

Detroit Country Day Academic Regular Tournament

Packet 2

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1. **Frederick Merk argued against this concept's widely accepted popularity in a work titled for its reinterpretation. John Gast allegorized this concept in a painting depicting telegraph wires below the central figure, who carries a book. This concept was first proposed in the *Democratic Review* by (*) John O'Sullivan, who used it to argue for the annexation of Texas. Believers in this concept used the slogan "Fifty-four Forty or Fight" to argue for annexing Oregon. Horace Greeley's advice to "Go West, young man" is an expression of, for 10 points, what concept that refers to the United States' divine right to expand west in the 19th Century?**

ANSWER: **manifest destiny** [accept ***Manifest Destiny*** and *Mission in American History: A Reinterpretation*; prompt on **American Exceptionalism** or **American expansion** or **westward expansion**] <US History, Gayden, Ed.>

The world's largest one of these places is in Atlanta, and houses over 100,000 sea creatures, including the massive Whale Shark. For 10 points each,

[10] Name these places, where tourists may go to see aquatic life. Another one of these places is inside of the Dubai Mall.

ANSWER: **aquariums** [accept Georgia **Aquarium**]

[10] This aquarium is situated between the Field Museum and the Adler Planetarium in Chicago. This aquarium is home to the 33 year old penguin Wellington.

ANSWER: **Shedd** Aquarium

[10] The US's National Aquarium is located in this coastal city's Inner Harbor district. This city also contains the Pimlico race course.

ANSWER: **Baltimore**, Maryland <Geography, Gayden>

2. **In 2016, Hales and Kusner demonstrated that for a shape with this many sides, the "ice-ray" packing structure is optimal. This number is the first congruent number. Playfair's Axiom is equivalent to a statement partially named for this number, which concerns a straight line intersecting two other straight lines and is named (*) Euclid's parallel postulate. There are this many convex regular polyhedra, and the angles in a shape with this many sides sum to 540 degrees. Each face of a dodecahedron has this many edges. For a right triangle with legs of length 3 and 4, this is the length of the hypotenuse. For 10 points, give the number of sides in a pentagon.**

ANSWER: **five** [or **5**] <Math, Siddiqui>

A character on this show often says, "Gotta fix that step", for 10 points each.

[10] Name this show, whose first episode focused on the adoption of a Vietnamese baby. This Emmy nominated show's eleven seasons aired from 2009 until its last episode aired in April 2020.

ANSWER: ***Modern Family***

[10] *Modern Family* primarily takes place in this US state. This state's city of San Francisco is also the setting for *Full House*.

ANSWER: **California**

[10] This Colombian actress plays Gloria Delgado in *Modern Family*. She has also appeared alongside Reese Witherspoon in *Hot Pursuit* and she is currently a judge on *America's Got Talent*.

ANSWER: Sofia Vergara <Trash, Pavlou>

3. **In a novel by this author, the title character saves Niketas Choniates from the Fourth Crusade, after which he narrates his quest for Prester John. In another one of this author's novels, a group of characters discovers the *finis Africae* room, and a dead body is found in a vat of (*) pig's blood.** That novel written by this author ends with Jorge of Burgos consuming a lost volume of Aristotle's *Poetics*. This author of *Baudolino* wrote about Adso of Melk and William Baskerville investigating a murder at a monastery. For 10 points, name this Italian author of *The Name of the Rose*.

ANSWER: Umberto Eco <European Literature, Pavlou>

A ballistic type of these devices can be used to measure the momentum of a bullet. For 10 points each,

[10] Name this device consisting of a mass connected to a string which can be swung freely.

ANSWER: pendulum

[10] When one pendulum is attached to the end of another pendulum, they form a double pendulum, which exhibits this phenomenon. A small perturbation can cause this phenomenon in the butterfly effect.

ANSWER: chaos [accept word forms]

[10] The pendulum clock was invented by this physicist, who elaborated on the behavior of pendulums in his book *Horologium Oscillatorium*. This physicist also names a principle that treats each point on a wavefront as a source of spherical wavelets.

