

## Prison Bowl VI

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### Round 12 – Tossups

1. This artist depicted three elephants standing upright in his painting *Circus Scene*, and he also constructed rolling wire horses for a namesake portable miniature circus. One of this artist's large red sculptures is *Eagle*, while another similarly avian work by him in Chicago's Federal Plaza is entitled *Flamingo*. This sculptor's most famous work includes aluminum fins and a steel wire cage suspended on rods attached to the ceiling. That work, an example of a moving kinetic sculpture, contrasts with this artist's abstract stabiles. For 10 points, name this American sculptor of *Lobster Trap and Fish Tail* and other mobiles.

ANSWER: Alexander Calder <WR>

2. One of these substances with phenyl and methyl substituents is known as anisole, while a cyclic type of these compounds features electronegative interior atoms which capture cations. Along with the "crown" type, epoxides are another class of these compounds which can be synthesized from alcohols and halocarbons in the Williamson synthesis. Containing an oxygen atom bonded to two hydrocarbon groups, for 10 points, name this class of organic compounds derived from the name of a classical Greek heavenly element, the "diethyl" variety of which was formerly used as an anesthetic.

ANSWER: ether <WR>

3. In a novel set in this location, Madame Haupt Hebamme is reluctant to see a teenage girl who is dying in childbirth. Catherine Banahan meets Studs Lonigan in a novel set here. Another work describes this place as "a tall bold slugger" and "a dog with tongue lapping for action" before repeating that it is a "Tool Maker, Stacker of Wheat". This "somber city" is the birthplace of a Saul Bellow protagonist in *The Adventures of Augie March*. The meatpacking industry of this "Hog Butcher for the World" was exposed by Upton Sinclair. For 10 points, name this city, the setting of *The Jungle* and the subject of a Carl Sandburg poem.

ANSWER: Chicago <WR>

4. To defend his stance that speech was a result of hearing, this man carried out a language deprivation experiment on his own children. This ruler's son rebelled against him but still took his throne after his death, his son being Jahangir. This man created the dahsala system as a means of taxation, credited to Sher Shah Suri. This emperor repealed the jizya tax on non-Muslims, and created an amalgamation of other religions including Islam, Hinduism, and Christianity called Din-e Ilahi. For 10 points, name this grandson of Babur who ruled over the Mughal Empire.

ANSWER: Jalaluddin Muhammad Akbar the Great <AM>

5. This country enforced a hard currency policy in the late 1990s, but failed to meet the budget deficit requirements of the Stability and Growth pact. In the early 2000s, much of this country's budget went to defense spending due to a rivalry with Turkey. A government elected in October 2009 revised its deficit estimate from 5% to 12% of GDP, leading to an audit by Eurostat. Syriza and Golden Dawn take up 89 seats in this country's parliament. Two separate bailout packages were prepared to avoid an exit from the Euro by this country, though neither the Grexit nor a default has yet occurred. For 10 points, name this southern European country, led by Antonis Samaras, with capital at Athens.

ANSWER: Greece [or Hellenic Republic] <RS>

6. In the chorus of one song in this work, the alto belter female lead transitions from the note E4 to E5 while singing the word "out". Act 2 of this musical begins with a repeated two-measure theme of F major piano chords over which the cast sings "In inches, in miles, in laughter, in strife". This musical contains "Out Tonight", "Life Support" and "Seasons of Love", sung by characters like Roger Davis and Mimi Marquez. For 10 points, name this Jonathan Larson musical centering on a circle of Lower East Side artists with HIV who sing "We're not gonna pay" the title cost.

ANSWER: Rent <WR>

7. Possibly as a response to rumors of their illicit relationship, this man put his son Crispus and wife Fausta to death. This man brought back the solidus coins, introduced by his predecessor, and regained control over the empire after a meeting at Chrysopolis led to the surrender of his co-emperor. The buckling of a wooden or possibly pontoon bridge proved decisive in his greatest victory. That engagement was the battle of the Milvian Bridge, during which his rival Maxentius drowned in the Tiber. Along with co-emperor Licinius, the man issued the Edict of Milan, introducing religious tolerance in Rome. For 10 points, name this Roman emperor who rebuilt Byzantium and converted to Christianity.

