**HSAPQ Tournament #53**

**Packet 3 Tossups**

1. **This opera's protagonist is told to be "steadfast, patient, and silent" by three boys, before trying to enter the Temple of Wisdom. Its librettist Emanuel Schikaneder performed at the opera’s premiere, playing a character who thwarts Monostatos by ringing some bells and gets a padlock put on his mouth as punishment for telling (\*)** a lie about having killed a serpent. In this opera, Papageno is the bird-catcher for the Queen of the Night. For 10 points, name this Mozart opera in which Pamina falls in love with Prince Tamino, who plays the title instrument.

ANSWER: *The* ***Magic Flute*** [or *Die* ***Zauberflöte***]

2. **This statement indicates that mechanical energy along a streamline must be conserved. It states that the sum of velocity squared over two, elevation times g, and pressure over density is always constant in a system. This statement explains the reduction of fluid pressure inside a constricted section of a pipe, which is known as the (\*)** Venturi effect. It is debated as to whether Newton's laws or this principle better explains the lift experienced by aircraft. For 10 points, name this principle that states fluid pressure is inversely proportional to velocity of fluid flow.

ANSWER: **Bernoulli**'s **principle** [or **Bernoulli**'s **equation**; or **Bernoulli**'s **law**]

3. **Neil Bartlett reacted one of this group of elements with platinum hexafluoride to generate a solid red product. An element in this group was initially isolated after a sample of cleveite was heated. William Ramsay discovered several of these elements using fractional distillation. The (\*)** electron configuration of this group is used as a base in shorthand notation for writing electron configurations. For 10 points, name this group of inert gases that is exemplified by neon and helium.

ANSWER: **noble gas**es [or **Group 18**; or **8A**]

4. **Along with Superboy, a character who died while using this identity was revived by Brainiac-5 to defeat an alternate universe’s Superboy in the Legion of Three Worlds crossover. That character with this identity was the grandson of a hero who had died to stop the Anti-Monitor and fought (\*)** Captain Cold and the Rogues several times after getting powers from a bolt of lightning. For 10 points, identify this name shared by several “Scarlet Speedsters” including Wally West and Barry Allen.

ANSWER: The **Flash**

5. **Along with her son, this goddess either disguised herself as a fish, or was rescued by fish, while hiding from Typhon. According to Homer, this goddess’s mother Dione consoles her after she is wounded in the arm by Diomedes. This lover of (\*)** Adonis was trapped in bed while having an affair with Ares using a net constructed by her husband Hephaestus. This goddess was born from the sea foam after Ourano’s genitals were thrown into the ocean. For 10 points, name this Greek goddess of love and beauty.

ANSWER: **Aphrodite** [or **Venus**]

6. **In the foreground of this painting lies a man who is naked except for his open shirt and a single blue sock on one foot. On the left of this painting, a man in white and brown holds a saber behind a well-dressed man in a top hat holding a musket. In this painting, a boy holding (\*)** two pistols stands beside the title bare-breasted allegorical woman, who holds a musket with a bayonet while waving the tricolor flag. For 10 points, name this canvas celebrating the July Revolution, painted by Eugene Delacroix.

ANSWER: ***Liberty Leading the People*** [or *La* ***Liberte Guidant le Peuple***]

7. **This man allegedly invented the table knife to prevent guests from picking their teeth. This associate of Father Joseph Leclerc promoted the fur trade by establishing the Company of One Hundred Associates. After his power was threatened on the Day of the Dupes, this politician had (\*)** Marie de Medici exiled. This predecessor of Mazarin entered his country into the Thirty Year's War and advised Louis XIII. For 10 points, name this man known as "The Red Eminence," an influential French cardinal.

ANSWER: Cardinal **Richelieu** [or Armand Jean du **Plessis**]

8. **This author described the title insect’s movement between four corners of a window in the essay “The Death of a Moth.” In one of this author’s novels, the section “Time Passes” is composed of descriptions of the disintegration of a house during war. Septimus Smith suffers from shell shock and jumps out of a window in a novel by this woman whose title character is named (\*)** Clarissa. Another of her novels concerns the Ramsay family’s trips to the title building. For 10 points, name this author of *Mrs. Dalloway* and *To the Lighthouse*.

