

## JAMES ROUND 8 TOSSUPS

1. One ruler of this empire resided with Tahmasp I after being defeated by the Sur Empire. This empire fought the War of 27 Years against the Maratha Empire. Military officers in this empire were called mansabdars. This empire was founded after the defeat of Ibrahim Lodi at the First Battle of (\*) Panipat. Mumtaz was one queen of this empire that long held its capital at Agra. Bahadur Shah II was the last emperor of this empire, whose jizya tax was reinstated by Aurangzeb. The building of the Taj Mahal was accomplished by this empire. Shah Jahan, Babur, and Akbar the Great were, for 10 points, emperors of what Indian empire?

ANSWER: Mughal Empire

2. One poem written in this language ends "Those people were a kind of solution"; that poem is "Waiting for the Barbarians" and was written by Constantin Cavafy. Another writer wrote a novel in this non-Portuguese language from the perspective of Jesus titled *The Last Temptation*; that author also created a character using this language who seduces (\*) Madame Hortense and meets the narrator as he travels to a lignite mine; that character, Zorba, was created by Nikos Kazantzakis. The protagonist journeys home to his wife Penelope in an epic using this language's ancient form. For 10 points, name this modern version of a language used to write *The Odyssey* by Homer.

ANSWER: Modern Greek (accept Ancient Greek when buzzing after "journeys" is read)

3. This city's borough of Milpa Alta borders a state with the same name as the country in which it is located. The Cumbres del Ajusco National Park, located near this city, contains the source of the Lerma River which flows into Lake Chapala. The Paseo de la Reforma is a wide boulevard in this city and was modeled after the Champs-Élysées. In 1824, this city beat out (\*) Queretaro to become the capital of the nation in which it is located. This city lies in the bed of the former Lake Texcoco upon which Tenochtitlan was established. For 10 points, name this capital of America's southern neighbor.

ANSWER: Mexico City or Ciudad de Mexico

4. One film in this artistic genre ends with the narration "There are eight million stories in [a certain] city. This has been one of them." Another film in this genre ends with Anna ignoring Martins as a zither theme plays. This genre of *The Naked City* and *The Third Man* also includes (\*) *Double Indemnity* and several films of its "neo" variety. Hallmarks of this genre include the femme-fatale and hardboiled detective, due to its common focus on crime stories. This genre often used shadowy lighting and black and white. For 10 points, name this genre popular during the 40s and early 50s that derives its name from the French for "black film".

ANSWER: film noir (prompt on "detective" or "crime" before they are read)

5. These particles make up the humorously named "Swiss cheese" and "spaghetti" phases in certain stars. These particles consist of two down quarks and an up quark and are the heavier of two common baryonic hadrons. This particle may emit electron antineutrinos and electrons to become a proton in the process of (\*) beta decay. These particles were discovered in 1932 by James Chadwick. Nuclear fission involves bombardment of nuclei with these particles, and the number of these particles is the difference between the atomic mass and the atomic number. For 10 points, name this heavier of the two particles in the nucleus, a particle with neutral charge.

ANSWER: neutron

6. In 2006, James Risen and Eric Lichtblau won Pulitzer Prizes for reporting about this organization. A bill amendment concerning this organization was defeated 205-217 in the House after it was proposed by John Conyers and Justin Amash. The secretive (\*) FISA Court has given decisions expanding the power of this agency that has used the XKeyScore and PRISM programs. This agency's doings were revealed by The Guardian after they were leaked by a previous contractor for this agency who is now in asylum in Russia. For 10 points, Edward Snowden leaked news that what agency had been broadly monitoring Americans' emails and phone calls?

ANSWER: NSA or National Security Agency

7. In the Friedel-Crafts reaction, one member of this group bonded to an alkyl group can be used to attach the alkyl group to an aromatic ring. One of these elements was bonded to xenon to form the first noble gas compound. One member of this group is the rarest non-transuranium element. An acid formed by bonding one of these elements to hydrogen can dissolve (\*) glass, and is the only such acid of this group that is weak. This

group contains the only nonmetal that is liquid at standard temperature, and each of its members contains seven valence electrons, making them extremely reactive. For 10 points, group 17 consists of which elements that include chlorine?