ANSWER: Constantine I [or Constantine the Great] <AM>

8. It's not change in volume, but this quantity is zero for an isochoric process because there is no area under its P-V curve, while in an isobaric process, this measurement is equal to P times delta V. For an object in circular motion, this quantity is also zero, because the line integral of the tangential component of the centripetal force along its path is zero. Because this quantity is equal to change in kinetic energy, it has units of joules, and it is path-independent for conservative forces. Equal to the dot product of force and displacement, for 10 points, name this scalar quantity calculated by multiplying force and distance, symbolized W.

ANSWER: work <WR>

9. One work with this title, written by a man whose critics labeled him "fault-finder" or "Old Ragwoman", introduced the system of reckoning time by four-period cycles of Olympiads. A 40-volume work with this title discusses the goddess of Luck, Tyche, as well as the Roman constitution. Besides those works by Timaeus of Tauromenium and Polybius, the most famous work of this title details the 5th century BCE conflict between Greek city-states and the Achaemenids, written by the Halicarnassus-born "Father of" this type of work, Herodotus. For 10 points, name this common title of chronological records which catalogue past events.

ANSWER: *The* Histories [accept History, I suppose] <WR>

10. An ale-wife sends the protagonist to a ferryman, where he destroys the only beings that can cross a body of water. That character's dreams of thunderstorms and falling mountains are seen as good omens by a man who joined "the throng of gazelles with the game at the water-hole." This work's protagonist and a character created by Aruru to be his companion cut down forbidden trees after defeating Humbaba with the assistance of Shamash, but the gods inflict a deadly illness upon Enkidu. Although the presence of a youth-restoring plant is revealed to him, the title king returns empty-handed and reconciles his mortality with the magnificence of the city he built, Uruk. For 10 points, name this Mesopotamian epic poem.

ANSWER: *The Epic of* Gilgamesh <KX>

11. Nye Mountain is one of the 46 "High Peaks" within this state's largest mountain range. The Saranac river flows through the largest national park in the contiguous United States in this state, and this state contains Hemlock Lake and Oneida Lake, part of a group of eleven appendage-like lakes. This state contains the highest-elevation portion of the Appalachian Plateau. Lake Champlain borders this state and its neighbor Vermont, and a canal connects Lake Erie to another river in this state, the Hudson. For 10 points, name this Mid-Atlantic state which contains the Catskill and Adirondack Mountains and has a capital at Albany.

ANSWER: New York <BM>

12. In 1979, Operation Phoenix allegedly involved one of these objects, which caused the Vela Incident. Richard H. Ullman disclosed that the legal loophole of "negative guidance" assisted in the construction of these. The USS *Seadragon* brought one of these objects to Sasebo, an action which opposed the "three principles" policy formulated by Eisaku Sato, and another one of these was lost near Thule. Smiling Buddha saw the use of one of these underground, and another one was used at Los Alamos during the Trinity test. For 10 points, name these devices which include "Fat Man" and "Little Boy", dropped on Nagasaki and Hiroshima, respectively.

ANSWER: nuclear bombs, weapons or warheads [or atomic bombs; or nukes] <WR>

13. A Tamari lattice is a poset of a type of this structure ordered with rotations, and the isometry of the AA variety of these structures is the 2-3 type. Lookup takes  $O(\log n)$  ("Big O of log n") time in the AVL type, which is similar to a variety in which each vertex is painted one of two colors. If  $h$  is the height, at most two to the  $h + 1^{\text{th}}$  power minus 1 nodes are contained in the binary type of this structure, and in the red-black variety, black is the default color of the root node. For 10 points, name this hierarchical data structure whose childless nodes are known as leaf nodes, as opposed to branch nodes.

ANSWER: **tree** [accept **binary tree** before mention] <SH>

14. This work's protagonist is saved from drowning in a deep river by his companion, who finds it shallow. This allows them to meet two shining men, who welcome them through the Wicket Gate. This work's narrative is framed as a series of the author's dreams, including one where the protagonist is asked "Whence came you, and whither are you bound?" by Apollyon in the Valley of Humiliation. Vanity Fair is one of many locations passed through by the title everyman. For 10 points, name this work detailing Christian's journey to the Celestial City from the City of Destruction, a religious allegory by John Bunyan.