ANSWER: Christiaan Huygens <Physics, Sun>

4. **According to these people, a woman became pregnant after a skull placed on a calabash tree spit into her hand. According to these people, two failed attempts to create humanity used mud and wood. Trials such as a river of scorpions and a house of bats are depicted in this civilization's epic, the (*) *Popul Vuh*.** The underworld in these people's mythology is Xibalba ["shee-BAL-bah"], whose lords are defeated by the Hero Twins in a deadly ball game. For 10 points, give this Mesoamerican civilization that developed a calendar mistakenly believed to predict the world's end in 2012.

ANSWER: Mayans [accept K'iche'; do not accept or prompt on "Aztecs" or "Olmecs"] <Mythology, Zhou>

Answer the following about famous violin concertos. For 10 points each,

[10] The soloist enters unusually early in this composer's violin concerto in E minor whose opening theme gave him "no peace". This composer also composed *Songs without Words*.

ANSWER: Jakob Ludwig Felix Mendelssohn Bartholdy

[10] This Italian violin virtuoso composed 6 violin concertos in addition to a set of 24 caprices including ones titled "The Devil's Laughter" and "The Hunt".

ANSWER: Niccolo Paganini

[10] This composer composed a popular violin concerto in D major that was premiered by Jascha Heifetz. He is also known for his scores for films such as *Anthony Adverse* and *Kings Row*.

ANSWER: Erich Wolfgang Korngold <Auditory Fine Arts, Sun>

5. **The Corey-Fuchs reaction converts aldehydes into this functional group, which is reduced in a reaction that uses a poisoned catalyst containing lead and quinoline named after Lindlar. This functional group contains two carbons with (*) sp hybridization.** Partial hydrogenation of this functional group produces a different type of unsaturated hydrocarbon. Despite not containing a double bond, the simplest of these compounds is named "acetylene." For 10 points, name this functional group containing a carbon-carbon triple bond, often contrasted with alkanes and alkenes.

ANSWER: **alkynes** [do not accept or prompt on “alkane” or “alkene”; generously prompt on unsaturated hydrocarbon before mention] <Chemistry, Siddiqui>

For 10 points each, name some American political parties.

[10] This political party was founded in 1828 by supporters of Andrew Jackson. Franklin Delano Roosevelt and Woodrow Wilson belonged to this party, which currently opposes the Republican Party.

ANSWER: **Democratic** Party

[10] This nativist, anti-catholic, and anti-immigrant party perpetrated the 1855 Bloody Monday riots in Louisville. It grew out of the Order of the Star Spangled Banner.

ANSWER: **Know-Nothing** Party [accept Native American Party or American Party]

[10] In the 1996 presidential election, businessman Ross Perot ran with this party. Donald Trump left this party in 2000 after losing the nomination to Pat Buchanan.

ANSWER: **Reform** Party <US History, Gayden>

6. **A harmonic ostinato consisting of alternating B and A half-diminished 7th chords open one movement of this piece and is interpreted by some to signify the passing of time. A call and response between a solo euphonium and the trumpets soars over steady quarter notes played by the strings in the first movement of this piece. That movement of this piece opens with the strings playing a *col legno* (*) ostinato in 5/4 time. A women’s choir is placed in a separate room whose door is gradually closed in the final movement of this piece. Movements in this suite include “The Bringer of Peace” and “The Bringer of War”. For 10 points, name this suite by Gustav Holst inspired by the solar system.**

ANSWER: *The Planets* <Auditory Fine Arts, Sun>

Much like in the Bible, Lazarus is a character who just keeps coming back in literature. For 10 points each,

[10] This author of *The Lazarus Project* is more famous for a series of books set on a desert-like planet inhabited by characters like Paul Atreides and the Bene Gesserit. The first book of that series is *Dune*.

ANSWER: Frank **Herbert**

[10] This poem’s narrator compares himself to “Lazarus, come from the dead, Come back to tell you all.” This poem’s speaker later asks, “do I dare to eat a peach?”