ANSWER: halogen (prompt on "group 17" or "group VII")

8. **This work's protagonist imagines the story of Comrade Ogilvy, and he secretly buys a coral paperweight from an antique shop. The principles of Neo-Bolshevism and Death Worship are compared to Ingsoc in this book, which sees the Inner Party member O'Brien torture the protagonist. This book's protagonist works in the (\*) Ministry of Truth and has an affair with a member of the Junior Anti-Sex League, Julia, whom he betrays under torture in Room 101. Eastasia and Eurasia both wage war with Oceania in this book and Winston Smith accepts that two plus two equals five. For 10 points, everyone loves Big Brother in what novel by George Orwell?**  
ANSWER: Nineteen Eighty-Four (or 1984, though this should never matter)

9. **The losing side's plan for this battle included an advance by Barry St. Ledger up the Mohawk River Valley, which was defeated by the Green Mountain Boys at Bennington. A diversion during this battle was led by General Clinton on Fort Clinton and Fort Montgomery. Timothy Murphy, a sniper at this battle, killed General Simon (\*) Fraser, while serving under Daniel Morgan at Bemis Heights. Fighting there during this battle followed earlier fighting at Freeman's Farm where Benedict Arnold was wounded while leading American forces. For 10 points, what battle ended with General Burgoyne surrender to Horatio Gates and caused France to enter the American Revolutionary War?**

ANSWER: Battle of Saratoga (or Battle of Bemis Heights or Freeman's Farm before mentioned)

10. **This figure's grandson gave his sons a magic fishhook and bow and was sent to earth by this figure with three gifts including a mirror, jewel, and sword to plant rice. This goddess became angry at her brother for killing a goddess of food and so refused to ever look at him again. She is venerated at the Ise Grand Shrine, and her parents are (\*) Izanagi and Izanami. This goddess looked into a mirror after she was lured out of a cave by the dancing of another goddess; she had hid there after a flayed horse was thrown at her by her brother Susanoo. For 10 points, name this chief Shinto sun goddess of Japanese mythology.**

ANSWER: Amaterasu

11. **In X-bar theory, this class of words, along with determiners and quantifiers, fills the determining phrase in a specifier slot. The negative variety of these words was argued by Noam Chomsky to be neither definite or indefinite. The closest to this word's partitive variety in English is the word (\*) "some." These words were likely not present in Proto-Indo-European, explaining their lack of presence in Latin and Russian. These special adjectives define the type of reference to a noun in English. The prefix "al-" is an example of it in Arabic. For 10 points, name these words, the three most common in English being "a," "an," and "the."**

ANSWER: articles (prompt on "adjectives" before mention)

12. **Mathematically, these entities have a chromatic number, and they are operated on by the Floyd-Warshall algorithm. The recursive "flood fill" algorithm can be used to determine the number of their connected components, and if they are connected and acyclic, they are called trees. The shortest path along one can be determined using (\*) Dijkstra's [jike-struh's] algorithm, and they can be represented using adjacency matrices or adjacency lists, which list for each vertex the vertices they are connected to. For 10 points, give these constructs, sets of points with edges between them, which some people may draw with x or y axes.**

ANSWER: graphs

13. **In this novel, the protagonist has an encounter with John Wilson while delivering a pair of gloves. Governor Bellingham is distressed when a child fails to name God as her creator; that same child refuses to let her father kiss her when they meet by a brook. A key scene in this novel has the protagonist join a man standing upon a (\*) scaffold. Robert Chillingworth had earlier been married to the protagonist of this book, who falls in love with the Reverend Dimmesdale. Because of that affair, Hester Prynne is forced to wear the title item upon her breast in, for 10 points, what novel by Nathaniel Hawthorne?**

ANSWER: The Scarlet Letter

14. **This man, the drummer Elvin Jones, the bassist Jimmy Garrison, and the pianist McCoy Tyner formed the Classic Quartet. The bassist Paul Chambers inspired this musician's song "Mr. P.C." Chromatic thirds**

are used in this musician's namesake "changes," and he recorded a four-part (\*) spiritual suite that includes the tracks "Psalm" and "Acknowledgement." One of this artist's albums contains the songs "Naima" and "Countdown," while another is titled after a song from *The Sound of Music*. For 10 points, name this musician behind the albums *My Favorite Things*, *Giant Steps*, and *A Love Supreme*, a tenor saxophonist.

