

ICCS 2014

Packet 5

TOSSUPS

1. A song about this holiday mentioning the consumption of “pastelikos” and “almendrikas” was written in the Sephardic language Ladino. This holiday was first celebrated under the Hasmonean dynasty. Shammai argued against Hillel that the *shamash* should be used one fewer time on each successive day of this holiday, which begins in the month of Kislev. This holiday celebrates the defeat of Antiochus IV’s Hellenistic army by Judah Maccabee. For 10 points, name this Jewish holiday whose eight nights correspond to candles on the *menorah*.

ANSWER: Hanukkah [or Chanukah]

2. This protein is quantified using Drabkin’s reagent. Its Lepore form is associated with strokes and its Barts form contains only gamma subunits. Similar to a related monomeric protein found in muscle, this protein’s subunits switch between the T state and R state upon substrate binding in a cooperative manner. Its carbamino form is formed by CO₂ binding to its N-terminus. A glutamic acid to valine substitution in the beta chain of this protein causes sickle-cell anemia. For 10 points, name this iron-containing protein found in red blood cells which is responsible for carrying oxygen.

ANSWER: hemoglobin

3. Orderic Vitalis wrote about an incident in which the Earls Edwin and Morcar revolted against this man, starting a campaign in which this man built many motte-and-bailey castles; that campaign was the Harrying of the North. This man defeated a force that made a shield wall with its housecarls on Senlac Hill in his most famous victory, after which he commissioned the Domesday Book and was crowned on Christmas Day. For 10 points, name this Duke of Normandy who invaded England and won the Battle of Hastings in 1066.

ANSWER: William the Conqueror [or William I of England, or William the Bastard, or William II of Normandy, prompt on “William”, do not accept or prompt on “William II”]

4. One character in this play is told that “the fault...is not in our stars, but in ourselves.” Another character in this play refuses a crown three times at the feast of Lupercal. Later in this play, Cinna the poet is murdered on the way to a funeral. Another character exclaims “let slip the dogs of war” before delivering a speech beginning “Friends, Romans, countrymen, lend me your ears.” For 10 points, name this Shakespeare play whose protagonist kills himself after a loss in battle at Philippi and is asked by the title character, “Et tu, Brute?”

ANSWER: Julius Caesar

5. This man held that the mind uses two “forms of pure intuition” and twelve “categories of the understanding” to help synthesize experience, a view he called transcendental idealism. This man wrote an essay flat-out rejecting any “right to lie,” even to a prospective murderer at one’s doorstep. This thinker said that people should act only by precepts which can rationally apply as universal law in *Groundwork of the Metaphysics of Morals*, which discusses the categorical imperative. For 10 points, name this German Enlightenment author of *Critique of Pure Reason*.

ANSWER: Immanuel Kant

6. In one opera by this composer, one character does nothing but make buzzing noises when courting a woman in the “Fly Duet.” In another of this man’s operas, the title character falls in love with Olympia, who needs to be rewinded as she sings the “Doll Song.” Oft-excerpted pieces from this composer’s operettas include a “Barcarolle” and an “Infernal Galop” that is widely-known today as the “Can-can.” For 10 points, name this French composer of *The Tales of Hoffmann* and *Orpheus in the Underworld*.

ANSWER: Jacques Offenbach

7. In response to this action, a presidential candidate stood on a flatbed truck in Indiana and urged Americans to show "love and wisdom." It targeted a man who was working to support striking sanitation workers. The target of this action was standing on the balcony of the Lorraine Motel and had given the "I've Been to the Mountaintop" speech the night before. This action was carried out by a fugitive named James Earl Ray in Memphis, Tennessee. For 10 points, name this April 4, 1968, murder of a Nobel Peace Prize winning civil rights leader.

ANSWER: The assassination of Martin Luther King Jr. [or the assassination of MLK, accept things like "murder" for assassination]

8. In a novel by an author from this country, a woman kills “the King of Ward 3” during a mysterious plague in their city. In a book partly set here, the Grand Inquisitor tries to buy a woman from Don Issachar and hangs a philosopher for claiming that this is the best of all possible worlds. That book's protagonist finds Cunegonde here, where Dr. Pangloss is killed for his optimism. For 10 points, name this home of José Saramago, the country Candide visits right after the Lisbon Earthquake.

