

Prison Bowl VI

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Round 09 – Tossups

1. In the preface of this work, its author wrote that Nature is personified by a veiled character wearing a mask with wax tears. That character's husband hangs up coats and hats to summon Madame Pace ("PAH-chay"), in whose brothel he nearly had an incestuous affair. During the reenactment of that brothel scene, one character tells her mother to "Scream as you screamed then!". This play ends with the Son shooting himself and the Child drowning in a fountain. Stiff masks are worn by the central figures, who interrupt the Stage-Director's rehearsal. For 10 points, name this play written by Luigi Pirandello.

ANSWER: Six Characters in Search of an Author [or Sei personaggi in cerca d'autore] <MZ>

2. This nation fought against Chad in the Battle of Adre, and the 21st Lancers carried out a notable charge against forces from this country. The Hyksos invasion of a neighbor of this country led to the formation of an independent here, where Charles Gordon's army was defeated. General Marchand marched his forces to Fashoda in this country during one incident here. Muhammad Ali conquered this nation, site of a bloodless 1989 coup, and Lord Kitchener won the Battle of Omdurman here over forces loyal to the Mahdi. For 10 points, name this country which contains the strife-ridden region of Darfur and a capital at Khartoum.

ANSWER: Sudan <ZZ>

3. The 18 major vows and 46 minor ones associated with these entities and involving merit transference were described by Asanga. The sites they visit are often pilgrimage destinations, such as Putuoshan. They include Ksitigarbha, who presides over all beings in hell. The Nyingma school believes that the king path to becoming this is the lower than the boatman- or shepherd-like paths, which are not accepted in Tibetan Buddhism. Including Guanyin, associated with compassion, they go through ten bhumis, or stages, on their way to becoming a buddha. For 10 points, name these beings in Buddhism, who remain in the world to help others achieve enlightenment.

ANSWER: bodhisattvas <PS>

4. The Mundell-Tobin effect pertains to the increase in interest rates along with this process, and the Taylor rule claims that interest rate should be changed by a central bank alongside increases in this. The opportunity cost resulting from this phenomenon is called the shoe leather cost, and aggregate demand overcoming the potential output of an economy leads to the demand-pull variety. It is calculated by comparing two years' Consumer Price Index. For 10 points, name this economic phenomenon that is defined as the rise in the price of goods over a period of time.

ANSWER: inflation <JL>

5. The northeastern portion of this body of water, which contains Rusinga Island and the port city of Kisumu, is Winam Gulf. The largest river that flows into this lake is formed by the Ruvuvu River and features Rusumo Falls; that inflow is the Kagera River. This lake has two outlets: the Katonga River, and another river which flows near Entebbe and Kampala before crossing Uganda and reaching Sudan. Once thought to be the source of the White Nile, this lake also borders Kenya and Tanzania. For 10 points, name this largest lake in Africa, which shares its name with a British queen.

ANSWER: Lake Victoria [or Nam Lolwe] <WR>

6. One member of this family is told that he doesn't understand children after spanking his niece for punching Francis. This family includes Jack, Alexandra, and a boy who destroys a row of camellias and is forced to read to the morphine-addicted Mrs. Dubose as punishment. Another member of this family lives up to his old nickname "One-Shot" by shooting a rabid dog. That character's children are attacked by Bob Ewell and rescued by Boo Radley after his controversial defense of Tom Robinson. For 10 points, name this family that includes Jem, Scout, and Atticus, the central family of Harper Lee's *To Kill a Mockingbird*.

ANSWER: Finch family <MZ>

7. An *Allegro pomposo* section in this composition features a slow double bass adaptation of the violin part in Berlioz's *Dance of the Sylphs*. This work's 12th movement quotes "Twinkle Twinkle Little Star" and, like a tone poem by the same composer, uses a xylophone to evoke clattering bones. That section, *Fossils*, precedes this work's most famous movement, which contains a cello solo adapted by Mikhail Fokine into a ballet for Anna Pavlova. Containing movements such as "The Elephant" and "The Swan", for 10 points, name this suite subtitled "Grand Zoological Fantasy" by Camille Saint-Saens.