ANSWER: *The **Pilgrim's Progress** From This World to That Which Is to Come* <WR>

15. One possible meaning of the name for the area surrounding a building in this city is "narrow," and Samaritan literature holds that this place was built by Nebaioth and his father. Travelers to this supposed location of Adam's burial ground often visit Mina, where they stone pillars representing the devil. A stone in this city is said to have been originally white but turned black from the kisses of the sinful. The Quraysh tribe worshipped Hubal in this location of the Zamzam well. This destination of the Umrah includes the Masjid al-Haram, and non-Muslims are forbidden to enter. For 10 points, name this city, the birthplace of Muhammad, which all Muslims must visit.

ANSWER: **Mecca** [accept **Makkah**; prompt on "Bakkah"] <PS>

16. One of these works holds an open D, imitating a bagpipe drone, while the first of these pieces features E major descending thirds and 32nd-note ricochet arpeggios. The 9th features double stops imitating flutes and horns and is nicknamed "The Hunt". The 6th one of these compositions features a continuous left-hand tremolo and is nicknamed "The Trill", while the 13th is nicknamed "The Devil's Laughter". The last of these pieces, number 24, was quoted in Rachmaninoff's *Rhapsody on a Theme of the composer of these works*. For 10 points, name this collection of technically challenging studies for the violin composed by an Italian virtuoso.

ANSWER: **Paganini's 24 Caprices** for Solo Violin [prompt on partial; accept **24 Caprices** for Solo Violin before "24"] <WR>

17. In flow cytometry, these molecules bind to fluorophores to differentiate test cells, and HRP is bound to them for use in another process. Kohler and Milstein discovered that myeloma cells can produce the monoclonal variety of these molecules. Three layers of these are used in the "sandwich" variety of the ELISA technique, and these proteins exhibit disulfide bonds between their two heavy and light chains to form a Y-shaped structure. The type of these molecules which attack A and B blood groups is known as Immunoglobulin M. Released by plasma B cells, for 10 points, name these proteins produced by the immune system which each tag a unique antigen.

ANSWER: **antibodies** [or **immunoglobulins** before mention] <WH>

18. One governor of this state, Robert Lucas, successfully retained a strip of land after mobilizing militia at the Maumee River, and the Adena culture in this state constructed the Great Serpent Mound. Agents from this state were ordered to return all "tax" money seized from the Bank of the United States in the case *Osborn v. Bank of US*, and Chief Justice Salmon P. Chase served as governor of this state. A senator from this state was known as "Mr. Republican" and co-wrote the Taft-Hartley Act, while another senator from here authored the Sherman Anti-Trust Act. For 10 points, name this state whose former senator, John Glenn, founded a school at a university in Columbus.

ANSWER: **Ohio** <ZZ>

19. An essay by Justin O'Brien proposed that a woman in this work was a sexually transposed version of the author himself. That essay, which discusses the sexuality of Andrée and Gilberte, is "Albertine the Ambiguous". The narrator of this novel associates one character with the deprivation of his mother's goodnight kiss. The Vinteuil Sonata serves as a love theme between that character and Odette de Crecy. This novel begins with the narrator stating that "for a long time, I went to bed early" before he recalls his time in Combray, memories that are triggered by a tea-soaked madeleine. For 10 points, name this massive novel that includes *Time Regained* and *Swann's Way*, by Marcel Proust.

ANSWER: *In Search of Lost Time* [or *Remembrance of Things Past*; or *A la Recherche du Temps Perdu*] <WR>

20. Hamilton's rule provides the basis for the kin selection theory of this concept, while Daniel Batson linked it with empathy. "Subversion from within" challenges the group selection theory of this concept, and those who exhibit a type of it were interpreted as too integrated in the collective consciousness by Emile Durkheim, who described suicides of this type in addition to fatalistic, egoistic, and anomic types. Objectivism rejects this phenomenon coined by Auguste Comte, who defined it as "living for others." For 10 points, name this behavior that causes an agent to benefit others at a cost to themselves.

