Round 9 2015 Potatoville Varsity

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Tossups

- 1. Forces under this man seized an Ottoman city during the Azov Campaigns. During one trip outside his country, this man took the last name Mikhailov to remain unnoticed. That trip was part of this man's Grand Embassy, and failed to form a coalition against the Ottoman Empire. In an attempt to put (*) Sophia Alekseyevna in power, the Streltsy rebelled against this ruler. In attempt to modernize his country, he required every man who wished to keep his beard to pay a tax. By winning The Great Northern War, this man was able to build a city on the Baltic Sea which bears his name. For 10 points, name this Tsar who westernized Russia. Answer: Peter the Great
- 2. This man was commissioned by an Italian wool guild to build an orphanage, The Hospital of the Innocents. Though he died before he could see it built, the general design for the Pazzi Chapel was created by this man. He lost his chance to design the (*) "Gates of Paradise" when Lorenzo Ghiberti produced a superior bronze panel for the Florence Baptistry. This man helped finished a building that had been under construction for 100 years by designing the largest brick dome ever created. For 10 points, name this Italian architect who helped finish Florence Cathedral.

Answer: Filippo Brunelleschi [broo-neh-leh-skee]

3. This man ordered Benaiah to kill his rival, Abimalech, soon after this man assumed power. He was briefly succeeded by Rehoboam and, unlike his father, this man was allowed to build an elaborate structure on Mount Moriah. This builder of the (*) First Temple entertained the Queen of Sheba, and this son of Bathsheba settled a dispute between two prostitutes by threatening to cut a child in half. God granted great wisdom to, for 10 points, what king of Israel, the son of David?

Answer: Solomon (accept Schlomo or Solmon)

4. One painting by this man depicts schoolchildren sitting at rows of desks, staring at a bust of Vladimir Lenin with flowers strewn around it. In addition to *Russian Schoolroom*, he depicted a young girl being escorted to a recently (*) desegregated school in *The Problem We All Live With*. A State of the Union address by Franklin Roosevelt inspired him to paint a married couple tucking their children into bed in a work from his *Four Freedoms* series. For 10 points, name this American illustrator and painter whose work *Rosie the Riveter* appeared on a 1943 edition of the Saturday Evening Post.

Answer: Norman Perceval Rockwell

5. One symptomatic sign of this disease are dermatomal pattern of rashes against a single spinal nerve. A Although it can't differentiate between the virus that causes this disease and herpes simplex virus, a Tzanck smear is used to look for cells that have been infected by the virus causing this disease. That virus is known as the varicella zoster virus and may pose a risk to those who were afflicted with a common (*) childhood variant of this disease as it stays in the immune system. Also known as herpes zoster, this disease results in painful blisters for those previously exposed to chickenpox. For 10 points, name this viral disease that is commonly associated with the elderly.

Answer: **shingles** (accept **herpes zoster** before it is read)

6. In a novel set in this country, a priest and a monk are given instructions on how to save the world from a sentient stone. In another novel from this country, 36 Heavenly Spirits and 72 Earthly Fiends make up the title group of (*) *Outlaws of the Marsh*. In a novel from this country, Lady Sun marries the protagonist and three friends are sworn into the Oath of the Peach Garden. In a novel set in this country, Sandy and Pigsy accompany the monkey king Sun Wukong and Tripitaka on a trip to India. For 10 points, name this country whose four classical novels include *Dream of the Red Chamber*, *Water Margin*, *Romance of the Three Kingdoms*, and *Journey to the West*.

Answer: China

- 7. Tehcir Law was used to carry out one of these events. Another one of these events was ordered by Radovan Karadzic, and occurred during the Bosnian War. Historians dispute whether the Holodomor was one of these events. Due to one of these events, mass (*) graves known as Killing Fields were created in Cambodia. During one of these events, Hutu, armed with machetes, attacked Tutsi in Rwanda. For 10 points, name these events exemplified by one targeting Armenians, the systematic destruction of a race, such as the Holocaust. Answer: genocide (accept Armenian Genocide; accept Bosnian Genocide; accept Cambodian Genocide; accept Rwandan Genocide; accept Genocide; a
- 8. A version of this process named for Fermat will give a false positive result when used on Carmichael numbers. This task is successful for n if n minus 1 factorial is congruent to negative 1 modulo the target number; that check is known as Wilson's Theorem; a more practical method of performing this process is named for (*) Miller and Rabin. It is also performed by eliminating all multiples of numbers that pass this process, known as the Sieve of Eratosthenes. For 10 points, name this mathematical task, which will be successful for a number if the number has no divisors other than itself and 1.