ANSWER: “**The Love Song of J. Alfred Prufrock**”

[10] The prostitute Sonya reads Raskolnikov the story of Lazarus in this novel by Fyodor Dostoyevsky. This inspires him to confess his actions in order to be redeemed.

ANSWER: ***Crime and Punishment*** <Ancient/Mixed/Other Literature, Gayden>

7. **During an invasion of this country, one ruler created the largest trebuchet ever, nicknamed the “Warwolf”. That invasion of this country featured a battle where Hugh de Cressingham died. This country’s unsuccessful Darien Scheme was an attempt to settle a colony in modern day Panama. This country had a defensive pact with France known as the Auld (*) Alliance. This country’s independence war featured the battle of Bannockburn, which allowed Robert the Bruce to become the king of this country. This country entered into a 1707 Act of Union with its southern neighbor. For 10 points, name this country whose cities include Glasgow and Edinburgh.**

ANSWER: **Scotland** [accept Alba] <European History, Pavlou, Ed.>

Wilms Tumor is a cancer of this organ that primarily occurs in children. For 10 points each:

[10] Name this organ located under the adrenal glands that filters the blood to produce urine.

ANSWER: **kidney**

[10] These functional units of the kidney contain the glomerulus and the Loops of Henle. These come in juxtamedullary and cortical forms.

ANSWER: **nephrons**

[10] In the kidney, this word succeeded by Densa describes a collection of cells next to the glomerulus. In a different body part, this structure contains a high concentration of cone cells, and its center is the fovea.

ANSWER: macula [Prompt on retina] <Biology, Siddiqui>

8. **A poem by Stevie Smith about the writing of this poem contains the line “I am hungry to be interrupted.” The title character of this poem hears “ancestral voices prophesying war” while contemplating a “deep romantic chasm.” The interruption of the author’s dreams by a “person on business from Porlock” parallels the end of a vision about an (*) Abyssinian “damsel with a dulcimer” in this poem. The setting of this poem is built “where Alph, the sacred river, ran.” For 10 points, name this Samuel Taylor Coleridge poem titled for a Mongol ruler who built a “stately pleasure-dome” in Xanadu**

ANSWER: Kubla Khan (accept a vision in a dream. A Fragment.) <British Literature, Gayden>

For 10 points each, name some Latin American dictators.

[10] This Cuban leader overthrew Fulgencio Batista and gave the “History will absolve me” speech. The CIA failed to assassinate this man using cigars, and he was succeeded by his brother Raul.

ANSWER: Fidel Alejandro Castro Ruz

[10] This leader of the Dominican Republic had the Mirabal sisters executed and infamously ordered his troops to carry out the Parsley Massacre.

ANSWER: Rafael Leonidas Trujillo Molina [prompt on El Jefe]

[10] This family ruled Nicaragua from 1936 to 1979, and its last member to be president was Anastasio. This family was overthrown during the revolution by the Sandinistas.

ANSWER: Somoza

<World History, Pavlou, Ed.>

9. **This molecule’s hydrolysis on the NBD results in conformational changes in the TMD, which ultimately allows for the transport of substances by ABC proteins. The action of an enzyme that produces this molecule was observed in an experiment that utilized a fluorescent actin filament.**

That enzyme uses the chemiosmotic (*) flow of protons into the inner matrix of the mitochondria to synthesize this molecule. Cellular respiration results in the net formation of approximately 36 of these molecules. For 10 points, name this molecule, commonly called the “energy currency” of the cell.

ANSWER: ATP [or adenosine triphosphate] <Biology, Siddiqui>

This character starts a C.I.D investigation after signing his name as “Washington Irving” while censoring letters. For ten points each,

[10] Name this pilot from the Fighting 256th Airborne Squadron in Pianosa. This character’s tent-mate Orr flees to Sweden at the end of the novel in which he appears.

ANSWER: John Yossarian

[10] Yossarian appears in this satirical 1961 novel by Joseph Heller, where he is forced to keep flying combat missions due to the title paradox.

