**HSAPQ Tournament #53**

**Packet 2 Tossups**

1. **In camels, these molecules curiously only have a single domain. Secondary examples of these molecules have names like "anti-rabbit" and "anti-goat" and are used to enhance the signal from a Western blot. These proteins have variable regions which are highly specific for particular epitopes. IgE and IgM are examples of these proteins. Plasma cells secrete these proteins as part of the humoral (\*)** immune response. For 10 points, name these Y-shaped proteins that are made by B cells and bind to antigens.

ANSWER: **antibodies** [or **immunoglobulin**s]

2. **A president of this country died in a suspicious 1988 plane crash that also claimed the life American Ambassador Arnold Raphel, and was Muhammad Zia-ul-Haq. Another leader of the country died by assassination during a campaign appearance, after possibly hitting her head on her (\*)** car's sunroof. Muhammad Ali Jinnah helped found this country, which lost control of Bangladesh in a 1971 war with its eastern neighbor. For 10 points, name this South Asian country led by the Bhutto family.

ANSWER: Islamic Republic of **Pakistan**

3. **A political club in this state stifled dissent by turning off lights before speakers could demand a vote. A group that got around that tactic here by lighting their own matches were the Locofocos. As mayor in this state, Fernando Wood proposed this state’s largest city join the South and secede from the union to protect its cotton businessmen. Democrats here once wore deer tails in their hats and were opposed to the infrastructure policies of (\*)** DeWitt Clinton, who supported building the Erie Canal. For 10 points, name this state, home to Tammany Hall.

ANSWER: **New York**

4. **An ensemble consisting of two string quartets plays this composer’s *Octet in E-flat Major*. A "Spinning Song," several "Venetian Boat Songs," and other solo piano pieces are among this composer's "Songs without Words." This composer's travels inspired his *Fingal's Cave* overture and his third, or (\*)** "Scottish," symphony. He included a “Nocturne,” a “Scherzo,” and a “Wedding March” among music he composed for a Shakespeare play. For 10 points, name this composer who wrote incidental music to *A Midsummer Night's Dream*.

ANSWER: Felix **Mendelssohn** Bartholdy

5. **These events are characterized based on whether their light curve exhibits a sharp peak and decreases gradually or rapidly. The last of these events to be observed in the Milky Way was detected in 1604 by its namesake, Johannes Kepler. The Ia (one A) type of them can occur when mass accumulation causes a (\*)** white dwarf to exceed the Chandrasekhar limit. An example of these events was observed by the Chinese in 1054. For 10 points, name these incredibly luminous events in which a star explodes.

ANSWER: **supernova**e [or **supernova**s; do not accept or prompt on "novas"]

6. **One poem by this author begins as an “Apeneck” title character “spreads his knees.” This poet of “Sweeney Among the Nightingales” also wrote a poem describing the title figures as “leaning together, headpiece filled with straw.” That poem by this author ends with the statement “this is the way the (\*)** world ends, not with a bang but with a whimper.” He wrote a poem ending with the mantra “Shantih shantih shantih.” For 10 points, name this poet of “The Hollow Men” who wrote “April is the cruelest month” in “The Waste Land.”

ANSWER: T. S. **Eliot** [or Thomas Stearns **Eliot**]

7. **In a painting by this man, a woman leads an army into Hell through an anthropomorphic mouth. This artist painted several people being crushed by a cart carrying a skeleton that is playing a hurdy-gurdy on the left side of his *The Triumph of Death*. A dilapidated sign hangs from a tavern in a painting by this man in which three men with spears trudge over a (\*)** snowy hill. Another of his paintings shows the son of Daedalus plunging into a body of water. For 10 points, name this Flemish Renaissance painter of *Hunters in the Snow* and *Landscape with the Fall of Icarus*.

ANSWER: Pieter **Brueghel** the Elder [or the Peasant **Bruegel**; do not accept or prompt on “Pieter Brueghel the Younger” or “Jan Brueghel the Elder”]

8. **A fictional brother of one of this author’s characters is the subject of Henry Fielding’s *Joseph Andrews.* This author wrote one of the longest novels in the English language, the last third of which charts the demise of the title woman, who is drugged and raped by Robert Lovelace. He also wrote about Mr**. **(\*)** B, the sexually aggressive employer of a title maidservant whose story illustrates “Virtue Rewarded.” For 10 points, name this author of the epistolary novels *Clarissa* and *Pamela*.