ANSWER: Virginia **Woolf**

9. **One of this author’s characters sometimes contracts the “mean reds” and owns a cat she refuses to name. Collin Fenwick lives with his aunts Dolly and Verena in this man’s novel *The Grass Harp*. This author wrote a novella in which Holly Golightly sometimes eats meals at a jewelry store. A “non-fiction novel” by this man details (\*)** Dick Hickock and Perry Smith’s murder of the Clutter family in Holcomb, Kansas. For 10 points, name this author of *Breakfast at Tiffany’s* and *In Cold Blood*.

ANSWER: Truman **Capote** [or Truman Streckfus **Persons**]

10. **This island is where George Grivas led the EOKA, a militant group that opposed John Harding’s government and tried to achieve the goal of enosis. A 2004 referendum rejected Kofi Annan’s plan for unifying this island. This island was led by Archbishop (\*)** Makarios until a coup d’etat replaced him with Nikos Sampson. A United Nations Buffer Zone in the Green Line has split this island’s northern and southern portions since a 1974 invasion by Turkey. For 10 points, name this Mediterranean island whose capital is Nicosia.

ANSWER: **Cyprus** [or **Kipros**; or **Kibris**]

11. **In one of this man’s plays, the professor commits his fortieth murder but is excused after wearing a swastika on his arm. This author of *The Lesson* also described an old couple who throw themselves out of a window after leaving their message behind to a deaf and dumb orator. This playwright of (\*)** *The Chairs* wrote a play in which everyone except Berenger transforms into the title creature. For 10 points, name this absurdist French playwright of *Rhinoceros.*

ANSWER: Eugene **Ionesco**

12. **This man suggests that he and his friends eat only vegetables and water for ten days, after which they appear healthier than their peers. This prophet interprets a dream in which a statue of gold, silver, bronze, and iron is smashed by a rock, and another in which an enormous tree is cut down to a stump. This person's three (\*)** friends are thrown into a furnace by Nebuchadnezzar. At Belshazzar's feast, this prophet interprets the writing on the wall. For 10 points, name this Biblical prophet who was thrown into a den of lions.

ANSWER: **Daniel** [or **Belteshazzar**]

13. **This man explained that his employer "did not communicate with Jay-Z" about the events described in the song "Open Letter." He declared "Jon, I get it!" in response to criticism from Jonathan Karl, with whom he frequently clashed. This man worked for *Time* magazine for twenty-one years before becoming director of (\*)** communications for Joe Biden. In 2011, he replaced Robert Gibbs in his most notable post, in which he was himself succeeded by Josh Earnest. For 10 points, name this former White House press secretary, who resigned in May 2014.

ANSWER: Jay **Carney** [or James **Carney**]

14. **It’s not Hamburg, but an art museum in this city is located in a former railway station. Most of this city’s skyscrapers are located in a planned business district that began construction in the fifties known as the Defense, although the tallest structure in this city was built for the 1889 (\*)** World’s Fair. The remains of around six million people fill the underground caverns of this city’s catacombs. The Seine River cuts through this city, where bistros are found along avenues such as the Champs-Elysées. For 10 points, name this city which is home to the Eiffel Tower.

ANSWER: **Paris**

15. **A harp and string orchestra play this man’s *Sacred and Profane Dances*. "Footsteps in the Snow" and "The Sunken Cathedral" are contained in this composer's first book of piano preludes. Another orchestral piece by this composer represents "dialogues" between the wind and the title entity, and the "play of the waves." He is best known for a solo piano piece from his (\*)** *Suite bergamasque* which depicts the nocturnal brilliance of a heavenly body. For 10 points, name this French Impressionist composer of *La Mer* and “Claire de lune.”

ANSWER: Claude **Debussy** [or Achille-Claude **Debussy**]

16. **This ruler built the Sainte-Chapelle to house his collection of relics, including the Crown of Thorns. Early in his reign, his mother Blanche of Castile negotiated the Treaty of Paris, ending the Albigensian Crusade. This king was captured at Fariskur after his defeat by (\*)** Baibars, a Mamluk leader of Egypt. After leading the Seventh and Eighth Crusades, this king was recognized for his piety in 1297 by Pope Boniface VIII. For 10 points, name this only French king to be canonized.