ANSWER: Portugal [or Portuguese Republic; or República Portuguesa]

9. In the virial expansion, N divided by this value gives the exponentiated variable of each term. One implication of Le Chatelier’s principle is that as this quantity decreases, the products of a reaction will have more moles of gas than the reactants. The square of this quantity is in the denominator of a correction term, of which n -squared times a is the numerator, in the van der Waals equation. Boyle’s law states that pressure and this quantity are inversely proportional. For 10 points, name this measure of the amount of space occupied by a substance.

ANSWER: volume

10. In November 2013, ten people were killed when a police helicopter crashed into a popular bar in this country’s largest city. This constituent country was home to a 2007 incident where terrorists drove a Jeep into an airport terminal in that same city. This country’s parliament meets at Holyrood, and has introduced the right to vote for 16 and 17 year olds in a September 18 referendum on independence, an effort supported by this country’s First Minister Alex Salmond. For 10 points, name this country in the United Kingdom whose capital is Edinburgh.

ANSWER: Scotland [anti-prompt on “United Kingdom” or “UK” before mentioned]

11. In one poem by this author, the speaker hears “the sweep of easy wind and downy flake” after his little horse “gives his harness bells a shake to ask if there is some mistake.” In another of this author’s poems, the speaker recalls how he “kept the first for another day,” yet, knowing how “way leads on to

way,” he doubted if he “should ever come back.” For 10 points, name this American poet who wrote “Stopping By Woods on a Snowy Evening,” and whose “The Road Not Taken” begins “Two roads diverged in a yellow wood.”

ANSWER: Robert **Frost**

12. Leaders of these people used to wear crescent-shaped regalia called “king plates.” These people used a spear-throwing device called a woomera. In 1946, these people led the Pilbara strike, and they held the Day of Mourning protest in 1938. The report *Bringing Them Home* documents the removal of these people’s children from their families; those children are called the Stolen Generations. In 2008, Kevin Rudd officially apologized to these people. For 10 points, name these indigenous people of Australia.

ANSWER: Australian **Aborigines** [prompt on answers like “the indigenous people of Australia”]

13. The C functions that “copy” and “cat” these objects are particularly vulnerable to security errors. Common functions that operate on these objects include “left”, “trim” and “split”. They can be searched by the Rabin-Karp algorithm. It’s not a hashcode or a clone, but every object in Java contains a method that converts the object “to” one of these data structures. They can be searched with regular expressions, and in C are stored in an array of characters ending with a null-terminator. For 10 points, name these data structures which can be used to store text.

ANSWER: **strings**

14. This man’s paintings include a spotted cow on the same blood-red background where a man wrestles an angel in the upper right corner. He depicted his 14-year-old mistress lying nude on her stomach in *Spirit of the Dead Watching*. A loin-clothed man reaches up for a fruit in the center of a wide painting by this man, who showed white-hatted Breton peasant women in *Vision After the Sermon* and *Yellow Christ*. For 10 points, name this French friend of Vincent van Gogh, who painted *Where Do We Come From? What Are We? Where Are We Going?* in Tahiti.

ANSWER: Paul **Gauguin**

15. One tributary of this river meets the Sobat in Malakal. Ernest Hemingway was involved in a plane crash while attempting to photograph this river’s Murchison Falls. The building of the Merowe Dam on this body of water forced the relocation of members of the Manasir and Amri tribes. Distributaries of this river, the Damietta and Rosetta, flow into its namesake delta. The Aswan High Dam was built on this river, whose tributaries include its namesake White and Blue rivers. For 10 points, name this river that runs north through Egypt.

ANSWER: **Nile** River

16. Ammonium acetate extraction can be used to measure the cation exchange capacity of these materials. The composition of these materials distinguishes edaphic communities. They are formed through pedogenesis, and have layers called horizons. These materials contain decayed organic matter called humus, and are classified by composition of silt, sand, and clay. For 10 points, name this kind of material formed from weathered rock, in which plants grow.