Answer: **primality test**ing (accept reasonable descriptions such as "**finding** if a number is **prime**")

9. Anticyclones from the north are said to regulate the dryness in this desert. To the west of this desert lies a smaller desert, the Taklamakan. Parts of this desert are given names such as basin of the Tarim and desert basin of Lop Nor. The (*) Dzungarian Basin is another ecoregion of this desert, which splits the Altai Mountains from the Tian Shan range. It is limited by Hexi corridor which used to form a busy route on the Silk Road. The Tibetan Plateau is also adjacent to this desert. For 10 points, name this largest desert in Asia which extends from Mongolia to China.

Answer: Gobi desert

10. The speaker of this poem speaks of the "brilliant Spaniard to converse about America and Eternity" and the "Peyote solidarities of halls/backyard green tree cemetery dawns." The second part of this poem speaks of "Solitude! Filth! Ugliness!" while repeating the name (*) "Moloch!" The footnote to this poem says that "The World is holy!" and repeats the word "Holy!" This poem repeats the phrase "I'm with you in Rockland", and was dedicated to Carl Solomon. Speaking of "angelheaded hipsters", this is, for 10 points, what poem that begins "I saw the best minds of my generation, destroyed by madness" by Allen Ginsberg?

Answer: Howl

11. A child king was installed in this country after Phibun defeated the Boworadet Rebellion. Black May was an event in this country which protested the military rule of General Suchinda Krapraytoon. In 2006, a political coup in this country removed Prime Minister Thaksin Shinawatra from power. More recently, protests against the government were started by the (*) UDD also known as the red shirts. The supporters of the monarchy were known as the yellow shirts in this country's 2008 political crisis. Rama XI leads this country that was formerly known as Siam. For 10 points, name this Asian country with capital at Bangkok. Answer: Kingdom of Thailand

12. A common solvent in NMR spectroscopy has a carbon bonded to deuterium and three atoms of this element. One hypervalent compound of this element used to add it to organic compounds has five of them bonded to a central phosphorus atom. This element is produced in its gaseous form at the anode of a Downs cell. The anion in bleach contains an atom of oxygen and one of this element, and the monomer of (*) PVC has a vinyl form of it. Along with fluorine and carbon, Freon has this element in it, which makes it a CFC. The acid of this element is commonly found in the stomach. For 10 points, name this element that makes up table salt with sodium, with atomic symbol Cl [C-L].

Answer: **chlorine** (accept **Cl** before it is read)

13. This man composed the aria "E sogno? o realta" for an opera that includes the defenestration of Herne the Hunter. In another of his works, "Di Provenza il mar" is sung by Giorgio to comfort his son, Alfredo Germont, about his separation from the courtesan Violetta. This composer of (*) Falstaff wrote a work in which the title character discovers that a sack contains the body of not Sparafucile but his daughter Gilda when he hears the lively "La donna e mobile." His most famous work centers on a love triangle between Amneris, Radames, and the title Ethiopian princess. For ten points, name this Italian Romantic composer of the operas La Traviata, Rigoletto and Aida.

Answer: Giuseppe Fortunino Francesco Verdi

14. In one of this author's works, the title character is asked to prevent the marriage of Romney and Marian Erle, as Romney's cousin, Lady Waldemar, loves him. This author wrote "Be heir to those who are now exanimate / Gather the north flowers and complete the south" in a poem that says to use the "name I used to run at, when I was a child." This author of (*) Aurora Leigh wrote a poem that answers the title question with "to the depth and breadth and height / my soul can reach." For 10 points, name this wife of Robert, whose Sonnets from the Portuguese includes a poem that begins, "How do I love thee? Let me count the ways."