ANSWER: The *Carnival of the Animals* [or *Le carnaval des animaux*] <WR>

8. The earliest discovered writings on these were in the Hittite language and were authored by Kikkuli of Mitanni, while Gryson, an expert on these, helped Xenophon to write two treatises on the subject. Tupac Amaru II and François Ravaillac were both executed using four of these, and one of these named Incitatus was legendarily appointed as a Roman senator by Caligula. The Avars brought an invention that eased their use to Europe, and huge masses of these were instrumental in saving the French army at Eylau. Many cities were named after of these owned by Alexander the Great, Bucephalus. For 10 points, name these animals used to transport hussars and knights.

ANSWER: horses <WR>

9. One person with this surname synthesized radiophosphorus by bombarding aluminum with alpha particles, while another contributed to the artificial synthesis of nitrogen. Another person with this name is the namesake of a law in which the magnetisation of a paramagnetic material is inversely proportional to temperature; that man also names the temperature above which a ferromagnetic material becomes paramagnetic. This name's most famous bearer, who hydrolysed pitchblende to isolate radium, is the namesake of a unit of radioactivity and element number 96. For 10 points, name this surname shared by a husband and wife who discovered polonium, Pierre and Marie.

ANSWER: Curie <WR>

10. The two main characters in this work travel over the mountains during a "very lucrative winter" before heading for Mississippi. Another character in this film is apparently a Francophile, but does not realize that Alexander Dumas was partly black. Dr. King Schultz ("SHOOL-tz") shoots a horse, leaving a Speck brother to die at the hands of slaves, and later dynamites his own wagon to avoid a lynching. Calvin Candie smashes his hand on a skull while explaining phrenology, and demands 12,000 dollars for Broomhilda. For 10 points, name this Quentin Tarantino film about the title character who becomes a bounty hunter.

ANSWER: *Django Unchained* <WD>

11. In one part of this work, the author warns its readers of an impending event, "I now must change / Those Notes to tragic". A character in this work becomes fascinated by a reflection in a pond, not realizing that it is her own. The antagonist claims that angels are "self-begot, self-raised", and another character in this work receives a vision of the Great Flood from Michael. Moloch, Belial, and others offer different viewpoints during a debate in Pandemonium in Book II of this work. The antagonist declares, "Better to reign in Hell, then serve in Heav'n" in, for 10 points, this epic poem about Adam and Eve's fall from the Garden of Eden, written by John Milton.

ANSWER: *Paradise Lost* <SH>

12. Some of these organisms produce sexual structures that are classified as unitunicate, bitunicate, or prototunicate. One of these organisms was used to prove the "one gene - one enzyme" hypothesis by Beadle and Tatum. These organisms may possess asci or conidial anastomosis tubes, examples of specialized hyphae. These eukaryotes form mutualistic relationships with the roots of vascular plants in mycorrhizae, and they are often pioneer species when partnered with photosynthetic algae in lichens. Spores allow bread mold to reproduce in, for 10 points, this kingdom of organisms which includes yeasts and mushrooms.

ANSWER: fungi <WH>

13. This nation sent a delegation to London to negotiate the Treaty of Whitehall, and it earlier defeated the Muscogee at the Battle of Taliwa. Tsali led a group of this nation in hiding for several years in the Snowbird Mountains, and extremists from John Ross's party in this nation attempted to assassinate the leaders of the rival Ridge party. The Treaty of New Echota led to their relocation despite the ruling in *Worcester v. Georgia*, and that relocation was overseen by Winfield Scott. For 10 points, identify this Indian nation whose alphabet was created by Sequoyah which was forcibly relocated to Oklahoma via the Trail of Tears.

ANSWER: *Cherokee* Nation <ZZ>

14. The central figure in this work is possibly based on Simonetta Vespucci. The bottom-left corner of this work displays cattails, while the right side of this painting contains three tall trees and an orange grove in the background, as well as a red-haired figure who extends a red, floral-patterned robe towards the title figure. On the left side of this painting, many roses fall around Chloris and Zephyr, who blow wind towards the title figure as she stands upon a clamshell and emerges from the sea. For 10 points, name this Botticelli painting which depicts the title Roman goddess of love.