ANSWER: **soil** [prompt on “dirt” or “regolith”]

17. This composer's violin sonatas include ones nicknamed "Spring" and "Kreutzer." One of this composer's piano sonatas begins with repeated G sharp-C sharp-E triplets. That piece gained its nickname when a critic compared the first movement to observing the title phenomenon on Lake Lucerne. Another of this composer's piano pieces begins with alternating E and D sharp sixteenth notes in three-eight time, and was named after a still-unidentified woman. For 10 points, name this composer of the *Moonlight Sonata* and *Für Elise*.

ANSWER: Ludwig van **Beethoven**

18. This writer asked, "As long as this sunshine and this cloudless sky exist, how can I be sad?" in a work that concludes, "If only there were no other people in the world." This writer described herself as two people, a cheerful "light-hearted" self and another "deeper" self in that work, which is addressed to "Kitty." This author shared a room with Alfred the dentist, kissed Peter, and rationed butter among her own family and the van Daans. For 10 points, name this resident of the Secret Annex, a young girl who kept a diary during the Holocaust.

ANSWER: Anne **Frank**

19. In the *Kalevala*, Ilmarinen's first task in Pohjola is to plow a field infested with these animals. A creator deity who inhabits water holes is a "rainbow" type of this animal in Australian Aboriginal myth. In Hindu myth, nagas take the form of this animal. In Greek myth, Asclepius learns healing secrets from one of these animals. Two of these symmetrically appear on Hermes's staff, the caduceus, and the Ouroboros is one that eats its own tail. For 10 points, name these animals which, according to another legend, were driven out of Ireland by Saint Patrick.

ANSWER: **snakes** [or **serpents**]

20. In one of these conflicts the winning side introduced ships such as *Nemesis* and *Phlegathon* which were equipped with rocket launchers. The second of these conflicts broke out when one side raided the *Arrow*, while the first was sparked by a raid on the "Thirteen Factories" ordered by Lin Zexu. The first of these conflicts ended with one side ceding Hong Kong in an "Unequal Treaty" and they significantly weakened Qing Dynasty rule. For 10 points, identify these conflicts which resulted from British desires to find markets for a contraband substance in China.

ANSWER: **Opium** wars [accept "First **Opium** War" or "Second **Opium** war;" accept **Arrow** war until "Arrow"]

21. Gary Becker authored a book titled after the "human" form of this concept. Marxian theory divides this concept into "variable" and "constant" forms, where the "variable" form refers to human labor. A German book titled after this concept presents a labor theory of value in which a good's worth is proportional to the amount of work put into it. The "venture" form of this concept is used to fuel startups. For 10 points, give this term that generally applies to the assets or wealth that a person owns and which also titles a text by Karl Marx.

ANSWER: **capital** [accept *Das Kapital*]

22. An analogue of this expression for superconductors can be used to relate the difference in entropy per unit volume to the product of the magnetic field and the derivative of the field with respect to temperature. This equation can be derived by noting that the Gibbs free energy in two phases must be

equal and rearranging terms to obtain the derivative of pressure with respect to temperature as equal to latent heat divided by the product of temperature and volume differential. For 10 points, identify this doubly-eponymous equation from thermodynamics that is useful in drawing the coexistence curves between simultaneous phases.

ANSWER: Clausius-Clapeyron equation

23. One of these objects was attacked in 1914 by British suffragette Mary Richardson. Guillaume Apollinaire's views led him to be accused of a crime involving one of these objects, though the real culprit was had simply wanted it returned its creator's country of Italy. That object of this type is now protected by bulletproof glass, and was recovered when Vincenzo Peruggia tried to sell it to the Uffizi. For 10 points, identify these objects, one of which depicting Napoleon atop a rearing horse was created by Jacques-Louis David.