Answer: Elizabeth Barrett **Browning** (prompt on "Browning")

- 15. In 2014, London-based Chilango sold bonds that gave investors a free one of these items each week. The "nature of" this food "is to be a delicious, leaking mess, regardless of whether it is cylindrical or hexaflexagonal," according to a Vi Hart video. In 2014, FiveThirtyEight.com ran a 64-entry bracket to determine "America's Best" one of these foods, crowning San Francisco-based (*) La Taqueria the champion. Inspired by a "secret menu" item at Chipotle, Taco Bell introduced one of these using a quesadilla as the outer wrapping. For 10 points, name this Mexican foodstuff, often containing rice, beans, and meat wrapped in a tortilla. Answer: **burrito**s
- 16. In one form, this deity spent a night sleeping between Ai and Edda, and he also stayed with Fodir and Madir, later claiming their son Jarl as his own. This deity fathered the three races of man while disguised as Rig. He transformed into a seal and fought for Brisingamen, (*) Freya's necklace. This deity will be the last of the Aesir to die, when he will be killed by and will kill Loki. This deity owns Gulltoppr, and he will blow the Gjallarhorn to signal the beginning of Ragnarok. For 10 points, identify this Norse god who defends the rainbow bridge Bifrost.

Answer: **Heimdall**r

17. The protagonist of this novel replaces a man as captain after Fresleven strikes a native. The protagonist meets the Brickmaker at Central Station. The different colored patches on his clothes leads to a character's nickname, harlequin. While talking to a Russian character, the protagonist of this novel notices several (*) severed heads on fence posts. The frame story of this novel is set aboard the Nellie, and a character ends a report with the line "Exterminate all the brutes!" That character's last words were "The horror, the horror." For 10 points, name this novel where Charlie Marlowe travels up the Congo to find the ivory trader Kurtz; a novel by Joseph Conrad.

Answer: Heart of Darkness

18. Participants in this event took hostages at the Allstadt House; others held up a passing train and killed porter Hayward Shephard, but let the train pass, allowing authorities to be alerted to this event. During the Civil War, a marching tune noted that the leader of this event's (*) "soul is marching on" even as his "body lies a-mouldering in the grave." President Buchanan sent a group of Marines led by Robert E. Lee to end this attempt to start a slave revolt. For 10 points, name this October 1859 failed raid on an armory in Virginia by abolitionist John Brown.

Answer: (John Brown's) Raid on <u>Harpers Ferry</u> (accept "John Brown's raid" before "John Brown" is mentioned)

19. One work by this author opens with a lament that, just as the "methods and aims of [...] ethnology have taken shape," the subjects of study "die away under our very eyes." This author studied the use of rituals and magic words in agriculture and general life among his subjects, who traded crops like yams only after opening with ceremonial (*) trade of shell necklaces and armbands, an exchange system called the "Kula ring." For 10 points, name this author, who depicted life in the Trobriand Islands of Papua New Guinea in his works Argonauts of the Western Pacific and Coral Gardens and their Magic, a Polish anthropologist.

Answer: Bronislaw Malinowski

20. When considering the particle in a box, this quantity is zero inside the box and infinity outside the box. A barrier of this quantity is surpassed in quantum tunnelling, and this quantity is subtracted from a counterpart in the expression for the Lagrangian. The negative derivative of this quantity is equal to (*) force. Half the product of the displacement squared and force constant gives this quantity for a spring, and for a conservative force, work is the negative change in it. On Earth, the gravitational version of this quantity is equal to mass times g times height. For 10 points, name this quantity symbolized U, that, unlike its kinetic counterpart, arises from an object's configuration or position in a force field.

Answer: **potential energy**

Bonuses

1. During his presidency, Veracruz was invaded. For 10 points each,

[10] Name this man whose refusal to pay interest led the French to invade his country. During the invasion, this man's general Ignacio Zaragoza achieved an unlikely victory at the Battle of Pueblo.

Answer: Benito Pablo Juarez Garcia

[10] Benito Juarez was president of this country. The holiday Cinco de Mayo celebrate this country's victory at the Battle of Pueblo.

Answer: Mexico (accept United Mexican States)

[10] Another president of Mexico was this general who attempted to overthrow Juarez after his reelection. After committing obvious voter fraud, this man was removed from office by the Mexican Revolution.

Answer: José de la Cruz Porfirio **Díaz** Mori

2. This figure was killed by Hodur. For 10 points each,

[10] Name this Norse god of light who was killed by an arrow of mistletoe due to Loki's manipulation.