ANSWER: John Coltrane

15. This man at times opposed the Cardinal Cajetan, Andreas Karlstadt, and Thomas Muntzer, the last of whom he criticized for leading the excessively violent Peasant's War. Along with Ulrich Zwingli, this man attended the Marburg Colloquy. Earlier, this man apocryphally said "Here I stand; I can do no other." That announcement came at the Diet of (\*) Worms, which was called when this man refused to recant his beliefs, which included a criticism of Johann Tetzel, who sold indulgences. This man espoused justification by faith alone in a work he nailed to a church door, the 95 Theses. For 10 points, name this German monk who sparked the Protestant Reformation.

ANSWER: Martin Luther

16. One holiday from this country began after a poet drowned himself in a river and involves the eating of a food bound in leaves and wrapped with string. The graves of ancestors are visited in early April during the Clear and Bright Festival of this country. This country often employs lanterns and the color (\*) red in its celebrations. Cakes named after a celestial body are eaten during lunar holidays of this country from which dragon boat races originate. This country's most prominent holiday involves the giving out of red bags of money. That holiday is the New Year of, for 10 points, what country with a twelve animal zodiac?

ANSWER: China (accept Taiwan, I suppose)

17. The direct Coombs test looks for the presence of antibodies on these cells, and one disease associated with these cells comes in aplastic and pernicious forms. One protein in these cells undergoes the Bohr shift in response to carbon dioxide concentrations, and these cells develop from (\*) normoblasts. In one disease, these cells assume an abnormal shape due to valine replacing glutamic acid in a certain protein. These cells can have Rh factors and A and B antibodies on their surface, and low counts of them are called anemias. For 10 points, name these biconcave cells which lack nuclei, contain hemoglobin and carry oxygen throughout the body.

ANSWER: red blood cells or erythrocytes

18. One of this author's stories describing a dream about the revived corpses of the customers of Prokhorov, the title "Undertaker," was supposedly told to Ivan Belkin. A slave ancestor of this author was the basis for his novel *Peter the Great's Negro*, while in another of his stories Evgenii is chased by a (\*) statue of Peter the Great. This author of *The Bronze Horseman* wrote about a Tsar whose death begins the Time of Troubles in the play *Boris Godunov*, and in another work described the rejection of Tatyana. In that verse novel, Lensky is killed by the title character in a duel. For 10 points, name this author of *Eugene Onegin*.

ANSWER: Alexander Pushkin

19. Among this man's military campaigns were an expedition with his son Amun-her-khepeshef into Syria and battles with the Sherden sea pirates. With Hattusili III, this son of Seti I signed the oldest extant written peace treaty after having earlier fought a battle with Hattusili's predecessor Muwatalli II near the Orontes River. This man constructed the massive rock (\*) temples of Abu Simbel for himself and his wife Nefertari. With the Hittites, this ruler engaged in the largest chariot battle in history. For 10 points, name this New Kingdom pharaoh sometimes called Ozymandias who won the Battle of Kadesh.

ANSWER: Ramesses II or Ramesses the Great (prompt on "Ramesses"; accept Ozymandias before it is read; accept "Ramses" in place of "Ramesses")

20. This city's most famous art gallery is located at the Piazza della Signoria, where the Palazzo Vecchio is also located. A fresco located in the Brancacci Chapel in this city was painted by Masaccio and shows Peter retrieving a coin from a fish's mouth. This site of *The Tribute Money* and the (\*) Uffizi Gallery was the home of an artist who decorated the Arena Chapel; that man was Giotto. The bronze doors of a Baptistery in this city were designed by Ghiberti, who lost a competition to engineer a dome for another building in it. Brunelleschi designed, for 10 points, a notable Cathedral in what Italian city?