ANSWER: altruism <MZ>

TB. One version of this model, in which objects are pushed to regions of heated low-density aether, was used by John Herapath to mechanically explain gravitation. This theory predicts a value of  $2mv$  for momentum gained by the wall of a container due to a single particle, because this theory assumes that all collisions are perfectly elastic. It also postulates that individual particles have negligible volumes and that intermolecular attractive or repulsive forces between gas particles are also negligible. For 10 points, name this theory that describes the behavior of ideal gases undergoing constant, random motion.

ANSWER: kinetic theory of gases [or kinetic-molecular theory] <BM>

## **Round 12 – Bonuses**

1. It is the longest continental mountain range in the world. For 10 points each:

[10] Name this South American mountain range, which reaches as far north as Merida in Venezuela to Mount Aconcagua in Argentina.

ANSWER: **Andes** Mountains

[10] The Andes pass through this country with both a constitutional capital and a departmental capital, which is the highest capital city in the world. This landlocked nation contains Santa Cruz and much of the Altiplano.

ANSWER: Plurinational State of **Bolivia** [or Estado Plurinacional de **Bolivia**]

[10] This lake in the Andes contains the islands Amantani and Isla del Sol, which is separated from mainland Bolivia by the Strait of Yampupata.

ANSWER: Lake **Titicaca** <SH>

2. In the age of colonialism and mercantilism, there existed many joint-stock companies chartered by their monarchs to explore Asia. For 10 points each:

[10] Name this British company that was granted a charter to trade with a namesake region now referred to as South East Asia.

ANSWER: British **East India** Company

[10] Almost 96% of the British East India Company's army was made up of these soldiers. Their name was used to refer to any Indian in the employ of a Western army.

ANSWER: **sepoys**

[10] This battle saw the decisive defeat of the Nawab of Bengal and granted the British East India Company hegemony over most of India.

ANSWER: Battle of **Plassey** <JL>

3. It is produced from vascular cambium during secondary growth. For 10 points each:

[10] Name this structural plant tissue which forms growth rings around the pith. Its "heart" variety is found near the center of a trunk, while its lighter-colored "sap" type is separated from bark by the phloem.

ANSWER: **wood**

[10] Wood is primarily composed of this type of transport tissue, which utilizes transpirational pull to move water throughout a vascular plant.

ANSWER: **xylem**

[10] This organic polymer, a network of phenylpropane units, structurally strengthens the xylem of a tree and decreases the permeation of water. Along with hemicellulose, this compound is removed in pulping.

ANSWER: **lignin** <SH>

4. In this novel, Fray Baltazar is thrown off of a cliff after he kills an Indian servant. For 10 points each:

[10] Name this novel where Father Vaillant accompanies Father Latour on a Catholic mission in a new territory.

ANSWER: **Death Comes for the Archbishop**

[10] This author of *Death Comes for the Archbishop* wrote about the Great Plains in a trilogy consisting of *O Pioneers!*, *The Song of the Lark*, and *My Antonia*.

ANSWER: Willa **Cather**

[10] In *Death Comes for the Archbishop*, Father Latour establishes a church in this state. Antonio Márez witnesses Tenorio shooting his aunt's owl in *Bless Me, Ultima*, another novel set here.

ANSWER: **New Mexico** <MZ>

5. He was an avatar of Vishnu, and his companions included his brother Lakshmana. For 10 points each:

[10] Name this self-exiled king of Kosala, a man with blue skin who wielded the bow. He is featured in a namesake epic.

ANSWER: **Rama**

[10] Rama's main enemy was this demon king of Lanka who had ten heads and performed immense penances to Brahma and Shiva to gain power. He stored the nectar of immortality in his navel, making him effectively invincible.

ANSWER: **Ravana** [accept **Dasis Ravana**, **Ravan**, **Raavan**, **Ravula**, **Lankeshwar**, or **Ravanaeshwaran**]

[10] Ravana had captured this wife of Rama, who elected to enter exile with her husband and then raised his children again in isolation. She was the embodiment of womanhood and an avatar of Lakshmi.