ANSWER: Catch-22

[10] In *Catch-22*, the mess officer Milo Minderbinder struggles with the fact that he bought all of this substance in existence. Milo covers this substance in chocolate in an effort to sell it to mess halls as food.

ANSWER: Egyptian cotton <US Literature, Sun>

10. **Lee Chatfield and Mike Shirkey launched a successful challenge that reduced emergency executive authority belonging to the current holder of this position. In December 2020, a former holder of this position was announced as the nominee to become the next Secretary of Energy. The Wolverine Watchmen targeted the current holder of this position in a (*) kidnapping plot that was unveiled in October 2020. The current holder of this position attributed the motivation for the plot against her to President Trump, who had previously labeled her as**

“that woman from [her state].” For 10 points, identify this office held by Jennifer Granholm and Gretchen Whitmer that governs from Lansing.

ANSWER: **Governor** of **Michigan** [prompt on partial answer] <Current Events, Liu, Ed.>

Answer the following about ancient Greek art. For 10 points each,

[10] This Hellenistic era statue located in the Louvre is missing both of its arms. According to some scholars, the statue celebrates a naval triumph because its base was originally the prow of a ship.

ANSWER: **Winged Victory of Samothrace** [accept **Winged Nike of Samothrace** or **Nike of Samothrace**]

[10] This son of Cephisodotus the Elder sculpted *Apollo the Lizard-slayer*. This sculptor, who had a sexual relationship with the courtesan Phyrne, also created *Hermes and the Infant Dionysus*.

ANSWER: **Praxiteles**

[10] During the Greek War of Independence, the Earl of Elgin took statues from this building. This temple, which was dedicated to Athena, is currently located on the Acropolis.

ANSWER: **Parthenon** <Other Fine Arts, Pavlou>

11. **A battle in this state saw the death of Abraham Lincoln’s brother-in-law Benjamin Hardin Helm. A leader of this state allied with the Yamacraw chief Tomochichi to win battles at Gully Hole Creek and Bloody Marsh. Casimir Pulaski died during a siege of a city in this state, which was deemed (*) “too pretty to burn.”** The Battle of Chickamauga was fought in this state. A Spanish invasion of this modern-day state during the War of Jenkins’ Ear was repulsed by James Oglethorpe. William Tecumseh Sherman’s March to the Sea culminated in, for 10 points, what state whose capital is Atlanta?

ANSWER: **Georgia** <US History, Gayden> [Ed.]

This character ultimately dies when fighting a dragon with Wiglaf. For 10 points each,

[10] Name this character who ascends to the throne of Geatland after defeating Grendel and his mother.

ANSWER: **Beowulf**

[10] The loud noise from this hall of the Danes angers Grendel, causing him to attack them. This mead-hall was built by King Hrothgar.

ANSWER: **Heorot**

[10] This character mocks Beowulf, telling stories of Beowulf’s previous defeat in a swimming race against Breca. This character later lends his sword Hrunting to Beowulf.

ANSWER: **Unferth** <British Literature, Siddiqui>

12. **This character is humiliated in the aria “Questa donna conoscete.” This operatic character sings the duet “Un di felice, eterea” with her lover before telling him to return once a white camellia has withered. At the end of Act I, she resolves to always remain free in the cabaletta aria (*) *Sempre Libera*.** This operatic character is convinced to abandon her lover by Giorgio Germont. The *brindisi* “*libiamo, ne’ lieti calici*” is sung by Alfredo after this character’s lover Baron Douphol refuses to give a toast. For 10 points, name this title “fallen woman” who dies of consumption in an opera by Giuseppe Verdi.

ANSWER: **Violetta Valéry** [accept either underlined portion; accept **La Traviata**; accept **The Fallen Woman** until mention] <Other Fine Arts, Gayden>

For 10 points each, answer the following about a Greek philosopher.

[10] Name this student of Socrates who wrote *The Republic*. His student was Aristotle.