ANSWER: The *Birth of Venus* [or *Nascita di Venere*] <WR>

15. This man's mortal mother may have eaten his heart, and he carried a thyrsus tipped with a pinecone from which honey dripped, perhaps given to him by the Titans. He grew up with the nymphs of Nysa, and returned to Greece after Rhea cured him of his madness. This "twice-born" god had Lycurgus murder his son with an axe when Lycurgus tried to capture the Maenads. Aceotes escaped being turned into a dolphin when his fellow sailors tried to bind this god, whose mother was incinerated after viewing Zeus as proof of his godhood. This son of Demeter or Semele is followed by the satyrs. For 10 points, name this Greek god of wine.

ANSWER: Dionysus [accept Bacchus before "Nysa"] <WD>

16. Wolfgang Kapp's coup was stopped in this city after a general strike. A meeting at this location gave Cyprus to the British, while another meeting here concluded with a General Act that established the Congo as private property. The Glienicke Bridge just outside this city was used to conduct several spy exchanges. Three corridors were used to access this city during one event here, where Operation Little Vittles was conducted. Checkpoint Charlie in this city was a famous part of a structure built here under orders from Walter Ulbricht. For 10 points, identify this capital of the Hohenzollern family of Prussia, split into 4 occupation zones following World War II.

ANSWER: Berlin <ZZ>

17. One equation that governs these objects involves the ideality factor, which is multiplied by the thermal voltage. The saturation current is another term in that law, the Shockley equation. These devices typically overheat above the breakdown voltage, although the reverse-biased "avalanche" type will not. These devices, symbolized on circuit diagrams with a triangle and a vertical line, consist of a single P-N junction. With low forward resistances but very high reverse resistances, for 10 points, name these circuit components, designed to allow current to flow in only one direction, which may be "light-emitting".

ANSWER: diodes <WR>

18. In this novel, the title phrase appears in a passage about "the unborn child that is the inheritor of our fear". The protagonist of this novel is relieved when Mr. Carmichael takes a case *pro deo*, while another character has a bookshelf dedicated to Abraham Lincoln. One character funds the building of irrigation, terraces, and a church in a village after his son Arthur Jarvis is killed by the protagonist's son. After receiving a letter from Theophilus Msimangu and descending into the city, the protagonist of this novel finds that his "ill" sister Gertrude has become a prostitute and his son Absalom a murderer. For 10 points, name this work centering around Stephen Kumalo, a novel by South African author Alan Paton.

ANSWER: *Cry, the Beloved Country* <PS/MZ>

19. He argued that ethical judgments were based on feelings rather than on moral principles. This philosopher said that man was governed by custom, and argued that humans justified the use of induction by assuming that causes and effects were "constantly conjoined". This man apparently contradicted himself by positing the existence of a "missing shade" that a man who had experienced all other blues would be able to deduce. This British empiricist is often grouped with Berkeley and Locke but argued that we could never have true knowledge about complex ideas. For 10 points, name this Scottish philosopher, the author of works such as *An Enquiry Concerning Human Understanding*.

ANSWER: David Hume <WD>

20. This body's "Weird Terrain" may have been formed concurrently with its Caloris Basin. In 2022, this body will be orbited by BepiColombo, which will research its iron-rich core and its magnetic field first detected by Mariner 10. This body's orbital eccentricity is the highest of any planet, while its perihelion precesses an extra 43 arcseconds than predicted by Newtonian mechanics. Its day is longer than its year and it experiences the most temperature variation of any planet, since its thin atmosphere has been largely blown away by solar wind. The smallest planet in the solar system, for 10 points, name this planet closest to the Sun.