ANSWER: Florence (or Firenze)

## TIEBREAKER/REPLACEMENT TOSSUPS

21. One character in this play orders another to precisely place a stool. One character in this play struggles to remove his boots at the play's opening as another examines his hat. At the end of this play, the characters resolve to leave but do not move. Characters in this play say "quaquaquaqua" and "nothing to be done." This play's scenery contains a single (\*) tree, and at one point Pozzo enters while leading Lucky on a leash. The title character never appears, despite Estragon and Vladimir performing the title action for two days. For 10 points, name this absurdist "tragicomedy in two acts" by Samuel Beckett.

ANSWER: Waiting for Godot (or En Attendant Godot)

22. Potential energy due to these forces is often modeled as proportional to the inverse sixth power of distance, and a subtype whose strength depends on polarizability and dipole moment is sometimes named for Debye. Another subtype accounts for the higher boiling points of straight molecules compared to spherical molecules with an equal number of electrons and for the ability of (\*) geckos to climb glass surfaces; those induced dipole-induced dipole forces are also known as London dispersion forces. For 10 points, identify this type of intermolecular force, weaker than covalent, ionic, and hydrogen bonds, named for a Dutch scientist.

ANSWER: van der Waals force [accept van der Waals interaction]

## BONUSES

1. The Fox network has cancelled some of the best TV shows of all time. Name three of them, for 10 points each:  
[10] Starring Nathan Fillion and Morena Baccarin, this space western epic acquired so much post-cancellation support that its story was allowed to continue in the feature film *Serenity*.

ANSWER: **Firefly**

[10] Centering around the exploits of the dysfunctional Bluth family, new episodes of this comedy starring Jason Bateman will start airing on Netflix in the spring of 2013, seven years after it was originally cancelled by Fox.

ANSWER: **Arrested Development**

[10] Fox doomed this quirky 2004 comedy-drama by abruptly changing its timeslot and airing episodes out of order. On this show the gift shop clerk Jaye Taylor has conversations with animal figurines who inspire her to help the needy.

ANSWER: **Wonderfalls**

2. Name some different economic markets, for 10 points each:

[10] Competition is diminished in this type of market in which a single seller dominates the market.

ANSWER: **monopoly** (accept word forms)

[10] The reverse of the monopoly is this structure characterized by a single buyer and many sellers. Government contracts are an example.

ANSWER: **monopsony** (accept word forms)

[10] Similar to a monopoly is this market structure, which is characterized by a kinked demand curve and sticky prices. In it, the market is dominated by a few sellers, rather than one.

ANSWER: **oligopoly** (accept word forms)

3. This author wrote about a man who visits Prester John in *Baudolino*. For 10 points each:

[10] Name this author of a novel in which William of Baskerville investigates a series of murders at a monastery, *The Name of the Rose*.

ANSWER: Umberto **Eco**

[10] In this other Eco novel, Casaubon, Belbo, and Diotallevi conceive a conspiracy in which a group called the Tres use the title object for sinister purposes.

ANSWER: **Foucault's Pendulum**

[10] *Foucault's Pendulum* is narrated while Casaubon hides in a museum in this European city. Victor Hugo wrote a novel about a hunchback living in this city's Notre Dame cathedral.

ANSWER: **Paris**

4. Ann Richardson joked that this US politician was "born with a silver foot in his mouth." For 10 points each:

[10] Name this former Texas governor. As president, he sent troops to Iraq to overthrow Saddam Hussein.

ANSWER: George **Walker Bush** [accept **Bush 43** or **Bush the Younger**; prompt on "Bush" or "George Bush"]

[10] This hispanic served as Bush's Attorney General. While serving in that position, this man dismissed many US Attorneys and used the NSA to wiretap U.S citizens without a warrant.

ANSWER: Alberto **Gonzales**

[10] Bush pushed for this education initiative sponsored by Edward Kennedy. Partially replaced by the Reach for the Top program, many have criticized this initiative for its reliance on standardized testing and unrealistic goals.