ANSWER: **Plato**

[10] Plato wrote this work, in which Socrates arrives late to the title dinner party. In this work, each guest is supposed to give a speech praising Eros, the god of love.

ANSWER: **Symposium**

[10] In the dialogue of this name, Plato poses the question “Is an act pious because it is loved by the gods, or is it loved by the gods because it is pious?”

ANSWER: Euthyphro <Philosophy, Zhou>

13. **The “seesaw mechanism” might explain a nonzero value of this quantity in certain fermions. Proving the existence of Yang-Mills theory and a gap named for this quantity is one of the Millenium Prize Problems, and the difference between the values of this quantity for a nucleus and its component nucleons is known as its namesake (*) “defect”.** The equivalence principle states that this quantity’s inertial and gravitational forms are equal, and Albert Einstein equated energy with the speed of light squared times this quantity. For 10 points, name this quantity, whose SI unit is the kilogram.

ANSWER: mass <Physics, Sun>

The composition of one work by this artist was taken from a panel drawn by Irv Norick in issue 89 of *All-American Men of War*. For 10 points each,

[10] Name this artist known for his use of Ben-Day dots and speech bubbles. He depicted an exploding plane in his work *Whaam!*

ANSWER: Roy Lichtenstein

[10] Roy Lichtenstein is a member of this art movement which uses products and images of mass culture. Another member of this movement, Andy Warhol, made many depictions of Campbell’s soup cans.

ANSWER: Pop Art

[10] In one work by Lichtenstein, a girl says that “I don’t care. I’d rather” perform *this* action than call Brad for help.

ANSWER: sinking underwater [accept Drowning Girl, or anything related to drowning or sinking underwater] <Visual Fine Arts, Sun>

14. **A leader with this surname was assassinated by a woman with a bomb hidden under her dress. Another leader with this surname used the Monkey Brigade to collect information and was investigated by the Shah Commission for corrupt activities. The Bofors scandal implicated the son of a leader with this surname who carried out the (*) Smiling Buddha nuclear tests. That woman with this surname was assassinated by her Sikh bodyguards. Another person with this surname led a 250 mile salt march to Dandi.** For 10 points, name this surname held by Rajiv, Indira, and the Mahatma.

ANSWER: Gandhi [accept Rajiv Gandhi or Indira Gandhi or Mohandas “Mahatma” Gandhi] <World History, Pavlou, Ed.>

In late 2020, an anti-LGBTQ member of parliament from this country resigned after being caught escaping from a gay sex party in violation of COVID-19 restrictions. For 10 points each,

[10] Name this country that banned same-sex couples from adopting children in December 2020.

ANSWER: Hungary [accept Magyarország]

[10] This Prime Minister of Hungary has received criticism since he seized power at the start of the pandemic for his social policies, which many believe to violate human rights.

ANSWER: Viktor Mihály Orbán

[10] In mid 2020, Hungarian students formed a human chain around one of these institutions in Budapest for theatre and film after Orbán’s government took it over. Other famous institutions of this type include Harvard, Stanford, and Yale.

ANSWER: universities (or colleges; accept University of Theatre and Film Arts) <Current Events, Gayden, Ed.>

15. **In one book, this thinker called an “unarticulated malaise” exacerbated by what she describes as many women’s abandonment of the family. Another work by this thinker centers on “the problem that has no name” and argues that women are confined to the basic level of Maslow’s hierarchy of needs because they can**

only find their identity through sexuality. This author of (*) *The Second Stage* wrote one work based on the questionnaire responses of her fellow Smith College alumni. For 10 points, name this first president of the National Organization of Women and author of *The Feminine Mystique*, a pioneer of second-wave feminism.

ANSWER: Betty Friedan <Social Science, Liu>

This period is divided into the Terreneuvian and Furongian Epochs. For 10 points each,

[10] Name this period, during which animals may have first evolved from flagellated protists. This period's namesake explosion saw rapid diversification of multicellular life.