ANSWER: paintings [accept any equivalents; prompt on “works of art”; do not accept “sculptures”]

24. One work from this country features Bernardo, a character based on Leonardo da Vinci, and is written from the point of view of a 26-inch tall Italian courtesan. Besides the author of that novel, *The Dwarf*, another author who hailed from this country wrote about Arkenholz in *The Ghost Sonata*. In another play by that author, the protagonist's canary is beheaded by Jean. For 10 points, what European country is the home of Pär Lagerkvist and the playwright of *Miss Julie*, August Strindberg?

ANSWER: Kingdom of Sweden [or Konungariket Sverige]

BONUSES

1. This system is described by a potential that is zero between the locations a and $-a$ and contains impenetrable boundaries at a and $-a$. For 10 points each:

[10] Identify this common model system in quantum mechanics.

ANSWER: infinite square well [or particle in a box or infinite potential well]

[10] The eigenfunctions that describe the solution to the particle in a box consist of linear combinations of these two orthonormal functions; these two functions are also used to decompose a function into Fourier components.

ANSWER: sine and cosine functions [accept sinusoidal]

[10] The particle-in-a-box and this other quantum system are both commonly studied in physical chemistry. This system consists of a single proton being orbited by a single electron.

ANSWER: hydrogen atom

2. The protagonist of this author's Gogol-inspired short story "A Madman's Diary" sees the phrase "Eat people!" appear in his books, and suspects people of cannibalism. For 10 points each:

[10] Name this author who described a peasant who believes he is superior to everyone and spins defeats as "spiritual victories" in his "The True Story of Ah Q."

ANSWER: Lu Xun [or Lu Hsün; or Zhou Shuren]

[10] Lu Xun was an early 20th-century writer from this country. A modern author from this country, Gao Xingjian, was awarded the 2000 Nobel Prize for Literature.

ANSWER: China

[10] This 8th-century Chinese poet wrote "I drink alone, for no friend is near" in his poem *Drinking Alone By Moonlight*.

ANSWER: Li Po [or Li Bai]

3. This instrument plays the namesake "voluntary" in a piece by Jeremiah Clarke. For 10 points each:

[10] Name this highest-pitched brass instrument. Haydn and Hummel both wrote concertos for Anton Weidinger, who played this instrument.

ANSWER: trumpet

[10] The trumpets play the rising C-G-C motif in the beginning of *Also Sprach Zarathustra*, a tone poem by this composer.

ANSWER: Richard Strauss [prompt on partial answer]

[10] In the first movement of this composer's fifth symphony, a trumpet solo begins a C-sharp minor funeral march. This composer's sixth symphony is known as the "Tragic."

ANSWER: Gustav Mahler

4. The 1964 Good Friday Earthquake flattened the largest city located on this body of water. For 10 points each:

[10] Name this sound that was the site of the *Exxon Valdez* oil spill.

ANSWER: Prince William Sound

[10] Cruise ships in the Prince William Sound can pass through the Cook Inlet to reach Anchorage in this state.

ANSWER: Alaska

[10] This longest river in Alaska originates in British Columbia and flows through a namesake territory in northern Canada.

ANSWER: **Yukon** River

5. During this man's time in office, the Emergency Powers Act of 1939 was passed due to the imminent threat of World War II. For 10 points each:

[10] Name this leader who founded the Fianna Fáil party after leaving Sinn Féin in 1926. He was the final President of the Executive Council before becoming his nation's first Taoiseach.

ANSWER: Eamon **de Valera**

[10] Eamon de Valera was president of this European nation while revolutionary leader Michael Collins died in 1922 during this nation's Civil War. The Oireachtas parliament meets in this nation's capital Dublin.

ANSWER: Republic of **Ireland**

[10] Before Ireland became an independent republic, a rebellion in 1916 against British Rule named after this holiday was quickly put down and many of its leaders, such as Patrick Pearse and James Connolly, were executed.

ANSWER: **Easter**

6. Jacob Marley is "dead as a doornail," but that doesn't stop him from visiting his former business partner as a ghost in this work. For 10 points each:

[10] Name this Dickens novella in which Ebenezer Scrooge is visited by three spirits who show him visions of the past, present, and future on the title holiday.