ANSWER: **No Child Left Behind** Act of 2001 [accept **NCLB**]

5. You've undergone the terrible experience of being trapped in a phase diagram. For 10 points each, answer some questions about your travels:

[10] You start off feeling very hot, as you are in this phase of matter which has neither constant shape nor volume.

ANSWER: **gas**

[10] You want to cool off, so you head towards a decrease in temperature in order to undergo this phase change from gas to solid. It is the opposite of sublimation.

ANSWER: **deposition** (accept word forms)

[10] But your pressure is too high, so you end up at this point, where you coexist in equilibrium between the phases of solid, liquid, and gas.

ANSWER: **triple** point

6. Rome got sacked--a lot. For 10 points each, identify these people that liked to pillage and burn.

[10] This Gallic leader sacked Rome after a victory at the Battle of the Allia river. He famously said "woe to the defeated" after accusations of tipping the tribute scales.

ANSWER: **Brennus**

[10] This barbaric tribe centered in Africa famously sacked Rome in 455. This group names acts of ruthless destruction or defacement, such as graffiti.

ANSWER: **Vandals**

[10] This "scourge of God" and leader of the Huns nearly sacked Rome before turning away due to an unknown cause. Apocryphal stories state that Pope Leo I convinced this man to turn away either with gold or Christian pleading.

ANSWER: **Atila** the Hun

7. He described how "the armies of those I love engirth me" in "I Sing the Body Electric." For 10 points each:

[10] Name this poet of a work who wrote of a great star that "early droop'd in the western sky" in "When Lilacs Last in the Door-yard Bloom'd."

ANSWER: Walt **Whitman**

[10] "When Lilacs Last in the Door-yard Bloom'd" is a eulogy for Abraham Lincoln, as is this poem by Whitman in which he tells the title figure "our fearful trip is done," though that figure lies "fallen cold and dead."

ANSWER: **"O Captain! My Captain!"**

[10] Whitman also describes riding a ferry to this location in a poem opening "Flood tide below me! I watch you face to face."

ANSWER: **Brooklyn**

8. This feature formed during the Amazonian period. For 10 points each:

[10] Name this shield volcano that was until 2011 known as the tallest mountain base-to-height in the Solar System.

ANSWER: **Olympus** Mons

[10] Olympus Mons is a volcano on this red planet that is also the site of the Valles Marineris.

ANSWER: **Mars**

[10] Olympus Mons was surpassed by Rheasilvia Mons on this asteroid, confirmed as taller by data from the Dawn spacecraft. It is the second most massive asteroid after Ceres and the brightest from Earth.

ANSWER: 4 **Vesta**

9. Mencius was one member of this school of thought. For 10 points each:

[10] Name this philosophy formulated by a namesake Chinese philosopher which advocates filial piety. It was the state philosophy of the Han dynasty.

ANSWER: **Confucianism** (accept word forms including **Confucius**)

[10] This collection of Confucius's sayings was compiled by his followers, and includes his descriptions of concepts such as the Golden Rule.

ANSWER: **Analects** of Confucius (or **Lunyu**)

[10] A key concept in Confucianism is this virtue of humaneness, or uprightness a human should exhibit. Its Chinese character is derived from the words for man and two.

ANSWER: **ren**

10. Answer some questions about colorful revolutions, for 10 points each:

[10] This was the color of the turbans of members of a revolution that overthrew the Yuan Dynasty, and should not be confused with the Yellow Turban Revolution during the Han Dynasty.

ANSWER: **red** (accept **Red Turban** Rebellion)

[10] Shah Reza Pahlavi led the White Revolution in this country to try to placate dissidents. Involving land and voting reforms, it obviously failed because the Shah was ousted 15 years later here.

ANSWER: Islamic Republic of **Iran**

[10] This revolution occurred in the mid 20th century, and contributed to the rapid growth rates in countries like India. It came about mainly because of pesticides and fertilizers, and its namesake color is often associated with environmentalism as well.