ANSWER: Mercury <MZ>

TB. This man forbade clergymen from living near a parish they were expelled from in the Five Mile Act, and he was forced to end the Third Anglo-Dutch War following a string of victories by Admiral de Ruyter. Titus Oates spread rumors that there was a Catholic conspiracy to assassinate this man, the Popish Plot. This man's Lord High Treasurer, Thomas Osborne, advised against his Royal Declaration of Indulgence, and he was targeted along with his brother in the Rye House plot. Though he bore no children with his wife Catherine of Braganza, he had numerous illegitimate children. For 10 points, name this Stuart king restored to the monarchy shortly after the death of Oliver Cromwell who converted to Catholicism on his deathbed.

ANSWER: Charles II <AM>

Round 09 – Bonuses

1. It includes the poem “Mid-Term Break”, which concludes “a four-foot box, a foot for every year.” For 10 points each:

[10] Name this poetry collection that includes “Digging”. The title poem is about a young boy who collects frogspawn, but eventually feels threatened by the frogs and loses interest in nature.

ANSWER: **Death of a Naturalist**

[10] *Death of a Naturalist* is by this poet of *Door into the Dark*, *North*, and *Stations*. He also created a notable translation of *Beowulf*.

ANSWER: Seamus **Heaney**

[10] In *Station Island*, Heaney writes about encountering James Joyce in this country. Heaney wrote of this country: “Be advised my passport’s green. / No glass of ours was ever raised / to toast the Queen”.

ANSWER: **Ireland** [or **Eire**] <SH>

2. It radicalized the ILGWU and led to the formation of the American Society of Safety Engineers. For 10 points each:

[10] Name this 1911 tragedy which took place on the 8th, 9th and 10th floors of the Asch Building. It led to the deaths of over 100 mostly female employees of a garment company.

ANSWER: **Triangle** Shirtwaist Factory **fire**

[10] The Triangle fire occurred in this city with a largely immigrant population once dominated politically by Tammany Hall. Mayors of this city have included George McClellan, Jr. and Fiorello La Guardia.

ANSWER: **New York** City

[10] This figure helped investigate the Triangle fire before becoming the longest-serving Secretary of Labor under Franklin Roosevelt. As the first woman in cabinet, she helped push for social security and child labor reform.

ANSWER: Frances **Perkins** <WR>

3. Over 93,000 people are on the transplant wait list for these in the United States. For 10 points each:

[10] Name these organs located dorsally on either side of the vertebral column. Composed of nephrons, they are responsible for filtering nitrogenous wastes from the blood and reducing water loss.

ANSWER: **kidneys**

[10] This hormone, produced by the hypothalamus, increases water retention in the kidney by lowering blood pressure and increasing permeability of the collecting tubules.

ANSWER: **antidiuretic** hormone [or **ADH**; or **vasopressin**]

[10] Antidiuretic hormone increases the concentration but decreases the volume of this substance secreted by the kidney and collected in the bladder. Bilirubin is responsible for its characteristic color.

ANSWER: **urine** <SC/WH>

4. For 10 points each, identify the following about the philosophy of a certain field.

[10] Francis Bacon helped outline this technique of observation, hypothesis, experimentation, and confirmation.

ANSWER: **scientific method**

[10] In formulating hypotheses, science often follows this principle that expresses a preference for the hypothesis making the least assumptions. Karl Popper explains this as simply a preference for a more easily falsifiable theory.

ANSWER: **Ockham’s razor** [or **lex parsimoniae**; or **law of parsimony**]

[10] According to Thomas Kuhn, science occasionally undergoes these revolutionary changes of an entire system and way of thinking. Examples of these events include the Copernican Revolution and the acceptance and adoption of relativistic physics.

ANSWER: **paradigm shifts** [prompt on “conceptual revolution” or “scientific revolution”] <WD/MZ>

5. For 10 points each, name some problematic events going on in Russia.

[10] He recently signed a bill outlawing American adoption of Russian children. Name this current president of Russia, accused by many of presiding over an authoritarian and corrupt regime.

ANSWER: Vladimir **Putin**

[10] Many Russians were outraged after this punk rock band was arrested for singing protest songs inside a church in Moscow.