ANSWER: A **Christmas Carol**

[10] Scrooge becomes like a second father to this son of Bob Cratchit, after seeing an alternate future where this character has died. This character notably says "God bless us every one."

ANSWER: Tiny **Tim**

[10] In his youth, Scrooge was apprenticed to this man, whose good-natured generosity contrasts with Scrooge's miserliness and cutthroat business ethics.

ANSWER: **Fezziwig**

7. Ovid's version of the origin of these people describes how King Aeacus of Aegina's request for repopulation resulted in Zeus creating them from a host of ants. For 10 points each:

[10] Name this group of highly skilled warriors, led during the Trojan War by the bosom companion of Patroclus.

ANSWER: the **Myrmidons**

[10] This leader of the Myrmidons kills the Trojan champion Hector, but later dies when an arrow hits him in the heel.

ANSWER: **Achilles**

[10] Achilles is killed by this Trojan prince, whose abduction of Helen from the court of Menelaus kicked off the Trojan War. He also presents Aphrodite with a certain golden apple.

ANSWER: **Paris** [or **Alexander**]

8. Evaluating the Riemann Zeta function at 4 yields this value raised to the fourth power divided by 90. For 10 points each:

[10] Identify this number, the area of a circle with radius 1.

ANSWER: pi

[10] Pi is not algebraic, so it is one of these numbers, which means it is not the root of any polynomial with rational coefficients.

ANSWER: transcendental numbers

[10] This man solved the Basel problem, proving that pi-squared over six equals the infinite sum of one over n-squared. He is the namesake of the number *e*.

ANSWER: Leonhard Euler

9. It's not the KGB, but Ion Pacepa defected to the United States after he was ordered to have Noel Bernard executed while serving as a general in this organization. For 10 points each:

[10] Name this brutal secret police agency which was the successor to the Siguranța. It developed a weapon called the Radu which was used to spread cancer to kill dissidents.

ANSWER: Securitate

[10] This world leader used the Securitate to arrest protesters during an uprising in Timișoara and put down the Brașov Rebellion. This man outlined his socialist proposals in his July Theses and developed a cult of personality inspired by Mao Zedong and Kim Il-sung.

ANSWER: Nicolae Ceausescu

[10] Ceausescu led this Eastern European nation until he and his wife were executed in 1989; they attempted to flee this nation's capital, Bucharest, by helicopter.

ANSWER: Romania

10. Inventories of these units can be expressed with the help of the IPA. For 10 points each:

[10] Identify this smallest linguistic unit of sound. Different phonetic realizations of a single one of these units, like the two different "p" sounds in "peak" and "speak," are known as allophones.

ANSWER: phonemes

[10] This is the term for two words that differ only by a single phoneme. For example, the words "bad" and "bed" contrast with respect to one vowel phoneme.

ANSWER: minimal pair [accept minimal set]

[10] This larger phonological unit minimally consists of a nucleus, which is usually a vowel, and may also include onset and/or coda consonants. These units are further grouped into feet.

ANSWER: syllables

11. A prisoner in this story escapes from his buddies, who are chained up in front of a fire so that they can only see shadows in front of them. For 10 points each:

[10] Name this story told by Socrates to Glaucon, whose title locale is an analogy for humans' inability to see the ideal Forms.

ANSWER: allegory of the cave [or Plato's cave]

[10] This Plato dialogue includes the allegory of the cave. It discusses the nature of justice and the government of the title ideal city-state.

ANSWER: Republic [or Politeia]

[10] This ruling class is the highest of three major social classes in Plato's *Republic*. This set of people tells the "noble lie" that its members have gold in their blood to justify its rule.

ANSWER: philosopher kings [or guardians; or phylakes]

12. This novel's protagonist has a lover named Maria, and performs a "nuptial dance" with another love interest during the Fancy Dress Ball. For 10 points each:

[10] Name this novel, which ends with the protagonist Harry Haller stabbing Hermine in the Magic Theater.

ANSWER: Steppenwolf

[10] *Steppenwolf* was written by this German author, who wrote about a character who achieves enlightenment while working as a ferryman in the novel *Siddhartha*.