ANSWER: **Louis IX** [or **Saint Louis**; prompt on **Louis**]

17. **In an analog to the capital sigma, the capital form of this letter can be used as shorthand for multiplication. A quickly converging series for this number was developed by John Machin, based on the Leibniz infinite series for it. Both gamma and this letter appear in the general formula for the volume of an n-dimensional (\*)** hypersphere. This number can be approximated by considering regular polygons with more and more sides. For 10 points, identify this Greek letter that denotes a number approximately equal to 3.14.

ANSWER: **pi**

18. **This character begins the last chapter of the novel she appears in with the declaration, “Reader, I married him.” This character declines to marry the clergyman St. John Rivers, and as a girl, she is tormented at Lowood Institution by Mr. Brocklehurst. This character’s wedding veil is torn in two by a (\*)** madwoman kept in the attic of Thornfield Hall, where she works as a governess and eventually marries Mr. Rochester. For 10 points, name this title woman of a novel by Charlotte Brontë.

ANSWER: **Jane** Eyre [or Jane **Eyre**]

19. **A mayor of this city, Andrew Peters, failed to quell a strike of police officers in this city that was ultimately dissolved by Calvin Coolidge. Oliver Wendell Holmes described this city's upper-class residents as its namesake "Brahmins." This city was the site of a 1919 flood caused by a bursting (\*)** molasses tank. Another event in this city was spearheaded by the Sons of Liberty, who dressed up as Native Americans and destroyed a British shipment. For 10 points, name this city which was also the scene of a 1773 "Tea Party."

ANSWER: **Boston**, Massachusetts

20. **The second stage of this process features K-complexes and namesake "spindles". The appearance of delta waves characterizes the "deep" variety of this process, where somnambulism can take place. A disorder that can occur during this process is a period of discontinued breathing, known as its namesake (\*)** "apnea", and its fifth stage features rapid eye movement. For 10 points, name this phase that doctors recommend adults get eight hours of every night, which is interrupted by insomnia.

ANSWER: **sleep**

21. **This playwright may have collaborated with Thomas Nashe on his first play, *Dido, Queen of Carthage.* He created a character who asks, “Was this the face that launched a thousand ships?” upon summoning Helen of Troy. This playwright wrote about the vengeful merchant (\*)** Barabas in his play *The Jew of Malta* in addition to creating an ambitious scholar who sells his soul to Mephistophilis. For 10 points, name this contemporary of Shakespeare who wrote *Doctor Faustus.*

ANSWER: Christopher **Marlowe**

22. **This composer stated that only the devil could play his *Wanderer Fantasy*. Walter Scott’s *Lady of the Lake* inspired his “Ellen’s Third Song,” which is often called his “Ave Maria.” His incidental music for *Rosamunde* has been proposed as the finale of one of his symphonies. This composer’s song (\*)** “Die Forelle” was used in his composition for string quartet and piano, the *Trout Quintet*. For 10 points, name this Austrian composer of many *lieder* and an *Unfinished* eighth symphony.

ANSWER: Franz **Schubert**

23. **The Gum and Sharpless catalogs classify these objects, which should not to be confused with Herbig-Haro objects. When red giants less than eight solar masses can no longer support themselves with fusion, they shed their outer layer and form the "planetary" type of these objects. The famous "Pillars of Creation" photograph depicts the (\*)** Eagle example of these objects. A well-known supernova occurred in the Crab example of these objects. For 10 points, name these clouds of dust and gas in outer space.

ANSWER: **nebula**e [accept specific types of **nebula**]

**HSAPQ Tournament #53**

**Packet 3 Bonuses**

1. The priest Laocoon was killed for delivering warnings about this object. For 10 points each:

[10] Name this massive hollow object engineered by Epeius, which brought Greek soldiers like Odysseus and Diomedes inside a city they had been besieging for ten years.

ANSWER: **Trojan Horse**

[10] This man was one of the few Trojans who escaped the sack of Troy, though he lost his wife Creusa. However, he did manage to rescue his father Anchises and his son Ascanius.

ANSWER: **Aeneas**

[10] Like Laocoon, this woman also warned against the Trojan Horse, but was ignored. Ajax the Lesser’s rape of this woman resulted in a storm that sank many Greek ships after the war.