ANSWER: Cambrian Period

[10] A prime example of evolution during the Cambrian Period can be seen in these organisms whose shells hardened and began to proliferate all around the world. These organisms are named for the number of lobes in their body and are one of the earliest known arthropods.

ANSWER: trilobites

[10] Trilobites didn't die out until this event, which marked the end of the Paleozoic Era. Population of the bacterium *Methanosarcina* skyrocketed prior to this event.

ANSWER: [Great] Permian-Triassic extinction event [accept great dying or P-Tr Extinction] <Other Science, Gayden>

16. **In this play, one character who wishes he was born “a seagull or a fish” is told by his father to leave literature for God after he quotes Shakespeare and Baudelaire. A constantly blaring foghorn bothers the protagonist of this play, who vows never to have another baby after the death of her two year old son Eugene. A character in this play claims (*) Doc Hardy is lying and refuses to accept the fact that her son Edmund has tuberculosis. Mary struggles with a morphine addiction after being prescribed the drug to ease a painful birth in, for 10 points, what play about the Tyrone family by Eugene O'Neill?**

ANSWER: Long Day's Journey Into Night <US Literature, Siddiqui>

For 10 points each, answer the following about the rise of Rome.

[10] Rome's first king and legendary founder was this man. This man murdered his twin brother, Remus.

ANSWER: Romulus

[10] One of Rome's earliest rivals was this other Italian civilization. This civilization's most important city was Veii, which was conquered by Marcus Furius Camillus.

ANSWER: Etruscan Civilization [accept Rasenna Civilization, or Tyrrhenian Civilization]

[10] Rome was able to take control of Southern Italy after defeating this ruler at the Battle of Beneventum. This ruler used war elephants during his campaigns including the Battle of Argos, where this ruler was killed.

ANSWER: Pyrrhus of Epirus <Ancient/Other/Mixed History, Pavlou>

17. **This band's drummer plays in a wheelchair in front of men with orange masks in the music video for a song noting, “sometimes I give myself the creeps.” Another song by this band describes “one nation controlled by the media.” A song by this band dedicated to its lead singer's late father begins, (*) “Summer has come and passed, the innocent can never last.” This band's song *Wake Me up When September Ends* appears on an album whose cover shows a fist clenching a heart resembling a grenade. Billie Joe Armstrong fronts, for 10 points, what American punk rock band behind *Basket Case* and *American Idiot*?**

ANSWER: Green Day <Trash, Gayden>

The *pratimoksha* is a list of rules that governs the behavior of these people. For 10 points each:

[10] Name these people who collectively comprise the community of *sangha*. Depending on their gender, they are known as either *bhikkhu* or *bhikkhuni*.

ANSWER: Buddhist monks [or nuns]

[10] Most Mahayana schools advocate this lifestyle, as some sutras teach against the eating of the flesh of animals.

ANSWER: **vegetarianism** [accept **veganism**]

[10] Buddhist monks are supposed to acquire food in this manner, though some also do practice agriculture. The Sanskrit word *bhikkhu* literally means one who does this action.

ANSWER: **begging** [or reasonable equivalents like **asking** for alms] <Religion, Suh>

18. **A work based on this painting depicts a chandelier between blue and red curtains behind a red table laden with a vase and fruits. Emile Zola called this work's central figure the "fille of our time, whom you meet on the sidewalks." A figure in this painting modeled by Laure wears a pink dress with a white collar and delivers a (*) bouquet of flowers. Paul Cezanne painted a "modern" version of this painting. A black cat sits at the foot of this painting's central figure, who was modeled after Victorine Meurent and may have been inspired by Titian's *Venus of Urbino*. For 10 points, name this then- scandalous Edouard Manet painting of a reclining prostitute with her African servant.**

ANSWER: ***Olympia*** <Visual Fine Arts, Gayden>

For 10 points each, answer the following about a certain animal in literature.

[10] In a play titled for one of these animals, Gregers tells a girl to sacrifice one of these animals. That girl, Hedvig, ultimately shoots herself at the end of the play.