ANSWER: Samuel **Richardson**

9. **This philosopher criticized the Islamic thinker Averroes in his "On the Unity of the Intellect." This man referred to Al-Ghazali as "Algazel" in a book that also includes "reasonable cause" as a condition for "just war." This man also refers to Aristotle as "The Philosopher" in his magnum opus, which includes five proofs for the (\*)** existence of God. For 10 points, identify this philosopher known as "Doctor Angelicus," a theologian who wrote *Summa Theologica*.

ANSWER: Thomas **Aquinas**

10. **The Rising Sun Bar was the location of one of the deadliest events in this conflict, the Greysteel Massacre. An early attempt to resolve this conflict, which began with the Battle of the Bogside, was the Sunningdale Agreement, and one group of its combatants were the Shankill Butchers. These hostilities came to an end with the (\*)** Good Friday Agreement, which featured the decommissioning of weapons by the Ulster Volunteer Force and Provisional IRA. For 10 points, name this long-running sectarian conflict between Catholics and Protestants in Northern Ireland.

ANSWER: The **Troubles**

11. **In the *Aeneid*, a member of this group of deities helps Ascanius kill a sacred deer and turns Queen Amata against the Trojans to help Juno stir up war. Traditionally, this group of goddesses is composed of Tisiphone, Megaera, and Alekto, who were born from the blood of (\*)** Ouranos. These deities are renamed the Eumenides, or Kindly Ones, after Orestes is acquitted of the murder of his mother Clytemnestra in the last play of the *Oresteia*. For 10 points, name this trio of goddesses who punished evildoers and avenged crimes like matricide.

ANSWER: **Furies** [or **Erinyes**; or **Dirae**; or **Eumenides** until mentioned]

12. **A comedic spinoff of this series set during Pyre Night and narrated by Zeke Dunbar is subtitled *Festival of Blood*. The most recent game in this series centers on graffiti artist Delsin Rowe's fight against the D.U.P. and is subtitled (\*)** *Second Son*. The first two entries in this Sucker Punch Productions series star a character who survives an explosion in Empire City while carrying the Ray Sphere, which gives him electrical powers. For 10 points, name this series of Playstation 3 and 4 games, the first two of which star Cole MacGrath.

ANSWER: ***Infamous*** [or ***Infamous****: Festival of Blood*; or ***Infamous*** *Second Son*]

13. **An artist from this movement created a four minute film of him consuming a hamburger. This movement produced the iconic collage *Just what is it that makes today's homes so different, so appealing?* An artist from this movement pioneered the use of Ben-Day dots in art and showed a (\*)** jet being destroyed by a missile in *Whaam!* The Factory was the studio of an artist from this movement, who was known for his images of Campbell's soup cans. For 10 points, name this 1960s art movement exemplified by the artworks of Andy Warhol and Roy Lichtenstein.

ANSWER: **pop** art

14. **One of this author’s poems imagines a “little Arctic flower” which “To Eden wandered in.” A “little Bird that kept so many warm” is the subject of another of this poet’s works, which explains, “Hope is the thing with feathers” that “perches in the soul.” This poet imagined a firearm with a “Vesuvian face” in a poem comparing (\*)** her life to a “loaded gun.” Another of her poems is set in a carriage that “held but just ourselves and Immortality.” For 10 points, name this reclusive “Belle of Amherst” who wrote “Because I could not stop for Death.”

ANSWER: Emily **Dickinson**

15. **This country, which is not France, still celebrates the first written European constitution each year on May 3, despite how short-lived that 1791 document was. In the sixteenth century, this country became part of a commonwealth through the Union of Lublin with its neighbor (\*)** Lithuania. This country lost so much territory in 1772, 1793, and 1795 to neighboring powers that it disappeared from maps. For 10 points, name this Eastern European country that was divided by Austria, Prussia, and Russia in a series of three partitions.

ANSWER: Republic of **Poland** [or Rzeczpospolita **Polska**]

16. **The Garrison Dam’s blocking of this river formed the Lake Sakakawea reservoir. Fort Mandan was constructed as a winter encampment on this river near what is now Washburn, North Dakota. The Cheyenne River meets this river at Lake Oahe in (\*)** South Dakota. The Fort Peck Dam was built on this river. The Jefferson, Madison and Gallatin Rivers merge in Montana to form this river, nicknamed the Big Muddy. For 10 points, name this longest tributary of the Mississippi, whose mouth is near St. Louis.