ANSWER: **Sita** [accept **Seetha**] <WD>

6. This team's season saw a season-ending ACL injury to Nerlens Noel, after which they suffered a humiliating defeat to Robert Morris in the NIT this year. For 10 points each:

[10] Name this college basketball team coached by John Calipari.

ANSWER: University of **Kentucky** Wildcats [or **UK**]

[10] Calipari has been heavily criticized for his recruiting efforts at Kentucky, which focus on players that seek to take advantage of this rule.

ANSWER: the **one and done** rule [accept anything indicating that players can leave college for the **NBA after one year**; prompt on "leaving college early"]

[10] One Kentucky player who took advantage of the "one and done" rule is Marquis Teague, who now plays for this NBA team. Michael Jordan and Scottie Pippen won six championships in the 1990s for this NBA team.

ANSWER: **Chicago Bulls** [accept either] <345>

7. Congrats, you've just discovered a new star cluster! You happily decide to name it Alpha Venatori. For 10 points each:

[10] Sorting the stars in Alpha Venatori by color and brightness yields one of these graphs with an x-axis of temperature and a y-axis of luminosity. The stars form a diagonal that you identify as the main sequence.

ANSWER: **Hertzsprung-Russell** diagram

[10] You notice that you have to shift the main sequence for Alpha Venatori much higher to fit that of the well-established Pleiades. From this, you conclude that Alpha Venatori has a high value for this quantity.

ANSWER: **distance** to the cluster [or **distance** modulus of the cluster]

[10] You observe that many stars are migrating off the main sequence at a turnoff point. As an expert astronomer, you realize you can estimate this quantity for Alpha Venatori by using the location of the turnoff point.

ANSWER: **age** of the cluster <MZ>

8. For 10 points each, name the following about poets who used a common stanza form.

[10] This Italian poet wrote about 100 stories told by 10 young men and women fleeing plague-ridden Florence in *The Decameron*.

ANSWER: Giovanni **Boccaccio**

[10] This 20th century Irish poet wrote that "an aged man is but a paltry thing / a tattered coat upon a stick" in "Sailing to Byzantium".

ANSWER: William Butler **Yeats**

[10] Boccaccio popularized this stanza form later used to write *Don Juan*, *Orlando Furioso* and "Sailing to Byzantium". Initially associated with heroic poetry, it is composed of eight 11-syllable lines in a *abababcc* rhyming scheme.

ANSWER: **ottava rima** <KX>

9. Napoleon's rise to power in Europe was violently but often unsuccessfully opposed by many European monarchies. For 10 points each:

[10] Napoleon successfully used fog to hide the movements of his forces en route to this crushing victory. The Treaty of Pressburg was signed in the direct aftermath of this battle, which partially took place in Pratzen Heights.

ANSWER: Battle of **Austerlitz** [or Battle of the **Three Emperors**]

[10] Napoleon was less successful in ordering an attack on the Shevardino Redoubt during this battle, where Russian forces under Kutuzov inflicted sufficiently high casualties on Napoleon's Grand Armée to retreat unmolested.

ANSWER: Battle of **Borodino**

[10] Napoleon was defeated again at this engagement by a massive coalition army. A rout ensued after a corporal prematurely detonated the only river crossing out of the city, trapping the rear guard of the army.

ANSWER: Battle of **Leipzig** [or Battle of the **Nations**] <ZZ>

10. The elder worked for Ferdinando de' Medici while the younger taught Barbara of Portugal. For 10 points each:  
[10] Give this last name shared by two Italian composers. The father, Alessandro, created Neapolitan opera while the son, Domenico, created 555 keyboard sonatas cataloged by Ralph Kirkpatrick.

ANSWER: Scarlatti

[10] Domenico Scarlatti reportedly played in a harpsichord contest with this composer of *Water Music* and *Messiah*. His own works for the harpsichord include his *The Harmonious Blacksmith*.

ANSWER: George Frideric Handel

[10] This Handel wind suite was composed to commemorate the end of the War of Austrian Succession. Its second movement is a bourrée, which precedes a movement in the Sicilian style.

ANSWER: Music for the Royal Fireworks <WR>

11. It is mainly practiced in West Africa and Haiti. For 10 points each:

[10] This syncretic chief religion of Haiti believes in a supreme god called Bondye. A temple in this religion is called a Hounfour, and female priests are called Mambos.