ANSWER: **Cassandra**

2. This man sent his officer Antonio de Abreu to search for the Spice Islands after he captured the port of Malacca. For 10 points each:

[10] Name this explorer, who also captured the Persian port of Hormuz in the service of King Manuel I.

ANSWER: Afonso de **Albuquerque**

[10] Albuquerque greatly expanded the overseas empire of this European kingdom, which also colonized Brazil.

ANSWER: **Portugal**

[10] Albuquerque conquered Goa from the Bijapur sultanate, creating a Portuguese colony that lasted until 1961, when this country overran it in Operation Vijay.

ANSWER: **India**

3. This character’s father discovers that he admired Abraham Lincoln and subsequently obtains a copy of the Gettysburg Address. For 10 points each:

[10] Identify this civil rights activist who is murdered by Absalom Kumalo. During his funeral, Mr. Harrison tells this character’s father James of his intent to avenge the death.

ANSWER: **Arthur** Jarvis [prompt on **Jarvis**]

[10] Arthur Jarvis is a central character in this 1948 novel, in which Msimangu accompanies the pastor Stephen Kumalo in his journey to Johannesburg to find his son.

ANSWER: ***Cry, the Beloved Country***

[10] *Cry, the Beloved Country* was written by this South African author and anti-apartheid activist.

ANSWER: Alan **Paton**

4. A group of women sit at the bottom right corner of this painting, although only one of them looks toward the action. For 10 points each:

[10] Name this painting in which the three title men raise their arms toward the three swords held by a red-clad man.

ANSWER: ***Oath of the Horatii*** [or Le ***Serment des Horaces***]

[10] This French Neoclassical artist of *Oath of the Horatii* painted *The Death of Marat* and *The Rape of the Sabine Women*, as well as five versions of *Napoleon Crossing the Alps*.

ANSWER: Jacques-Louis **David**

[10] This seventeenth century French painter also depicted the rape of the Sabine women. He is better known for a painting of four shepherds examining a tomb bearing the enigmatic inscription *Et in arcadia ego*.

ANSWER: Nicolas **Poussin**

5. This quantity is the rate of change of angular momentum. For 10 points each:

[10] Name this quantity that is equal to the cross-product of the applied force and the lever arm.

ANSWER: **torque** [or **moment** of force; or **tau**]

[10] The torque on an object equals zero when an applied nonzero force has this property with respect to the lever arm.

ANSWER: **parallel** [or obvious equivalents]

[10] The "torque-induced" type of this phenomenon can occur in gyroscopes. This phenomenon is responsible for the spinning motion of tops because it is the change in axis of a rotating object.

ANSWER: **precession** [or torque-induced **precession**]

6. The title character of this novel becomes the mistress of Charles Drouet after moving to Chicago. For 10 points each:

[10] Name this controversial novel about an immoral girl who becomes a Broadway star after running away with George Hurstwood.

ANSWER: ***Sister Carrie***

[10] *Sister Carrie* was written by this naturalist American novelist who also wrote *An American Tragedy.*

ANSWER: Theodore **Dreiser**

[10] This social climber who murders his lover Roberta Alden is the protagonist of *An American Tragedy*.

ANSWER: **Clyde** Griffiths [or Clyde **Griffiths**]

7. This man attempted to kill his mother Agrippina with a collapsing boat. For 10 points each:

[10] Name this famously cruel Roman emperor who had Seneca bleed himself to death in a bath for his role in the Pisonian conspiracy.

ANSWER: **Nero** [or **Nero** Claudius Caesar Augustus Germanicus]

[10] An anachronistic saying claims that Nero "fiddled" while this event occurred. This event decimated Rome for six days, and it was blamed on the Christians of the city.

ANSWER: Great **Fire** of Rome [or obvious equivalents]

[10] Nero's general Suetonius defeated this Iceni woman who led an uprising against the Romans in Britain.

ANSWER: **Boudica**

8. It immediately follows from this theorem that any continuous function with values above and below zero in an interval will have a root in that interval. For 10 points each:

[10] Name this theorem, which states any continuous function on a closed interval will take on all values between the values at the endpoints of the interval.

ANSWER: **intermediate value** theorem [do not accept "mean value theorem"]

[10] The intermediate value theorem does not hold for the rationals, but does for this set of numbers because it is complete. It contains the rationals and irrationals.