ANSWER: **Pussy Riot**

[10] This man, formerly the richest man in Russia, was sentenced to 7 more years in prison in 2010 on charges of fraud. Many people believe he is imprisoned due to his affiliation with the Russian opposition party.

ANSWER: Mikhail **Khodorkovsky** <RS>

6. For 10 points each, name the following about exposure in photography.

[10] Early photography utilized this process that creates a direct positive image on a polished silver-coated copper plate. It required really long exposure times, after which the plate would be developed with mercury vapor.

ANSWER: **daguerreotype**

[10] Exposure is altered by this number, which is the focal length of the lens over aperture diameter. If the shutter speed is constant, increasing this number decreases the amount of light and increases the depth of field.

ANSWER: **f-stop** [or **f-number**; or focal **ratio**]

[10] Ansel Adams and Fred Archer developed this system to control exposure and development. It divides a scale of values into sections labelled 0 through X, each of which correspond with the exposure from an f-stop.

ANSWER: **Zone** System [prompt on “Exposure Value” or “EV”] <MZ>

7. This concept is important in determining the most stable resonance structure of a given molecule. For 10 points each:

[10] Name this value which, for an atom in a compound, is equal to the number of valence electrons of that atom minus the number of non-bonding electrons minus half the number of bonding electrons.

ANSWER: **formal charge** [prompt on partial]

[10] The formal charge of the central carbon atom in this simplest alkane is zero, because carbon has 4 valence electrons and makes 4 bonds with 4 hydrogen atoms. This hydrocarbon is the primary component of natural gas.

ANSWER: **methane** [prompt on “CH₄”]

[10] Methane possesses this molecular geometry, which features bond angles of 109.5 degrees for a central atom with four substituents and no lone pairs.

ANSWER: **tetrahedral** molecular geometry <WR>

8. Joseph Sedley mysteriously dies after signing away much of his money to her. For 10 points each:

[10] Name this character and friend of Amelia Sedley who cheats her way up the social ladder with her husband Rawdon.

ANSWER: **Becky Sharp** [accept either]

[10] Becky Sharp and Amelia Sedley appear in this novel, which opens with the two characters’ graduation from Miss Pinkerton’s Academy for Young Ladies.

ANSWER: **Vanity Fair**

[10] This author of *The History of Henry Esmond* and *Vanity Fair* described the downfall of the title character in *The Luck of Barry Lyndon*.

ANSWER: William Makepeace **Thackeray** <MZ>

9. A modified version of one of these objects held a ricin pellet used to poison the Bulgarian dissident Georgi Markov. For 10 points each:

[10] Identify this common type of object used to fend off the rain, one of which was carried around by Jonas Hanway despite some initial public embarrassment.

ANSWER: umbrella [or synonyms like parasol]

[10] During the Panathenaea festivals in Athens, daughters from this class of people would hold umbrellas for the Athenian women as a symbol of inferiority. These people were foreign residents who had settled in Athens but did not have full citizenship.

ANSWER: Metics

[10] This Chinese leader ordered the construction of a collapsible umbrella for one of his ceremonial chariots. He seized power as a regent for Rizi, but was overthrown after many rebellions. His reign interrupted Han rule.

ANSWER: Wang Mang <ZZ>

10. She appointed her son Kingu to lead her army of monsters. For 10 points each:

[10] Name this massive dragon in Babylonian myth, the primordial personification of chaos and the ocean. After her defeat, her body was split in two and used to form the world.

ANSWER: Tiamat

[10] This god used a whole slew of weapons, including a giant net, a flood-storm, and a whole bunch of winds, to kill Tiamat. After he succeeded, he was made the chief Babylonian god and was given 50 names.

ANSWER: Marduk [or Bel]

[10] Tiamat gave these objects to Kingu, which were reclaimed by Marduk after he defeated Tiamat. They conferred to him his authority as chief of the pantheon.

ANSWER: Tablets of Destiny [or Dup Shimati] <WR>

11. Its coastline touches the South Atlantic and Indian Oceans. For 10 points each:

[10] Name this country whose highest point, Mafadi, is located in the Drakensberg range. This polity recognizes distinct executive, judicial, and legislative capital cities.