ANSWER: Herman Hesse

[10] In Hesse's novel *The Glass Bead Game*, Joseph Knecht attains this title when he becomes "master of the game." This is also the name of one of the novel's published English translations.

ANSWER: Magister Ludi

13. This member of the Royal Academy painted a pair of landscapes titled *The Harvest Wagon*. For 10 points each:

[10] Name this painter of a portrait of Mrs. Richard Brinsley Sheridan, as well as *Mr. and Mrs. Andrews*.

ANSWER: Thomas Gainsborough

[10] Gainsborough also created this painting, which is possibly of Jonathan Buttall. Its subject stands in a suit of the title color and holds a black hat next to his side.

ANSWER: *The* Blue Boy

[10] Gainsborough had a feud with this other painter, who was the president of the Royal Academy at the time. His paintings include *Sarah Siddons as the Tragic Muse*.

ANSWER: Joshua Reynolds

14. The final ruler of these people was executed near Vilcabamba, and that execution is recounted in a memoir of Baltasar de Ocampo. For 10 points each:

[10] Name these people, whose rulers included Viracocha and Pachacuti, the latter of whom established a large empire that was known as the Tawantinsuyu.

ANSWER: the Incas [or "Incan empire"; accept sapa Inca]

[10] This Incan city, located north-west of Cusco, was built during the reign of Pachacuti. Hiram Bingham explored this city's ruins.

ANSWER: Machu Picchu

[10] The Inca used textiles with these topological features for record-keeping in the *quipu* system. Work by the Aschers shows that these features encode numerical data in a decimal format.

ANSWER: knot [accept "talking knots"]

15. Peyer's patches are lumps of immune tissue found in this organ. For 10 points each:

[10] Name this segment of the digestive system that connects the large intestine and the stomach. It receives bile from the sphincter of Oddi.

ANSWER: small intestine

[10] This middle segment of the small intestine begins at the ligament of Treitz. It comes after the duodenum and before the ileum.

ANSWER: jejunum

[10] The I-cells of the duodenum secrete this hormone in response to chyme, which triggers the release of pancreatic enzymes into the small intestine and the release of bile from the gallbladder.

ANSWER: cholecystokinin [or CCK]

16. The protagonist of this novel repeatedly bores people by relating the story of his sole journey in a Scenicruiser bus, and eventually gets a job as a hotdog vendor. For 10 points each:

[10] Name this novel which ends with Ignatius J. Riley escaping away with Myra Minkoff.

ANSWER: A *Confederacy of Dunces*

[10] A *Confederacy of Dunces* is set in this Louisiana city. In the novel, Lana Lee runs the “Night of Joy” club in this city’s French Quarter.

ANSWER: New Orleans, Louisiana

[10] Another novel partially set in New Orleans is this Kate Chopin work, which opens with its central family vacationing at Grand Isle. Edna Pontellier drowns herself in the Gulf of Mexico in this novel.

ANSWER: *The* *Awakening*

17. This god is depicted as the Lord of the Dance in the *Nataraja* form. For 10 points each:

[10] Name this blue-throated Hindu deity whose consort is Parvati. This god is typically considered the “destroyer” in contrast with Brahma as “creator” and Vishnu as “preserver.”

ANSWER: Shiva

[10] Brahma the creator, Vishnu the preserver, and Shiva the destroyer are collectively referred to in Hinduism with this term, which means “three forms.”

ANSWER: trimurti

[10] The incarnations of Vishnu to earth as Matsya, Kurma, and Krishna are referred to with this term. Vishnu is set to appear again in this form as Kalki to bring about the end of the Kali Yuga.

ANSWER: avatars

18. During this man’s presidency, John Fries led a violent tax revolt against the state government. For 10 point each:

[10] Name this President who passed the Alien and Sedition Acts to stop internal dissent. He was not only the second President but the first Vice-President.

ANSWER: John Adams [do not accept “John Quincy Adams”]

[10] During the Adams presidency, the United States fought the Quasi-War with this European country, which extorted money from the U.S. in the XYZ Affair.