ANSWER: **Green** Revolution

11. This city was originally known as Edo. For 10 points each:

[10] Name this capital city of Japan.

ANSWER: Tokyo

[10] This island of Japan is home to Tokyo, Kobe, Hiroshima, and Sendai. It is the second most populous island in the world.

ANSWER: Honshu

[10] This archipelago, stretching between Hokkaido and Kamchatka, is part of an ongoing dispute between Japan and Russia. A visit by Russian President Dmitri Medvedev in late 2010 intensified the dispute.

ANSWER: Kuril Islands

12. This artist split with Theo van Doesburg over the use of diagonals. For 10 points each:

[10] Name this man who preferred to use straight lines at right angles in works such as *Broadway Boogie-Woogie*.

ANSWER: Piet Mondrian

[10] *Broadway Boogie-Woogie* is currently housed in this New York City museum aptly titled for its collection of relatively contemporary art.

ANSWER: Museum of Modern Art or the MoMA

[10] Mondrian helped found the movement "De Stijl" ["duh" "style"], which he also gave this name in his essays on the movement.

ANSWER: Neo-Plasticism (or The New Plastic or De Nieuwe Beelding)

13. For 10 points each, answer some questions about the death of Ymir, which led to the creation of the world:

[10] Ymir was the primordial first example of this type of creature in Norse mythology. The jotunn were the "frost" type of these large creatures.

ANSWER: giant (prompt on "jotnar")

[10] Ymir was killed by Odin, Vili, and Ve, who were the first generation of this pantheon of gods. They wage a war with, and then combine with, the Vanir.

ANSWER: Aesir

[10] The flesh and blood of Ymir were fashioned into these creatures. Brokkr and the sons of Ivaldi were examples of this type of creature.

ANSWER: dwarf

14. He is stabbed while eavesdropping on a character's conversation with Getrude. For 10 points each:

[10] Name this fictional diplomat in a Shakespeare work, the father of Laertes and Ophelia.

ANSWER: Polonius

[10] Polonius interacts with the title Prince of Denmark in this Shakespeare play. This man debates whether to commit suicide in the famous "To be or not to be" soliloquy.

ANSWER: *The Tragedy of* Hamlet, *Prince of Denmark*

[10] Hamlet gets some actors to put on this play in order to provoke an emotional reaction from his uncle, Claudius, who he suspects of killing his father. The title action is committed by ear poison, just as Hamlet's father was dispatched by Claudius.

ANSWER: *The* Murder of Gonzago

15. This experiment was originally performed with silver atoms, and was later repeated with hydrogen atoms. For 10 points:

[10] Identify this doubly-eponymous quantum mechanics experiment in which a stream of particles are sorted by exposure to a constant magnetic field.

ANSWER: Stern-Gerlach experiment

[10] When a stream of electrons is passed through a Stern-Gerlach machine, they are sorted by their value for this quantity. It is the fourth quantum number, and fermions have half-integer values for this quantity.

ANSWER: spin angular momentum [prompt on angular momentum]

[10] This type of fermion has possible values of one-half or negative one-half for spin. An atom that gains or loses these becomes an ion.

ANSWER: electron

16. In one depiction of this entity, a man sweeps the inside of a large wooden hoop. For 10 points each:

[10] Name this Japanese mountain which appears in the background of a work of art in which three fishing boats struggle against the title *Great Wave off Kanagawa*.

ANSWER: Mount **Fuji**

[10] This Japanese artist created the woodblock print series *Thirty-six Views of Mount Fuji*. He also created the erotic shunga *The Dream of the Fisherman's Wife*.

ANSWER: **Katsushika Hokusai** (accept either or both names)

[10] Most of Hokusai's woodblock prints were of this main artistic genre that literally means "pictures of the floating world" and was easily mass-produced.

ANSWER: **ukiyo-e**

17. This kingdom was ruled by the House of Savoy. For 10 points each:

[10] Name this state that partially existed at the foot of the Alps and partially on an island.