ANSWER: **real** numbers [or blackboard **R**n]

[10] Continuous functions are those where, for any point on the interval, this relationship holds between the value the function takes and the function's limit at that point.

ANSWER: **equality** [or obvious equivalents, such as they are the **same**]

9. This quantity's namesake multiplier is calculated as one over the reserve requirement, and the quantity theory of it assumes its velocity to be constant. For 10 points each:

[10] Name this "unit of account" whose supply is calculated using the M0, M1, and M2 definitions.

ANSWER: **money**

[10] A formulation of the quantity theory of money was developed by this monetarist, a former leader of the Chicago school of economics.

ANSWER: Milton **Friedman**

[10] Friedman's k-percent rule advocated for taking this action annually at a rate equal to real GDP growth in order to control inflation.

ANSWER: **increasing the money supply** [or obvious equivalents such as "**adding money to the economy**"; prompt on "**changing the money supply**"]

10. This element's nitride and carbide are both extraordinarily hard. For 10 points each:

[10] Name this lightest metalloid, with atomic number 5. It shares some of its bonding properties with beryllium, which comes right before it on the periodic table.

ANSWER: **boron** [or **B**]

[10] Like beryllium, boron is electron-deficient. Rather than obeying the octet rule, it is most stable with this many valence electrons.

ANSWER: **six**

[10] Give the full electron configuration of boron. Note that it is the first electron configuration to include an electron in a p orbital.

ANSWER: **1s2 – 2s2 – 2p1**

11. Movements of this composition include "The Sea and Sinbad's Ship" and "The Kalendar Prince." For 10 points each:

[10] Name this orchestral suite, which depicts several stories from the *Arabian Nights*. A recurring leitmotif represents the title character as she tells those stories to a sultan.

ANSWER: ***Scheherazade***

[10] *Scheherazade* was written by this Russian composer, whose other compositions for orchestra include *Russian Easter Overture* and *Capriccio Espagnol*.

ANSWER: Nikolai **Rimsky-Korsakov**

[10] The character of Scheherazade is represented by a recitative-like solo in E minor for this instrument. This solo instrument plays Massenet’s “Meditation” from *Thais*.

ANSWER: **violin**

12. During this Tudor king’s reign, Robert Aske led the Pilgrimage of Grace, which protested his Dissolution of the Monasteries. For 10 points each:

[10] Name this King of England. He beheaded his wife Anne Boleyn, the second of his six wives.

ANSWER: **Henry VIII** [prompt on **Henry**]

[10] This Cardinal served as Henry’s Lord Chancellor. He fell out of favor after he proved unable to secure an annulment of Henry’s marriage to Catherine of Aragon.

ANSWER: Cardinal Thomas **Wolsey**

[10] Wolsey arranged for Henry to meet this Valois French king at the Field of the Cloth of Gold. Benvenuto Cellini constructed a salt cellar for this monarch.

ANSWER: **Francis I** [prompt on **Francis**]

13. This author fictionalized Alan Breck Stewart in his novels *Kidnapped* and *Catriona*. For 10 points each:

[10] Name this Scottish novelist.

ANSWER: Robert Louis **Stevenson**

[10] Stevenson is best known for this adventure novel featuring Jim Hawkins and Long John Silver.

ANSWER: ***Treasure Island***

[10] This Stevenson character is the protagonist of *Kidnapped*.

ANSWER: David **Balfour** [or **David** Balfour]

14. In 2010, bone fragments of a species of hominins separate from Neanderthals and homo sapiens were discovered in the Denisova cave in this mountain range. For 10 points each:

[10] Identify this mountain range whose name means “golden mountains.” It lends its name to a group of Central Asian languages.

ANSWER: **Altai** Mountains [or **Altaic** languages]

[10] The snow leopard, a symbolic animal of the Altais, appears on the flag of Almaty, the largest city in this vast former Soviet republic which is home to Baikonur Cosmodrome.

ANSWER: **Kazakhstan**

[10] People from this ethnicity may have inherited some metabolic genes from the Denisovans that allow them to thrive at high altitudes in places like their namesake plateau north of the Himalayas.

ANSWER: **Tibet**an people [or **bodpa**; or **zang**zu]

15. Insects possess the compound variety of these structures, and mollusks use a single-lens variety of this structure. For 10 points each:

[10] Name this organ that detects motion and light waves. Early versions of this organ of vision could only sense ambient brightness.