ANSWER: France

[10] During the XYZ Affair, Charles Pinckney, John Marshall, and this other delegate represented the U.S. This future Vice-President names a system of redrawing electoral districts.

ANSWER: Elbridge Thomas Gerry [or gerrymandering]

19. Answer the following about jazz as it relates to a certain adjective, for 10 points each.

[10] Jazz was influenced by this style of music, which is often associated with a namesake “twelve-bar” chord progression.

ANSWER: blues

[10] This jazz trumpet player recorded the album *Kind of Blue*, which features the songs “So What” and “Freddie Freeloader.” His other albums include *Sketches of Spain* and *Bitches Brew*.

ANSWER: Miles Davis

[10] This man composed the “Blue Rondo a la Turk,” which appears on his namesake quartet’s album *Time Out* along with “Take Five.”

ANSWER: Dave **Brubeck**

20. One class of these compounds is called chelates, and some of these containing EDTA are used to treat heavy-metal poisoning. For 10 points each:

[10] Name these chemical species that contain at least one complex ion consisting of a central metal cation bonded to other molecules or anions.

ANSWER: **coordination** compounds

[10] In a coordination compound, this name is given to the molecules or anions that bond to complex ions.

ANSWER: **ligands**

[10] A complex ion with a coordination number of two has this shape. Molecules with this shape include beryllium chloride and carbon dioxide.

ANSWER: **linear**

21. This character lives in an underwater city in the South Pacific, which is notable for its “non-Euclidean” architecture. For 10 points each:

[10] Name this figure who, according to his cultists, “waits dreaming” in R’lyeh. In one story, a student at RISD makes a clay sculpture of this figure after seeing him in a dream.

ANSWER: **Cthulhu**

[10] “The Call of Cthulhu” is a short story by this author of “The Dunwich Horror” and “Pickman’s Model.” Many of his works are set in the fictional town of Arkham, Massachusetts.

ANSWER: Howard Phillips **Lovecraft**

[10] This recurring Lovecraft character tells of Harley Warren’s death in his namesake “statement.” In another story, he time-travels back to his childhood with the help of a silver key.

ANSWER: **Randolph Carter** [accept either underlined part]

22. This device was technically invented by Hero of Alexandria two thousand years ago, though the aeliopile had no practical usage. For 10 points each:

[10] Name this device, which was refined by Thomas Savery and first used by Thomas Newcomen to pump water out of mines.

ANSWER: **steam engine**

[10] This process transformed many of England’s open grazing fields into private plots of land during the sixteenth through eighteenth centuries, and put many farmers out of work.

ANSWER: **enclosures**

[10] The introduction of the steam engine for use in factories and the increased labor supply brought by the enclosures helped usher in this revolution in Britain.

ANSWER: **Industrial** Revolution

23. The central characters of this novel repeatedly remind themselves that they are “carrying the fire,” unlike their enemies, some of whom eat dogs and also other people. For 10 points each:

[10] Name this post-apocalyptic novel which follows a man and his boy as they endlessly walk south to avoid a nuclear winter.

ANSWER: *The Road*

[10] *The Road* was written by this contemporary American author, who also wrote *No Country for Old Men* and *Blood Meridian*.

ANSWER: Cormac McCarthy

[10] The title of *No Country for Old Men* is taken from the poem “Sailing to Byzantium” by this Irish poet, who also wrote about the birth of a “terrible beauty” in the poem “Easter, 1916.”

ANSWER: William Butler Yeats

24. The arbuscular type of these symbioses involves penetration of root cortical cells. For 10 points each:

[10] Name these root structures formed out of symbiotic associations between fungi and vascular plants, in which plants exchange carbohydrates for soil micronutrients.

ANSWER: mycorrhizae

[10] Mycorrhizae are this kind of symbiosis, in which both partners experience a net benefit.

ANSWER: mutualism

[10] Many members of this plant family produce root nodules that host nitrogen-fixing rhizobial bacteria, which allow them to produce amino acids. Peas and alfalfa are members of this family.

ANSWER: legumes [or Fabaceae]