Answer: **Baldr** (or **Baldur**)

[10] This mother of Baldr attempted to save his life by making everything in the world vow not to harm him.

Answer: **Frigg**a (accept **Frij**a; do not accept Freya)

[10] After Baldr's death, this deity offered to let Baldr return to the living if every being in existence would mourn for him.

Answer: Hel

3. This process is inefficient at producing energy but it becomes necessary when oxygen is unavailable. For 10 points each,

[10] Name this alternative to cellular respiration that converts sugars into waste products such as ethanol. It is perhaps better known as a process that produces beer and wine.

Answer: **fermentation**

[10] This acid is produced when oxygen-deficient muscles undergo fermentation. While ethanol fermentation produces carbon dioxide, this acid's fermentation does not, and this carboxylic acid derivative is the same acid that spoils milk.

Answer: <u>lactic</u> acid [or <u>lactate</u>]

[10] In the Cori cycle, lactate is converted to pyruvate, which is then converted to glucose by this process. This process can be thought of as an inverse glycolysis pathway, and in humans, this process occurs in the liver.

Answer: **gluconeogenesis**

4. In one novel, this character holds Snowden as Snowden dies. For 10 points each,

[10] Identify this bombardier who was stationed in Pianosa, before sailing to Sweden. Milo Minderbinder is in this officer's squadron.

Answer: Yossarian

[10] Yossarian is the protagonist of this Joseph Heller novel, the first in which Yossarian appears. The title of this novel refers to problem Yossarian has in attempting to be declared insane to get out of flying combat missions.

Answer: Catch-22

[10] Yossarian also appears in this Heller novel, in which Yossarian looks to throw a wedding ceremony at the Port Authority Bus Terminal. The septuagenarians Sammy Singer and Lew Rainowitz also appear in this novel.

Answer: Closing Time

5. For 10 points each, name the following commanders from the War of 1812.

[10] This American general, known as "Old Fuss and Feathers, won the Battle of Queenston Heights during the Niagara campaign. He later captured Veracruz during the Mexican-American War.

Answer: Winfield Scott

[10] During the War of 1812, this man defeated British forces on Lake Erie. His brother Matthew would later open the doors of Japan to trade.

Answer: Oliver Hazard Perry (prompt on just "Perry")

[10] At the Battle of Thames, this Native American leader was killed. He had earlier teamed up with Isaac Brock to siege Detroit.

Answer: **Tecumseh**

- 6. The time-averaged Poynting vector over the speed of light gives this quantity when it's caused by electromagnetic radiation. For 10 points each:
- [10] Name this quantity, the ratio of force to the area over which the force is exerted. It can be measured in torr or atmospheres.

Answer: **pressure**

[10] This man's namesake law states that a difference in pressure is equal to density times gravitational acceleration times the height difference. He also names a unit for measuring pressure, equal to one Newton per meter squared.

Answer: Blaise Pascal

[10] In thermodynamics, heat capacity at constant pressure differs from heat capacity when this variable is held constant by R. On a diagram with pressure and this quantity as axes, taking the integral of a curve gives work.

Answer: volume

- 7. This character is a big fan of poison. For 10 points each,
- [10] Identify this character that leads the fictional country of Panem. He has sores on the inside of his mouth, and wears a rose to mask the smell of blood.

Answer: President **Coriolanus Snow** (accept either or both names)

[10] President Snow first appears in this Suzanne Collins book. *Catching Fire* and *Mockingjay* were the two sequels to this book, in which Katniss Everdeen participated in the 74th annual edition of the title event.

Answer: The **Hunger Games**

[10] This sister of Katniss was chosen for the Hunger Games in the first book. Also in the first book, Katniss volunteered to go to the 74th Hunger Games in place of this character.

Answer: **Primrose** Everdeen (prompt on Everdeen)

- 8. In one section, this work notes that a high probability of a random event may cause the observer to believe that the event will happen; that belief has a massive impact on one's thoughts. For 10 points each,
- [10] Name this philosophical book that famously awoke Immanuel Kant from his "dogmatic slumber."

Answer: An Enquiry Concerning Human Understanding

[10] After A Treatise on Human Nature fell "dead-born from the press," this Scottish author re-worked it into An Enquiry Concerning Human Understanding.