ANSWER: **Missouri** River

17. **Inversions take circles to either circles or these things. Projective geometry often makes use of the duality between these things and points. If three points are collinear, they can only define this curve. A conic section's directrix is this type of curve, and when one intersects a circle twice it is called a secant. Euclid's (\*)** parallel postulate suggests that there is a unique one of these objects satisfying the parallel condition. For 10 points, identify these straight curves described by equations of the form y equals a times x plus b.

ANSWER: **lines**

18. **A method of calculating momentum states that it is equal to the energy of a photon over this quantity times the speed of light. For a transparent medium, this quantity is related to wavelength by the Sellmeier equation. The arctangent of the ratio of this quantity gives Brewster's angle. Light moves farther away from the normal angle when it travels from a (\*)** medium with a higher value for this quantity to a medium with a lower value for this quantity. For 10 points, name this quantity equal to the speed of light in a vacuum over the speed of light in a medium.

ANSWER: **index of refraction** [or **refractive index**; or **n**]

19. **In this play, a character nicknamed "two-and-twenty troubles" muses that despite all he has read, he has not yet decided whether or not to shoot himself. Another character in this play is derided as an "eternal student," and Pischik finally pays off his debts when white clay is found on his land. It opens with a character returning from (\*)** Paris, where she had moved after her son Grisha's death. At its end, the servant Firs is accidentally abandoned on the Ranevskaya estate. For 10 points, name this play in which Lopakhin purchases the title property, a work of Anton Chekhov.

ANSWER: *The* ***Cherry Orchard*** [or ***Vishnevyi Sad***]

20. **In March 2014, the oil tanker *Morning Glory* was seized off the coast of this country. In June 2014, this country's Supreme Court ruled the election of this country's Prime Minister Ahmed Maiteeq was unconstitutional. In 2011, UN Security Council Resolution 1973 established a no-fly zone in response to violence in this country. J. Christopher (\*)** Stevens was killed in an attack on an American consulate in this country's city of Benghazi. For 10 points, name this North African country once ruled by Muammar Gaddafi.

ANSWER: State of **Libya** [or Dawlat **Libya**; or **Libyan Arab Jamahiriya**]

21. **Near the beginning of this novel, only a few people drop money into a hat after the *acziavimas* at a traditional *veselija*. Ostrinski decries “wage slavery” while promoting a “new religion” of “class consciousness” in this book. In this novel, Connor rapes Ona, the wife of the protagonist, in exchange for a job. It ends with the repeated rallying cry, (\*)** “Chicago will be ours!” For 10 points, name this novel about the Lithuanian immigrant Jurgis Rudkus, an Upton Sinclair expose of the conditions of American meatpacking plants.

ANSWER: *The* ***Jungle***

22. **This philosopher discussed the notion of "animal spirits" in his *The Passions of the Soul*. This man, who mentored Queen Christina of Sweden, discussed the sensory experiences relating to melting (\*)** wax from a candle in a book that begins by hypothesizing that a devil is tricking him. This proponent of mind-body dualism wrote *Meditations on First Philosophy* and *Discourse on Method*. For 10 points, name this French thinker who declared, "I think, therefore I am."

ANSWER: Rene **Descartes**

23. **A massacre occurred in response to this event in Strasbourg. Guy de Chauliac advised that Clement VI sit between two fires during it. This event led to the creation of the Statute of Laborers in Britain, and the (\*)** Flagellant movement flourished during it. The belief that Jews had caused this event by poisoning wells led to pogroms across Europe. For 10 points, name this outbreak of bubonic plague that destroyed Europe's population in the mid-fourteenth century.

ANSWER: **Black Death** [prompt on bubonic **plague**]

**HSAPQ Tournament #53**

**Packet 2 Bonuses**

1. This idea opposed the belief that Western cultures are superior. For 10 points each:

[10] Identify this idea important in twentieth-century anthropology that argues no culture is inherently superior to another and that societal practices must be judged within the context of their culture.