ANSWER: Kingdom of **Sardinia** [accept **Piedmont**-Sardinia]

[10] In the Second War of Italian Independence, this French emperor aided Piedmont-Sardinia. The nephew of a former emperor, this man was deposed by the Franco-Prussian war.

ANSWER: **Napoleon III** [accept **Louis-Napoleon**]

[10] This founder of Sardinia's liberal party also founded the newspaper *Il Risorgimento*. This man supported Italian Unification while serving as Piedmont-Sardinia's Prime Minister.

ANSWER: Count **Cavour** [accept Camillo **Benso**, Count of Cavour]

18. This organ aids in the maintenance of an appropriate water-salt balance in the blood. For ten points each:

[10] Name this organ, which processes blood wastes into urine. It is attached to the bladder via the ureter.

ANSWER: **kidney**

[10] This hormone helps to increase water reabsorption in the kidney and is produced by the hypothalamus. In higher concentrations, it can constrict blood vessels.

ANSWER: **Antidiuretic hormone** or **ADH**

[10] ADH affects the permeability of the collecting duct of this functional unit of the kidney. Other parts of it include the Bowman's capsule and Loop of Henle.

ANSWER: **nephron**

19. The main character of this novel eventually runs away with the "minx" Myrna Minkoff, and gets fired from jobs at Levy Pants and Paradise Hot Dogs. For 10 points each:

[10] Name this John Kennedy Toole novel about the Boethius-admiring Ignatius J. Reilly.

ANSWER: *A **Confederacy of Dunces***

[10] *A Confederacy of Dunces* is set in this American city. Tennessee William's *A Streetcar Named Desire* is also set in this southern city.

ANSWER: **New Orleans**

[10] New Orleans is the location of Rhett and Scarlett Butler's honeymoon in this Margaret Mitchell novel which takes place during and after the Civil War.

ANSWER: ***Gone with The Wind***

20. This composer's 40th symphony was termed the "Great G minor" symphony, to distinguish it from his "Little G minor" symphony. For 10 points each:

[10] Name this Austrian composer, a child prodigy who wrote his first symphony at the age of eight.

ANSWER: **Mozart**

[10] This unfinished mass by Mozart was completed by Franz Sussmayer. Its movements include uses of the Kyrie eleison and the Agnus Dei.

ANSWER: **Requiem** Mass in D minor, **K626** (accept either underlined portion)

[10] Mozart's Requiem makes use of this Latin hymn, which also appears in Hector Berlioz's *Symphonie fantastique* during the "Dream of a Witches' Sabbath," as well as Liszt's *Totentanz*.

ANSWER: **Dies Irae** (or **Day of Wrath** or **Day of Anger**)

## **TIEBREAKER/REPLACEMENT BONUSES**

21. This Germans were pushed behind this man's namesake line during the Hundred Days Offensive. For 10 points each:



[10] Name this German World War I Chief of Staff whose served as President of the Weimar Republic.

ANSWER: Paul von **Hindenburg**

[10] This type of airship named for Hindenburg exploded over New Jersey in 1937. These rigid airships are essentially giant balloons.

ANSWER: **zeppelin**

[10] Hindenburg defeated Rennenkampf and the Russian First Army at this World War I battle, which occurred after the destruction of the Russian Second Army.

ANSWER: First Battle of the **Masurian Lakes**

22. Markov chains involve the stochastic variety of these constructs. For 10 points:

[10] Identify this mathematical construct with elements in rows and columns. The "identity" example has all elements zero except those on the diagonal, which are one.

ANSWER: **matrix**

[10] This operation involves identifying pivots in a matrix and using elementary row operations to bring a matrix to row reduced echelon form. Applying this process to a system of equations set in an augmented matrix allows one to find solutions to the system of equations.

ANSWER: **Gauss-Jordan** elimination (or **Gaussian** elimination; or **row reduction**)

[10] When Gauss-Jordan elimination is applied to a matrix with a non-zero one of these augmented with the identity matrix, the inverse of the original matrix can be found. They can be used to find solutions to systems of equations in Cramer's Rule, and one of a 2 by 2 matrix equals a d minus b c.

ANSWER: **determinant**