Answer: David **Hume**

[10] Hume questioned whether this form of reasoning was valid as a means of gaining knowledge, as an argument for its validity seemed to require using it as support. This style of reasoning uses particular examples as evidence to support a general conclusion, as opposed to deductive reasoning.

Answer: **inductive** reasoning (accept word forms like **induction**)

9. The title character's mother is shipped to the American colonies after this character is born. For 10 points each, [10] Identify this novel whose title character marries a banker with an unfaithful wife. The title character is later a convict at Newgate, before returning to the American colonies.

Answer: Moll Flanders

[10] This character, created by the author of *Moll Flanders*, nicknamed a former Carib cannibal "Friday" because he met Friday on a Friday. He is based on Alexander Selkirk, and is shipwrecked on an island.

Answer: **Robinson Crusoe** (accept either or both names)

[10] This English author wrote Robinson Crusoe and Moll Flanders.

Answer: Daniel **Defoe**

10. Act Two of this work opens with a fugue on the chorus "Behold the Lamb of God," and ends with a chorus praising the "King of Kings" and "Lord of Lords." For 10 points each,

[10] Identify this oratorio that contains the "Hallelujah" Chorus.

Answer: Messiah

[10] This composer of Water Music and Music for the Royal Fireworks wrote Messiah.

Answer: George Frideric Handel

[10] After the Hallelujah Chorus, Act 3 of *Messiah* opens with a soprano solo, whose text comes from Job 19:25, noting that "I Know that" this figure "liveth."

Answer: I Know that my **Redeemer** liveth

11. There are only 48 known examples of this type of number, all of which are even; we don't yet know whether there are infinitely many of these numbers, nor if any of them are odd. For 10 points each,

[10] Give this term for a number equal to the sum of its proper divisors; for example, 6 is this type of number because it is only divisible by 1, 2, and 3 -- which add up to 6 -- and itself.

Answer: **perfect** numbers

[10] Euler proved that there are exactly as many even perfect numbers as there are these numbers, which are each one less than a power of 2.

Answer: Mersenne primes (do not prompt on partial answer)

[10] Each even perfect number is paired with exactly one Mersenne prime; as a result, this type of function, which is both one-to-one and onto, can be constructed between the set of all even perfect numbers and all Mersenne primes.

Answer: **bijection** (accept word forms; prompt on one-to-one correspondence)

12. This author wrote about an apple falling on Isaac Newton's head in his Essay on Poetry. For 10 points each,

[10] Identify this author who wrote about the title Babylonian philosopher in Zadig.

Answer: **Voltaire** (Or Francois Marie **Arouet**)

[10] Voltaire mocks Dr. Pangloss's optimism in this satirical novel. At the end of this novel, the title character and his friends cultivate their gardens.

Answer: Candide: Or, Optimism

[10] Voltaire created Dr. Pangloss as a parody of this philosopher. This optimistic philosopher used the principle of sufficient reason to argue that this world is the best of all possible worlds in his work *Monadology*.

Answer: Gottfried Wilhelm Leibniz

13. This artist painted *The Descent from the Cross* and *The Garden of Love*. For 10 points each,

[10] Name this Flemish painter known for his fleshy nudes.

Answer: Peter Paul Rubens

[10] Rubens included the paintings *The Birth of the Princess* and *The Coronation in Saint-Dennis* in his cycle of 24 paintings made for this woman. The cycle includes a painting entitled "The Destiny of" this woman.

Answer: Marie de' Medici

[10] Rubens painted this painting in the Medici Cycle following the marriage of Marie de' Medici to Henry the fourth. It features Marie walking down a red ramp over some naked people.

Answer: The **Disembarkation at Marseilles**

14. For 10 points each, name some conflicts dealing with amphibious landings.

[10] Allied forces made the largest amphibious landing in history during this invasion. This invasion targeted a French beach and was part of Operation Overlord.

Answer: **D-Day** (accept anything to do with landing/invading **Normandy** or **June 6th, 1944**)

[10] The persians used an amphibious landing to reach the site of this battle. After this battle, it is alleged that Pheidippides died after delivering a message.

Answer: Battle of Marathon

[10] During this conflict Britain, Israel, and France launched an amphibious assault, Operation Musketeer, as part of an invasion of Egypt to capture the namesake structure.