ANSWER: cultural **relativism**

[10] This anthropologist articulated the principle of cultural relativism. This author of *The Mind of Primitive Man* established the anthropology department at Columbia University.

ANSWER: Franz Uri **Boas**

[10] Boas argued that his work, unlike that of the eugenics movement, properly applied the ideas put forth by this man. He wrote *On the Origin of Species* and studied the Galapagos finches.

ANSWER: Charles Robert **Darwin**

2. This condiment was sometimes also known as liquamen, and varieties could be made with either just the intestines or the whole animal. For 10 points each:

[10] Name this salted and fermented fish sauce which was a delicacy in the Roman Empire.

ANSWER: **garum**

[10] This Roman city was a major center of garum manufacture until its destruction in the eruption of Mount Vesuvius in 79 CE.

ANSWER: **Pompeii**

[10] Another valuable Roman foodstuff was the now-extinct silphium herb, which was used both for flavoring and because it was believed to have this property. In the 1950s, the first pills for this purpose, including Enovid and Ortho-Tri-Cyclen, revolutionized U.S. morals.

ANSWER: **contraception** [or **birth control**; or word forms]

3. In 1986, this country's Lake Nyos released a massive amount of carbon dioxide, causing many locals to die of suffocation. For 10 points each:

[10] Name this country whose main port and largest city is Douala.

ANSWER: Republic of **Cameroon** [or République du **Cameroun**]

[10] This most populous African country lies on Cameroon's western border. In 1991, this country moved its capital to Abuja from its largest city, Lagos.

ANSWER: Federal Republic of **Nigeria**

[10] Both Cameroon and Nigeria border this slowly-shrinking lake, which is named for a country on Nigeria's northeastern border.

ANSWER: Lake **Chad**

4. All but two of this country's chancellors were members of the Christian Democratic Union, and it had its capital at Bonn. For 10 points each:

[10] Name this country that underwent an “economic miracle” after adopting the deutschmark as its currency following World War II.

ANSWER: **West Germany** [or **FRG**; or **Federal Republic of Germany**]

[10] One of West Germany's two Social Democratic chancellors was this former mayor of Berlin, who resigned upon the discovery that one of his aides was an East German spy.

ANSWER: Willy **Brandt** [or Herbert Ernst Karl **Frahm**]

[10] During his time as chancellor, Brandt notably implemented this policy, which aimed to facilitate a relaxation of tensions between East and West Germany.

ANSWER: *neue* ***ostpolitik*** [or **new eastern policy**]

5. An author with this last name wrote a novel about a German doctor that moves in reverse chronological order entitled *Time's Arrow*. For 10 points each:

[10] Give this last name shared by a father and son pair of authors. The son wrote *Money* and *London Fields*, while the father wrote *Lucky Jim*.

ANSWER: Martin and Kingsley **Amis**

[10] Kingsley Amis wrote the novel *Colonel Sun*, which continues the story of this fictional British secret agent originally created by Ian Fleming.

ANSWER: **James** Bond [or James **Bond**]

[10] James Bond novels also provided inspiration for this Italian author of *Foucault’s Pendulum*.

ANSWER: Umberto **Eco**

6. Answer these questions about the various flood myths, for 10 points each.

[10] This son of Prometheus escaped a flood sent by Zeus with his wife Pyrrha. This man eventually repopulated the earth with men by throwing stones behind his back.

ANSWER: **Deucalion**

[10] Matsya, one of this Hindu preserver god’s avatars, helped Manu survive a flood the kills all other humans.

ANSWER: **Vishnu**

[10] As recounted in the *Popol Vuh*, these Mesoamerican people believed that a flood was one of the ways the gods the gods killed early humanity.

ANSWER: **Maya**n mythology [or **Mayan** Civilization]

7. The Menger sponge is a three-dimensional form of a "carpet" named for this man. For 10 points each:

[10] Name this Polish mathematician who created a namesake triangle that is constructed by removing small equilateral triangles from the centers of larger ones.

ANSWER: Waclaw Franciszek **Sierpinski**

[10] The Menger sponge, along with Sierpinski's carpet and triangle, are examples of these self-similar objects.

ANSWER: **fractal**s

[10] Similar to Sierpinski's triangle, this fractal begins with an equilateral triangle, and adds smaller triangles to the outside edges of the previous iteration.