ANSWER: Republic of South Africa

[10] In South Africa's north is this desert, which primarily covers Botswana and Namibia. The Okavango River flows through this desert, home to the Dragon's Breath Cave, which contains a huge underground lake.

ANSWER: Kalahari Desert [or Dorsland]

[10] The Notwane River, a tributary of this river, runs along the edge of the Kalahari Desert. This river empties into the Indian Ocean after forming the border between South Africa and Botswana.

ANSWER: Limpopo River <PS>

12. In one scene, George tells a story about a boy who walks into a bar and orders a "bergin". For 10 points each:

[10] Identify this play in which Nick and Honey become entangled in a series of bizarre games played by George and Martha.

ANSWER: Who's Afraid of Virginia Woolf?

[10] This playwright of *Laying an Egg*, *A Delicate Balance*, and *Who's Afraid of Virginia Woolf?* followed Charlie and Nancy and the lizards Leslie and Sarah in *Seascape*.

ANSWER: Edward Albee

[10] In Act III of *Who's Afraid of Virginia Woolf?*, George recites the Kyrie after killing off this figure, much to Martha's horror. He is described as a "poor Lamb" who "loved the sun".

ANSWER: their imaginary son [or equivalents like their fantasy son] <MZ>

13. It is typically faster than heapsort despite its longer worst-case run time. For 10 points each:

[10] Name this algorithm which partitions a list around a pivot element before sorting the two resulting sub-lists. Its "balanced" type first selects an element likely to be the median of the list.

ANSWER: quicksort

[10] Quicksort is this type of algorithm which recursively breaks down problems into multiple problems of the same type. The Master theorem is used to solve recurrence relations concerning these algorithms.

ANSWER: divide and conquer algorithm

[10] This notation is used to classify algorithms based on processing time or space requirements. On average, quicksort makes *this* of $n \log n$ comparisons to sort n items, making it a linearithmic function.

ANSWER: big O notation <SH>

14. This chain of events was prompted by the increased Western influences on a certain country. For 10 points each:
[10] Name this series of events which saw the end of the Tokugawa Shogunate and the reestablishment of the emperor as Head of State and the creation of the Charter Oath.

ANSWER: Meiji Restoration [accept knowledge equivalents of Meiji revolution, reform, etc.]

[10] The arrival of this American admiral in Japan with his naval squadron, the Black Ships, helped to prompt the opening of Japan and was a major factor in bringing about the Meiji Restoration.

ANSWER: Matthew C Perry [prompt on “Perry”]

[10] Following the Meiji Restoration, samurai angry at the loss of their position instigated this event which was led by Saigo Takamori. It was crushed by the better-equipped and more modern Meiji army.

ANSWER: Satsuma Rebellion <JL>

15. After only 36 hours, one prisoner “began to act crazy.” For 10 points each:

[10] Name this experiment was intended to show the effects of authority, but was aborted six days after its inception after guards began to physically and psychologically abuse other participants.

ANSWER: Stanford prison experiment

[10] This psychology professor conducted the Stanford prison experiment and wrote *The Time Paradox*.

ANSWER: Philip Zimbardo

[10] Zimbardo wrote this book after the Stanford prison experiment that seeks to explain why good people perform evil acts after being given authority. Its title refers to the biblical figure who becomes Satan.

ANSWER: *The Lucifer Effect* <SH>

16. Answer some questions about a cool traditional Ghanaian instrument, the gyil (“JEEL”), for 10 points each:

[10] The gyil is categorized as this type of percussive musical instrument. Unlike the glockenspiel, it uses tuned wooden bars as opposed to metal ones, which are struck by mallets.

ANSWER: xylophone [prompt on “marimba” or “vibraphone”]

[10] The bars of the gyil are tuned to this scale, which can be hemitonic or anhemitonic. It features in Debussy’s *La mer*, traditional Chinese music, and all the black keys of a piano.

ANSWER: pentatonic scale

[10] The gyil musician always plays this type of phrase, a short melody that is continually repeated without any variation. The second movement of Gustav Holst’s *St. Paul’s Suite* features this technique.

