography> {Other, Geography}

17. The PMNS matrix describes this phenomenon. For 10 points each:

[10] Name this phenomenon predicted by Bruno Pontecorvo. Detecting this phenomenon in the Homestake experiment explained why only one-third of the particles expected were reaching earth.

ANSWER: **neutrino oscillation** [accept **flavor oscillation**, accept answers about **neutrinos** changing **flavor**; prompt on **lepton mixing** or **neutrino mixing**]

[10] The PMNS matrix is named for Pontecorvo and three scientists from this country: Ziro Maki, Masami Nakagawa and Shoichi Sakata. The Super-Kamiokande neutrino observatory is also in this country.

ANSWER: **Japan**

[10] Neutrinos can oscillate between three flavors: electron, tau, and this flavor named for a lepton.

ANSWER: **muon** <KL, Physics> {Science, Physics}

18. A still from *Battleship Potemkin* inspired the portrait of a person with this position. For 10 points each:

[10] Name this position. That aforementioned portrait of a "screaming" man with this religious position is dominated by jagged vertical lines, forming the suggestion of a cage.

ANSWER: **pope**

[10] That aforementioned painter was this Irish-born painter of many bloody scenes. He painted his Black Triptychs after the suicide of his lover, George Dyer.

ANSWER: Francis **Bacon**

[10] Bacon's *Painting 1946* may evoke this leader's bunker in its background. Another painting by Bacon, *Figure Study II*, is thought to be inspired by the work of this leader's official photographer, whose photographs were circulated as Nazi propaganda.

ANSWER: Adolf **Hitler** <ML, Visual Fine Arts> {Fine Arts, Visual Fine Arts}

19. References to Du Fu are interspersed throughout this work, including quoting *Spring View* in its introduction.

For ten points each:

[10] Name this work, which describes "days and months" as "travelers of eternity." The narrator of this work writes, "even this grass hut / could for the new owner be / a festive house of dolls!"

ANSWER: *The **Narrow Road to the Deep North*** [or ***Oku no Hosomichi***]

[10] This poet wrote the travelogue *Narrow Road to the Deep North*. He notably roasted poems that he published in his own anthology *The Seashell Game*.

ANSWER: Matsuo **Bashō** [accept Matsuo **Munefusa**]

[10] The *Seashell Game* collects poems of this type. Bashō wrote his own poems of this type, such as one in which frogs jump into an old pond, making sure to stick to the strict syllable limits in each line.

ANSWER: **haiku** [or **hokku**] <DP, Non-Epic Poetry> {Science, Non-Epic Poetry}

20. Downed aircraft can trigger major political crises. For 10 points each:

[10] In 1960, one of these planes was shot down while flying a reconnaissance mission over the Soviet Union. Another of these planes took the photographs which led to the Cuban Missile Crisis two years later.

ANSWER: Lockheed **U-2** [accept **Dragon Lady**; prompt on spy plane or similar with “what specific model?”]

[10] After Lin Biao died in a plane crash in 1971, this man succeeded him as Vice Chairman, a position he held alongside his prior position as the first Premier of the People’s Republic of China under Mao Zedong.

ANSWER: **Zhou** Enlai [“**joe-en-lie**”]

[10] In 1983, a civilian Boeing 747 operated by an airline from this country was shot down by a Soviet interceptor while en route to its capital of Seoul. That airline from this country had the flight number 007.

ANSWER: **South Korea** <SL, World History> {History, World History}