ANSWER: **Koch snowflake** [or **Koch star**; or **Koch island**]

8. This artist showed Ruby Bridges walking to school in New Orleans in his *The Problem We All Live With*. For 10 points each:

[10] Name this 20th-century American artist of everyday life who painted the *Four Freedoms* series.

ANSWER: Norman **Rockwell**

[10] Rockwell illustrated many covers for this magazine, including a depiction of Rosie the Riveter and several pictures of Santa Claus.

ANSWER: *The* ***Saturday Evening Post***

[10] One of Rockwell’s most famous *Saturday Evening Post* covers depicts an old woman and a young boy performing this action at a restaurant as two young men look on.

ANSWER: ***Saying Grace*** [or **praying**; or obvious equivalents]

9. In this novel, the mysterious Black Knight turns out to be Richard the Lionhearted in disguise. For 10 points each:

[10] Name this historical novel about the disinherited Cedric of Rotherwood, who falls in love with Rowena.

ANSWER: ***Ivanhoe***

[10] *Ivanhoe* was written by this Scottish novelist of *Waverley*.

ANSWER: Walter **Scott**

[10] In this other Scott novel, Jeanie Deans attempts to save her sister Effie from execution.

ANSWER: *The* ***Heart of Midlothian***

10. Both molecular orbitals in molecular hydrogen have the same symmetry as this type of bond, though one of them is bonding and one is antibonding. For 10 points each:

[10] Name this type of covalent bond that forms along the bonding axis, between the two nuclei. A double bond has one of these bonds and one pi bond.

ANSWER: **sigma** bond

[10] The four sigma bonds in this simple compound are oriented along the corners of a tetrahedron. This constituent of natural gas has formula CH4.

ANSWER: **methane**

[10] Sigma antibonding orbitals have this type of plane directly between the nuclei. This term refers to any point at which the probability of finding an electron is zero, as well as referring to the point on a standing wave with minimum amplitude.

ANSWER: **node**s [or **nodal** planes]

11. PUT A PHYSICS BONUS HERE

12. Darius Milhaud and Germaine Tailleferre were members of a musical group with this many members in it. For 10 points each:

[10] Give this number, also the number of sharps in the key signature for F sharp major. Beethoven’s symphony of this number was nicknamed the “Pastoral.”

ANSWER: **six**th

[10] The aforementioned musical group, Les Six, were all composers from this country, which inspired their collaborative *The Wedding Party on the Eiffel Tower*.

ANSWER: **France** [or **French Republic**; or **Republique francaise**]

[10] This member of Les Six is best known for a piece inspired by the sound of a running locomotive, titled *Pacific 231*.

ANSWER: Arthur **Honegger**

13. This character gives an anti-sermon about the Bible in “It Ain’t Necessarily So”. For 10 points each:

[10] Name this drug dealer and resident of Charleston's Catfish Row who runs off with one of the title characters at the end of a 1935 opera.

ANSWER: **Sportin’ Life**

[10] Sportin’ Life is a character in this opera about two black lovers living in Charleston. It opens with the jazz standard “Summertime.”

ANSWER: ***Porgy and Bess***

[10] This man collaborated on *Porgy and Bess* with his lyricist brother Ira, and also wrote *An American in Paris* and *Rhapsody in Blue*.

ANSWER: George **Gershwin**

14. For 10 points each, name these ancient Roman poets:

[10] This man told the stories of Daphne and Apollo, Daedalus and Icarus, and Pygmalion and Galatea in his *Metamorphoses*.

ANSWER: **Ovid** [or Publius **Ovid**ius Naso]

[10] This poet addresses a Bandusian fountain, his lyre, and a wine-jar in some of his *Odes*. In another, he advises Leuconoe, "carpe diem," or “seize the day.”

ANSWER: **Horace** [or Quintus **Horatius** Flaccus]

[10] This poet addressed many poems to a woman named Lesbia, and he gave his dead brother a final "hail and farewell" in a poem using the phrase “ave atque vale.”

ANSWER: Gaius Valerius **Catullus**

15. *Moderator note: do not read the alternate answers.* Charles and Francis Darwin first studied this phenomenon by covering the tips of grass seedlings with opaque and transparent caps. For 10 points each:

[10] Identify this term that describes a plant's growth in response to light.