ANSWER: **ducks** (accept The Wild **Duck**)

[10] This Danish author wrote of an "ugly duckling" who gets teased by his brothers and sisters and struggles to find an accepting family. This Danish author also wrote many other fairy tales such as *The Little Mermaid*.

ANSWER: Hans Christian **Andersen**

[10] This American author adapted an invention called the Digesting Duck by Jacques de Vaucanson as the fictional Mechanical Duck in his novel *Mason and Dixon*. This author also wrote of the Army Lieutenant Tyrone Slothrop in a novel featuring V-2 Rockets.

ANSWER: Thomas Ruggles **Pynchon** Jr. <European Literature, Siddiqui>

19. **The high school magazine *Foxfire* published oral histories from people in this mountain range. The mixed-race Melungeon people live in parts of this mountain range. Its subranges include the Tuscarora and Pocono mountains, and the southern terminus of a famous (*) path in this range is Springer Mountain. This range's highest point is Mount Mitchell, and it includes the Blue Ridge Mountains. Encompassing the Allegheny Mountains, for 10 points, name this mountain chain of the Eastern United States stretching from Georgia to Maine.**

ANSWER: **Appalachian** Mountains [prompt on **Allegheny** before "Springer" is read with "be less specific"] <Geography, Gayden> [Ed.]

There's a first time for everything. For 10 points each, answer the following about the achievements of various cosmonauts.

[10] In 1957, this country successfully launched *Sputnik 1*, the first artificial earth satellite. This country also launched Laika the space dog into orbit aboard *Sputnik 2*.

ANSWER: **Soviet Union** [accept **Union of Soviet Socialist Republics**; do not accept or prompt on "Russia"]

[10] 4 years after *Sputnik 1*, this 27-year-old cosmonaut became the first man to orbit the earth in his spacecraft, *Vostok 1*.

ANSWER: Yuri Alekseyevich **Gagarin**

[10] In 1963, this other cosmonaut became the first woman in space. She orbited the Earth 48 times, spent almost three days in space, and remains the only woman to have been on a solo space mission.

ANSWER: Valentina Vladimirovna **Tereshkova** <European History, Gayden, Ed.>

20. **In a novel by this author, it is not revealed whether a woman whose husband dies of tuberculosis is unconscious or dead after falling into a fire at the novel's end. In a novel by this author, Honinbo Shusai loses his "retirement game" after 237 moves. In a novel by this author, Tanizaki Eiko tells (*) Shingo of his son**

Shuichi's extramarital affair. This author also wrote of a student from Tokyo named Shimamura who realizes that he cannot continue loving the geisha Komako. For 10 points, name this Japanese author of *The Sound of the Mountain* and *Snow Country*.

ANSWER: Yasunari **Kawabata** (accept **Kawabata** Yasunari) <World Literature, Siddiqui>

The letters h, k, and l denote the Miller indices that describe these entities. For 10 points each, [10] Name these solids in which atoms are arranged in a highly ordered manner.

ANSWER: **crystals**

[10] As opposed to crystalline solids, this other type of solids feature atoms that lack a definite order. Examples of these types of solids include glass and rubber.

ANSWER: **amorphous** solids

[10] In crystals, this quantity is the number of atoms bonded to the central atom. This quantity is 12 for a face centered cubic and 8 for a body centered cubic.

ANSWER: **coordination number** [accept **ligancy**] <Chemistry, Siddiqui>

TIEBREAKER: Ports on this body of water include Dhahran and Dammam. It's not a river, but small sects like the Mandeans historically inhabited marshes around this body of water. The oil-rich Khuzestan province borders this body of water. A group of islands shaped like the (*) countries of the world are located in this body of water. The Shatt al-Arab waterway, which forms an international border, flows into this body of water, and the Strait of Hormuz is its only outlet. A "Cooperation Council" named for this body of water includes countries like Oman and Qatar. For 10 points, what gulf separates Iran from the Arabian Peninsula?

ANSWER: **Persian Gulf** <Geography, Pavlou> [Ed.]