ANSWER: **eye**s

[10] The rod and cone photoreceptors of the human eye are located on this innermost layer. Macular degeneration is caused by damage to a yellow spot near the center of this layer of the eye.

ANSWER: **retina**

[10] This clear gel-like substance fills the area between the retina and the lens. This substance is mostly devoid of cellular material and helps support the shape of the eye.

ANSWER: the **vitreous** humor [or the **vitreous** body]

16. For 10 points each, answer the following about biting incidents in sports.

[10] In 2014, this Uruguayan striker was banned from nine consecutive international soccer matches after biting Italy’s Giorgio Chiellini during a World Cup game.

ANSWER: Luis **Suarez**

[10] This boxer was disqualified from a bout with Evander Holyfield after he bit off some of Holyfield’s ear. He made cameo appearances in *The Hangover* and *The Hangover Part II*.

ANSWER: Mike **Tyson**

[10] In 2013, this hockey team’s former player Mikhail Grabovski bit a Montreal Canadiens player. Currently coached by Randy Carlyle, they have not won a championship since 1967.

ANSWER: **Toronto** Maple Leafs [or Toronto **Maple Leafs**]

17. Answer the following about the 9/11 terrorist attacksm for 10 points each.

[10] The attacks most notably destroyed the North and South towers of what complex in New York City?

ANSWER: **World Trade Center** [or **WTC**]

[10] While another plane was crashed into the Pentagon, United Airlines Flight 93 ended up crashing into a field in this state near the city of Shanksville when passengers fought the hijackers.

ANSWER: **Pennsylvania**

[10] United Flight 93 was crashed after a passenger revolt against the hijackers, begun shortly after passenger Todd Beamer was heard saying this two-word phrase over the phone.

ANSWER: "**Let's roll**."

18. For 10 points each, name the following about the ceramic process.

[10] Before shaping, the clay must be thrown forcefully onto a surface, then pushed and layered. Name either process, which eliminates air bubbles and evenly distributes moisture.

ANSWER: **wedging** or **knead**ing

[10] Any remaining air bubbles in the clay may explode when the object is placed in this firing oven. It should only be in contact with unglazed clay, else the object stick.

ANSWER: **kiln**

[10] A kiln rated at 10 cones or above is needed to make this kind of ceramic, which was so popular in China that it’s often called china.

ANSWER: **porcelain**

19. For 10 points each, answer these questions about Islamic literature.

[10] This text was given down from the angel, Jibril, to Muhammad and is viewed as the central text of the religion.

ANSWER: **Qur'an**

[10] These reports chronicle the sayings and actions of Muhammad and are broken down between the matn and the isnad.

ANSWER: **Hadith**

[10] This longest chapter of the Qur'an enforces fasting during Ramadan and is named after a story which details sacrificing the title animal to the Israelites.

ANSWER: The **Cow** Surah [or Surat **al-Baqarah**]

20. The title character of this novel kills his best friend Vladimir Lensky in a duel. For 10 points each:

[10] Name this novel-in-verse about a bored nobleman.

ANSWER: ***Eugene Onegin***

[10] *Eugene Onegin* was written by this Russian poet whose prose pieces include the story “The Queen of Spades.”

ANSWER: Alexander **Pushkin**

[10] Onegin incites Lensky’s anger by flirting with his fiancée Olga at one of these events on Tatyana’s name day.

ANSWER: a **ball** [or a **dance**; prompt on a **party**]

21. This composition periodically switches between measures of 5/4 and 6/4 time and contains a recurring Promenade Theme. For 10 points each:

[10] Name this suite based off a number of paintings by Viktor Hartmann, including movements such as "Bydlo," "Tuileries" and "The Hut on Fowl's Legs."

ANSWER: ***Pictures at an Exhibition***

[10] This member of the Mighty Five composed such pieces as *The Night on Bald Mountain* and *Boris Godunov*, as well as *Pictures at an Exhibition*.

ANSWER: Modest **Mussorgsky**

[10] This composer made an orchestral arrangement of Mussorgsky's *Pictures at an Exhibition*. He composed a *Pavane For a Dead Princess* and the *Rapsodie Espagnole.*

ANSWER: Maurice **Ravel**