ANSWER: **phototropism**

[10] This plant hormone is responsible for phototropism because it promotes stem elongation. This hormone is also responsible for inducing apical dominance.

ANSWER: **auxin** [or **IAA**]

[10] The most abundant and best studied auxin consists of an indole and this simple carboxylic acid, with formula CH 3 – COOH.

ANSWER: **acetic acid** [or **ethanoic acid**]

16. This ruler notably said "I am the state." For 10 points each:

[10] Name this King of France who supported Phillip V during the War of the Spanish Succession and built the palace at Versailles.

ANSWER: **Louis XIV** [prompt on **Louis**]

[10] Louis XIV repealed this law, which required religious and political toleration of Huguenots. It was passed by Henri IV in 1598.

ANSWER: the **Edict of Nantes**

[10] Louis' first major military altercation was his participation in this war, during which France briefly conquered the Spanish Netherlands.

ANSWER: War of the **Devolution**

17. An accident in this short story occurs when the cat Pitty Sing jumps out of a character's lap, causing Bailey to drive his car into a ditch. For 10 points each:

[10] Identify this short story in which the Grandmother and her family are murdered by the Misfit.

ANSWER: "**A Good Man Is Hard to Find**"

[10] "A Good Man Is Hard to Find" was written by this Southern Gothic author of *Wise Blood* and "The Life You Save May Be Your Own."

ANSWER: Flannery **O'Connor**

[10] In "A Good Man is Hard to Find," the Grandmother and her family stop at an establishment of this type owned by Red Sammy called "The Tower."

ANSWER: a **restaurant**

18. Joshua Chamberlain led the forces defending this location. For 10 points each:

[10] Name this hill south of the Gettysburg battlefield successfully defended by the 20th Maine Volunteer Infantry Regiment, despite superior Confederate numbers.

ANSWER: **Little Round Top**

[10] The Battle of Gettysburg ended with this charge on the Union's position. Led by one of Lee's favorite Major Generals, it ended disastrously, with the Confederates suffering a fifty percent casualty rate.

ANSWER: **Pickett's Charge**

[10] Immediately after the Battle of Gettysburg ended, the Union received word that this “unconditional surrender” fan and future two-term President, who commanded the final Union victory in the war, had won the siege of Vicksburg.

ANSWER: Ulysses Simpson **Grant**

19. This company recently introduced a "Proud" variant of one of its products wrapped in a rainbow-colored wrapper that reads "We are all the same inside". For 10 points each:

[10] Identify this second-largest fast food burger chain in the U.S., whose signature product is the Whopper.

ANSWER: **Burger King** [or **BK**]

[10] The "Proud Whopper" was introduced to aid Burger King's transition from its old four-word pro-customization slogan to a new, grammatically-incorrect three-word one. Give either.

ANSWER: "**Have it your way**" or "**Be your way**"

[10] In this country, Burger King franchises go by the name "Hungry Jack's". Other fast food chains in this home of basketball player Andrew Bogut include Fast Eddys and Pizza Capers.

ANSWER: **Australia**

20. In this book, a pair of brothers slaughter a town after all their men have been circumcised. For 10 points each:

[10] Name this biblical book which also contains the account of Noah’s Ark.

ANSWER: Book of **Genesis**

[10] This patriarch from the Book of Genesis is the husband of Sarah and kinsman of Lot.

ANSWER: **Abraham**

[10] In Genesis, Jacob bears sons on the handmaids of both of his wives, Leah and Rachel. Name either handmaid, one of whom is the mother of Gad and one of whom is the mother of Dan.

ANSWER: **Zilpah** or **Bilhah**

21. Before this process can proceed, pyruvate must be converted to acetyl-CoA, this cycle's input. For 10 points each:

[10] Name this cycle that produces ATP and electron carriers later used in the electron transport chain.

ANSWER: **Krebs**-Szent-Györgyi cycle [or **citric acid** cycle; or **tricarboxylic acid** cycle; or **TCA** cycle]

[10] Unlike glycolysis, the Krebs cycle takes place in the matrix of this organelle, which is commonly known as the powerhouse of the cell.

ANSWER: **mitochondria** [or **mitochondrion**]

[10] One turn around the Krebs cycle yields three molecules of this compound, which are then fed into the electron transport chain.

ANSWER: **NADH** [prompt on **nicotinamide adenine dinucleotide**]