ANSWER: ostinato <WR>

17. One character in this work was forced to live in a river after accidentally breaking a vase. For 10 points each:

[10] Name this Chinese novel that relates the adventures of a priest and three disciples on the road to retrieving Buddhist scriptures from Lei Yin Temple on Vulture Peak in India.

ANSWER: Journey to the West [or Xi You Ji]

[10] This shapeshifting disciple notoriously consumed the peaches of immortality and pills of longevity. He was imprisoned under a mountain for 500 years until he joined the journey to the West.

ANSWER: Sun Wukong [or Monkey King]

[10] In *Journey to the West*, this cute and somewhat helpless monk must fend off countless evil spirits while traveling with his trusty disciples Zhu Bajie, Sha Wujing, and Sun Wukong.

ANSWER: Xuanzang [or Tang Seng; or Tang Sanzang] <KX>

18. He declared that there was no use in expanding the navy, since “water rats do not fight with land rats”. For 10 points each:

[10] Name this German Chancellor who argued that Germany could only be united through “blood and iron” and who resigned shortly after the ascension of Wilhelm II.

ANSWER: Otto von Bismarck

[10] One example of the reliance on “blood and iron” was this war, carefully planned by Bismarck. A decisive victory at Sadowa allowed for Bismarck to quickly make peace with Austria and weaken their influence on the German Confederation.

ANSWER: Seven Weeks’ War [prompt on “Austro-Prussian War”]

[10] Bismarck largely succeeded due to his adherence to this ideology characterized by decisions based on power, practical, and material factors and considerations while ignoring moral, ideological, and ethical premises. It is a form of power politics.

ANSWER: Realpolitik <JL>

19. Answer some things about radioactive decay for 10 points each.

[10] The “minus” type of this decay mechanism releases an electron and a neutrino and increases the charge of the decaying nucleus by one. Unlike alpha decay, this type of decay does not change the mass number.

ANSWER: beta decay

[10] This interaction mediates beta decay and is itself mediated by the W and Z bosons. This fundamental force was unified with electromagnetism in 1968.

ANSWER: weak nuclear force [or weak interaction]

[10] In 1957, Yang and Lee discovered that the weak force is the only fundamental force that violates conservation of this property. This property’s inversion changes the sign of a single spatial coordinate.

ANSWER: parity <WR>

20. Directly above the head of Saint Stephen is the artist himself, in a white ruff and black robe. For 10 points each:

[10] Name this painting whose heavenly top half contains an elongated Jesus and Virgin Mary, while the armored title figure is held by Saint Augustine and mourned by Toledan aristocrats in the bottom half.

ANSWER: *The Burial of the Count of Orgaz* [or *The Burial of Count Orgaz*; or *El Entierro del Conde de Orgaz*; accept equivalent translations for entierro like *The Entombment of the Count of Orgaz*]

[10] This Spanish Renaissance artist with an ethnic nickname painted *The Burial of the Count of Orgaz*. His *Opening of the Fifth Seal* features a blue-clothed St. John and nude figures in his traditional tall, slender style.

ANSWER: El Greco [or Doménikos Theotokópoulos]

[10] An El Greco painting by this name features a rear-facing horse in the midground and a snake about to bite the title Trojan priest’s head. Agesander, Athenodoros and Polydorus also sculpted this figure in marble.

ANSWER: Laocoön <WR>

TB. For 10 points each, name some things about your backbone.

[10] The neural tube specializes into the brain and this bundle of nervous tissue that lines the back along with the vertebral column. Damage to this main pathway of information in the body can lead to loss of proper muscle control.

ANSWER: spinal cord

[10] The spinal cord is enveloped in a spinal column which ends with this protruding, triangular posterior bone, usually consisting of four fused vertebrae.

ANSWER: coccyx [or tailbone]

[10] This disorder occurs when the neural tube does not completely close during embryonic development between the 23rd and 27th day after fertilization, ultimately leading to malformation of the vertebrae covering the spinal cord.

ANSWER: spina bifida <WH>