ANSWER: voodoo [accept vodoun or vodon]

[10] In voodoo, these beings are emissaries of Bondye, as he is too great to directly intervene in human lives. Nanchons of these include Ghede, Petro, Kongo, and Rada. People “mounted” or possessed by these are called “horses.”

ANSWER: loa [accept Lwa or L’wha; prompt on “Mystères” or “Invisibles”]

[10] This loa of the dead is the head of the Ghede family and fond of alcohol and tobacco. His wife is Maman Brigitte. He is usually depicted wearing a tuxedo, tinted glasses, and a top hat, representing the way Haitians bury their dead.

ANSWER: Baron Samedi [accept Baron Samdi, Bawon Samedi, or Bawon Sanmdi; prompt on partial] <PS>

12. Its two eponymous linguists never actually co-authored anything. For 10 points each:

[10] This principle of linguistic relativity has a strong form, which holds that thought is determined by language, and a weak form, stating that thought is only influenced, not limited, by language.

ANSWER: Sapir-Whorf hypothesis

[10] This MIT professor of linguistics and author of *Syntactic Structures* argued for a universal grammar, meaning that surface differences in languages do not affect cognition, contrary to the Sapir-Whorf hypothesis.

ANSWER: Noam Chomsky

[10] Berlin and Kay also disputed linguistic relativity, positing a strict, universal sequence in which color terms evolve in language. They claim that this Stage II color is the first to be introduced other than “dark” and “light.”

ANSWER: red <SH>

13. In this novel, Miss Havisham raises Estella to break men’s hearts in revenge for her own abandonment at the altar. For 10 points each:

[10] Identify this novel in which the escaped convict Magwitch is revealed to be both the father of Estella and the true benefactor of the protagonist, an orphan-turned-gentleman nicknamed Pip.

ANSWER: Great Expectations

[10] This author of *A Tale of Two Cities* and *Great Expectations* depicted poverty in Victorian England in his novels *Oliver Twist* and *Hard Times*.

ANSWER: Charles Dickens

[10] After his transformation into a gentleman, Pip distances himself from this character, once his close friend. After Joe nurses him back to health, Pip rushes back to propose to her, only to find that she has married Joe.

ANSWER: Biddy <KX>

14. Identify some key figures who helped to develop American nuclear policy during the Cold War for 10 points each.

[10] This recipient of the Nobel Peace Prize pursued a policy of détente to smooth relations with other countries and argued against the use of nuclear weapons in Vietnam. He served as Secretary of State under Nixon and Ford.

ANSWER: Henry **Kissinger**

[10] This Secretary of Defense under Kennedy and Johnson argued that a “flexible response” instead of massive retaliation would be more useful and aligned defense spending accordingly, but was a strong proponent of nuclear deterrence and MAD.

ANSWER: Robert **McNamara**

[10] As Secretary of State, this man declared a namesake doctrine denying US recognition to territory seized by the Japanese in Manchuria. Though he made the decision to bomb Hiroshima and Nagasaki as Secretary of War, he believed that the atom bomb would never be used again.

ANSWER: Henry Lewis **Stimson** <JL>

15. In 1778, he isolated alkanes from swamp gas at Lake Maggiore. For 10 points each:

[10] Name this Italian physicist whose namesake pile, consisting of stacks of zinc and copper separated by brine-soaked cloth, is widely considered to be the first battery.

ANSWER: Alessandro **Volta**

[10] In the voltaic pile, zinc serves as this electrode, the site of oxidation. In a voltaic cell, this electrode is negatively charged, as opposed to the positively charged cathode.

ANSWER: **anode**

[10] A zinc anode paired with a cathode of this element can be found in this element’s oxide battery, which has a very high energy density. Artificial production of rain often involves cloud seeding with this element’s iodide.

ANSWER: **silver** [or **Ag**] <WR>

16. This French artist bridged Neoclassicism and Romanticism. For 10 points each:

[10] Name this French artist who dedicated a painting to his anti-monarchist friend, who was later stabbed in a bathtub, the artist altered the scene so that the knife is on the floor and the quill is still in Marat’s hand.