Answer: Suez Crisis

15. On Isle Royale in Michigan, the relationship between this animal and moose have been extensively studied. For 10 points each:

[10] Name this animal, whose removal from Yellowstone National Park triggered an explosion of elk population. These animals were subsequently re-introduced to the park in 1995.

Answer: wolves [or Canis lupus]

[10] In both aforementioned ecosystems, wolves benefit from this type of interaction, in which one species consumes another species. Stalking and ambush are two methods for this type of interaction that can result in the death of prev.

Answer: **predation** [or **predator**]

[10] Predator-prey relationships can be modeled naively with this set of differential equations that includes four distinct interaction parameters to model the relationship.

Answer: Lotka-Volterra equations

16. For 10 points each, answer the following about Middle Eastern denominations of Christianity.

[10] Ten percent of this nation's population, and the vast majority of this nation's Christian population, are Coptic. In 2012, a Coptic schoolteacher was arrested for defaming Islam and this country's then-President, Mohamed Morsi.

Answer: **Egypt**

[10] This church of roughly half a million people is centered primarily in Iraq and stems from a branch of Nestorianism. Most of its members, including its head, Louis Sako, are ethnically Assyrian.

Answer: Chaldean (Catholic) Church

[10] The Maronite Christian Church is centered in this nation, which established an unwritten pact in 1943 that dictates its President be Maronite and its Prime Minister be Sunni Muslim.

Answer: Lebanon

17. This event was ended with the rise of Napoleon Bonaparte. For 10 points each,

[10] Name this event in which Louis XVI was overthrown. During this period, Maximilien Robespierre rose to power and started the Reign of Terror.

Answer: French Revolution

[10] The French Revolution started after the storming of this location. It was targeted for its gunpowder, rather than its prisoners.

Answer: The **Bastille**

[10] During the revolution, the French countryside was thrown into this state of panic. During this panic, which led to the end of feudalism, peasants attacked many aristocratic homes.

Answer: Great Fear

18. For 10 points each, give the following about lawsuits involving religious liberty.

[10] This chain of craft stores won a 2014 Supreme Court case, arguing that providing contraceptives in accordance with the Affordable Care Act's mandate violated this corporation's religious beliefs.

Answer: <u>Hobby Lobby (accept Hobby Lobby v. Burwell</u> or <u>Hobby Lobby v. Sebelius</u>, with names in either order)

[10] Kawaljeet Tagore was fired from the IRS in 2006 for insisting on carrying this article of the Sikh faith, a small ceremonial dagger. After a lengthy court battle, the U.S. government reached a settlement with Tagore in November 2014.

Answer: kirpan

[10] In 2013, prisoner Gregory Holt handwrote his own petition to the Supreme Court asking for the right to this type of religious freedom. Holt asks for a compromised one-half inch length that would prevent concealing contraband material.

Answer: wear a beard

19. This film is based on the novel *The Clansman*, and public reaction to it led to the director's next film *Intolerance*. For 10 points each,

[10] Name this propaganda film which glorifies the Ku Klux Klan. In this film, black people are intimidated into not going out ot vote by a line of Klansmen staking out their front doors.

Answer: **Birth of a Nation**

[10] Lillian Gish often appeared in this director's films, including *Birth of a Nation*. This prolific director's other films include *Way Down East* and *The Struggle*.

Answer: David Llewelyn Wark "D.W." Griffith

[10] This other propaganda film was directed by Leni Riefenstahl, and commissioned by Adolf Hitler. It is set in the 1934 Nazi Party Congress in Nuremburg, and inspired Frank Capra's film series *Why We Fight*.

Answer: Triumph of the Will (accept Triumph des Willens)

20. Primus and Helena are two examples of these devices in one play. For 10 points each,

[10] Identify these devices that are produced in Rossum's Universal factory. Isaac Asimov came up with three laws for these devices.

Answer: **Robots**

[10] In this Czech author's play *R.U.R.*, Alquist is the only human left alive. He also wrote about Doctor Galen in *The White Disease*.

Answer: Karel Capek

[10] In this Karel Capek novel, Captain van Toch discovers the title characters on an island near Sumatra.

Answer: War With the Newts