ANSWER: Jacques-Louis **David**

[10] Identify this David painting in which the titular figure calmly discusses the immortality of the soul with his followers just before he drinks hemlock.

ANSWER: *The **Death of Socrates*** [or *La **mort de Socrates***]

[10] This pope appears with a red cape in a portrait by David that claims that he is a patron of the fine arts. David also portrays this pope in white and gold anointing *The Coronation of Napoleon*.

ANSWER: Pope **Pius** VII <KX>

17. One person with this surname ended decades of Kuomintang rule with his election, but is now serving a prison sentence for bribery during his administration. For 10 points each:

[10] Identify this common Chinese surname shared by the President of Taiwan from 2000 to 2008 and a dissident lawyer who opposes the one-child policy and fled to New York after staying in the US Embassy in 2012.

ANSWER: **Chen** [accept romanizations such as **Chan** or **Chin**]

[10] The Chen dynasty was the last of the four Southern Dynasties. It was conquered by this succeeding dynasty which reunified China and completed the Grand Canal before falling in turn to the Tang.

ANSWER: **Sui** Dynasty

[10] Chen also means minister in Chinese, which could designate people who had successfully completed this. Lasting from 1 to 3 days, they typically required the writing of several eight-legged essays.

ANSWER: **imperial examination** [or **civil service examination**] <ZZ>



18. Its author reduces sentences containing definite descriptions into first order logic. For 10 points each:

[10] Name this essay that attempts to tackle the problems of substitutivity, the excluded middle, and negative existentials by introducing a theory of definite descriptions.

ANSWER: "On Denoting"

[10] This writer of "Why I am Not a Christian" and "On Denoting" is also known for his namesake paradox, which pertains to a set of all sets that does not include itself.

ANSWER: Bertrand Russell

[10] Bertrand Russell collaborated with Alfred Whitehead on this ambitious work which introduces a set of axioms in an attempt to reduce mathematics into logical statements.

ANSWER: Principia Mathematica <MZ>

19. A block of mass M is at rest on a ramp. For 10 points each:

[10] The "static" form of this force on the block points upward along the ramp with magnitude M times g times this force's namesake coefficient. If the block slid, this force's "kinetic" variety would oppose its motion.

ANSWER: friction [or F sub f]

[10] This force on the block is proportional to the frictional force. It partially points upwards and is always perpendicular to the surface on which the block rests.

ANSWER: normal force [or F sub n]

[10] This function of the angle of incline multiplied by the force of gravity on the block equals the magnitude of the force of static friction. Taking the cross product of two vectors involves this function of the angle between them.

ANSWER: sine <WR>

20. He blended narration between Hikari's father and Mori's father in *The Pinch Runner Memorandum*. For 10 points each:

[10] Identify this author of *Aghwee the Sky Monster* and *Nip the Bud, Shoot the Kids* who described Bird's struggle with the birth of a deformed son in *A Personal Matter*.

ANSWER: Kenzaburo Oe

[10] In an Oe novel, a character paints his face red and hangs himself, producing this kind of cry. In a Shusake Endo novel, a Portuguese priest mistakes moans for snores and struggles with this title concept on God's part.

ANSWER: silence [or silent; or chinmoku]

[10] In a novel from this country, an entomologist becomes stuck with the title woman in the dunes. It is home to Kobo Abe, Shusake Endo and Kenzaburo Oe.

ANSWER: Japan [or Nippon] <MZ>

TB. The Eastern Front of World War II saw some of the bloodiest battles in all of history. For 10 points each:

[10] Name this 1941-1944 siege of a Russian city by German and Finnish forces. During this siege, nearly 1.5 million Russian civilians and soldiers died due to starvation or bombardment.

ANSWER: Siege of Leningrad

[10] This 1942 battle centered around modern day Volgograd. Germans and Russians engaged in heavy street to street fighting before Operation Uranus successfully encircled the German Sixth Army.

ANSWER: Battle of Stalingrad

[10] In this largest tank battle to have ever occurred, German forces launched a massive attack against a salient in the Russian line. The Russians under Zhukov were able to strengthen enough beforehand to hold despite massive casualties on both sides.

ANSWER: Battle of Kursk <JL>